SOLMAX

Technical data sheet

LLDPE Series, 40 mil Black, Textured

PROPERTY	TEST METHOD	FREQUENCY(1)	UNIT Imperial	1101950
SPECIFICATIONS				
Nominal Thickness		-	mils	40
Thickness (min. avg.)	ASTM D5994	Every roll	mils	38.0
Lowest ind. for 8 out of 10 values			mils	36.0
Lowest ind. for 10 out of 10 values			mils	34.0
Asperity Height (min. avg.) (3)	ASTM D7466	Every roll	mils	16
Resin Density	ASTM D1505	1/Batch	g/cc	< 0.926
Melt Index - 190/2.16 (max.)	ASTM D1238	1/Batch	g/10 min	1.0
Sheet Density	ASTM D792	Every 10 rolls	g/cc	≤ 0.939
Carbon Black Content	ASTM D4218	Every 2 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D5596	Every 10 rolls	Category	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D3895	1/Batch	min	100
Tensile Properties (min. avg) (2)	ASTM D6693	Every 2 rolls		
Strength at Break			ppi	100
Elongation at Break			%	250
2% Modulus (max.)	ASTM D5323	Per formulation	ppi	2400
Tear Resistance (min. avg.)	ASTM D1004	Every 5 rolls	lbf	25
Puncture Resistance (min. avg.)	ASTM D4833	Every 5 rolls	lbf	56
Dimensional Stability	ASTM D1204	Certified	%	± 2
Multi-Axial Tensile (min.)	ASTM D5617	Per formulation	%	30
Oven Aging - % retained after 90 days	ASTM D5721	Per formulation		
STD OIT (min. avg.)	ASTM D3895		%	35
HP OIT (min. avg.)	ASTM D5885		%	60
UV Res. - % retained after 1600 hr	ASTM D7238	Per formulation		
HP-OIT (min. avg.)	ASTM D5885		%	35
Low Temperature Brittleness	ASTM D746	Certified	°F	- 106
SUPPLY SPECIFICATIONS(Roll dimensions may vary ±1%)				
Roll Dimension - Width	-		ft	22.5
Roll Dimension - Length	-		ft	700
Area (Surface/Roll)	-		ft^2	15750

NOTES

1. Testing frequency based on standard roll dimensions and one batch is approximately180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
3. Lowest individual and 8 out of 10 readings as per GRI-GM13 / 17, latest version.

* All values are nominal test results, except when specified as minimum or maximum.
* The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.

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Table 9: Geomembrane Liner Received

Total	Date	Observed			Roll Number	Lot/Batch	Dimensions			Manufacturer's
554	11-Mar-2022	X			0104-203802	21IB592	22	700	15,400	Yes
555	11-Mar-2022	X			0104-203803	21IB592	22	700	15,400	Yes
556	11-Mar-2022	X			0104-203804	21IB592	22	700	15,400	Yes
557	11-Mar-2022	X			0104-203805	21IB592	22	700	15,400	Yes
558	11-Mar-2022	X			0104-203806	21IB592	22	700	15,400	Yes
559	11-Mar-2022	X			0104-203807	21IB592	22	700	15,400	Yes
560	11-Mar-2022	X			0104-203808	21IB592	22	700	15,400	Yes
561	11-Mar-2022	X			0104-203809	21IB592	22	700	15,400	Yes
562	11-Mar-2022	X			0104-203810	21IB592	22	700	15,400	Yes
563	11-Mar-2022	X			0104-203811	21IB591	22	700	15,400	Yes
564	11-Mar-2022	X			0104-203812	21IB591	22	700	15,400	Yes
565	11-Mar-2022	X			0104-203813	21IB591	22	700	15,400	Yes
566	11-Mar-2022	X			0104-203814	21IB591	22	700	15,400	Yes
567	12-Mar-2022	X			0104-203815	21IB591	22	700	15,400	Yes
568	12-Mar-2022	X			0104-203816	21IB591	22	700	15,400	Yes
569	12-Mar-2022	X			0104-203817	21IB591	22	700	15,400	Yes
570	12-Mar-2022	X			0104-203818	21IB591	22	700	15,400	Yes
572	12-Mar-2022	X			0104-203821	21IB591	22	700	15,400	Yes
573	12-Mar-2022	X			0104-203822	21IB591	22	700	15,400	Yes
574	12-Mar-2022	X			0104-203823	21IB591	22	700	15,400	Yes
575	12-Mar-2022	X			0104-203824	21IB591	22	700	15,400	Yes
576	12-Mar-2022	X			0104-203825	21IB591	22	700	15,400	Yes
577	12-Mar-2022	X			0104-203826	21IB591	22	700	15,400	Yes
578	12-Mar-2022	X			0104-203827	21IB591	22	700	15,400	Yes
579	12-Mar-2022	X			0104-203828	21IB591	22	700	15,400	Yes
580	12-Mar-2022	X			0104-203829	21IB591	22	700	15,400	Yes
581	12-Mar-2022	X			0104-203830	21IB591	22	700	15,400	Yes

Table 9: Geomembrane Liner Received

Total	Date	Observed			Roll Number	Lot/Batch	Dimensions			Manufacturer's
582	12-Mar-2022	X			0104-203831	21IB591	22	700	15,400	Yes
583	13-Mar-2022	X			0104-203832	21IB591	22	700	15,400	Yes
584	13-Mar-2022	X			0104-203833	21IB591	22	700	15,400	Yes
585	13-Mar-2022	X			0104-203834	21IB591	22	700	15,400	Yes
586	13-Mar-2022	X			0104-203835	21IB591	22	700	15,400	Yes
587	13-Mar-2022	X			0104-203836	21IB591	22	700	15,400	Yes
588	13-Mar-2022	X			0104-203837	21IB591	22	700	15,400	Yes
589	13-Mar-2022	X			0104-203842	21IB591	22	700	15,400	Yes
590	13-Mar-2022	X			0104-203843	21IB591	22	700	15,400	Yes
591	13-Mar-2022	X			0104-203844	21IB591	22	700	15,400	Yes
592	13-Mar-2022	X			0104-203845	21IB592	22	700	15,400	Yes
593	14-Mar-2022	X			0104-203846	21IB592	22	700	15,400	Yes
594	14-Mar-2022	X			0104-203847	21IB592	22	700	15,400	Yes
595	14-Mar-2022	X			0104-203848	21IB592	22	700	15,400	Yes
596	14-Mar-2022	X			0104-203849	21IB592	22	700	15,400	Yes
597	14-Mar-2022	X			0104-203850	21IB592	22	700	15,400	Yes
598	14-Mar-2022	X			0104-203851	21IB592	22	700	15,400	Yes
599	14-Mar-2022	X			0104-203852	21IB592	22	700	15,400	Yes
600	14-Mar-2022	X			0104-203853	21IB592	22	700	15,400	Yes
601	14-Mar-2022	X			0104-203854	21IB592	22	700	15,400	Yes
602	14-Mar-2022	X			0104-203855	21IB592	22	700	15,400	Yes
603	14-Mar-2022	X			0104-203856	21IB592	22	700	15,400	Yes
604	14-Mar-2022	X			0104-203857	21IB592	22	700	15,400	Yes
605	14-Mar-2022	X			0104-203858	21IB592	22	700	15,400	Yes
606	14-Mar-2022	X			0104-203859	21IB592	22	700	15,400	Yes
607	14-Mar-2022	X			0104-203860	21IB592	22	700	15,400	Yes
608	15-Mar-2022	X			0104-203861	21IB592	22	700	15,400	Yes

Table 9: Geomembrane Liner Received

Total	Date	Observed			Roll Number	Lot/Batch	Dimensions			Manufacturer's
609	15-Mar-2022	X			0104-203862	21IB592	22	700	15,400	Yes
610	15-Mar-2022	X			0104-203863	21IB592	22	700	15,400	Yes
611	15-Mar-2022	X			0104-203864	21IB592	22	700	15,400	Yes
612	15-Mar-2022	X			0104-203865	21IB592	22	700	15,400	Yes
613	15-Mar-2022	X			0104-203866	21IB592	22	700	15,400	Yes
614	15-Mar-2022	X			0104-203867	21IB592	22	700	15,400	Yes
615	15-Mar-2022	X			0104-203868	21IB592	22	700	15,400	Yes
616	15-Mar-2022	X			0104-203869	21IB592	22	700	15,400	Yes
617	15-Mar-2022	X			0104-203870	21IB592	22	700	15,400	Yes
618	15-Mar-2022	X			0104-203871	21IB592	22	700	15,400	Yes
619	15-Mar-2022	X			0104-203872	21IB592	22	700	15,400	Yes
620	15-Mar-2022	X			0104-203873	21IB591	22	700	15,400	Yes
621	16-Mar-2022	X			0104-203874	21IB591	22	700	15,400	Yes
622	16-Mar-2022	X			0104-203875	21IB591	22	700	15,400	Yes
623	16-Mar-2022	X			0104-203877	21IB591	22	700	15,400	Yes
624	16-Mar-2022	X			0104-203878	21IB591	22	700	15,400	Yes
625	16-Mar-2022	X			0104-203879	21IB591	22	700	15,400	Yes
626	16-Mar-2022	X			0104-203880	21IB591	22	700	15,400	Yes
627	16-Mar-2022	X			0104-203882	21IB591	22	700	15,400	Yes
628	16-Mar-2022	X			0104-203883	21IB591	22	700	15,400	Yes
629	16-Mar-2022	X			0104-203884	21IB591	22	700	15,400	Yes
630	16-Mar-2022	X			0104-203885	21IB591	22	700	15,400	Yes
631	16-Mar-2022	X			0104-203886	21IB591	22	700	15,400	Yes
633	16-Mar-2022	X			0104-203888	21IB591	22	700	15,400	Yes
634	17-Mar-2022	X			0104-203891	21IB591	22	700	15,400	Yes
635	17-Mar-2022	X			0104-203892	21IB591	22	700	15,400	Yes
636	17-Mar-2022	X			0104-203893	21IB591	22	700	15,400	Yes

Table 9: Geomembrane Liner Received

Total	Date	Observed			Roll Number	Lot/Batch	Dimensions			Manufacturer's
637	17-Mar-2022	X			0104-203894	21IB591	22	700	15,400	Yes
638	17-Mar-2022	X			0104-203895	21IB591	22	700	15,400	Yes
639	17-Mar-2022	X			0104-203896	21IB591	22	700	15,400	Yes
640	17-Mar-2022	X			0104-203897	21IB591	22	700	15,400	Yes
641	17-Mar-2022	X			0104-203898	21IB616	22	700	15,400	Yes
642	17-Mar-2022	X			0104-203899	21IB616	22	700	15,400	Yes
643	17-Mar-2022	X			0104-203900	21IB616	22	700	15,400	Yes
644	17-Mar-2022	X			0104-203901	21IB616	22	700	15,400	Yes
645	17-Mar-2022	X			0104-203902	21IB616	22	700	15,400	Yes
646	17-Mar-2022	X			0104-203904	21IB616	22	700	15,400	Yes
647	18-Mar-2022	X			0104-203905	21IB616	22	700	15,400	Yes
648	18-Mar-2022	X			0104-203906	21IB616	22	700	15,400	Yes
649	18-Mar-2022	X			0104-203907	21IB616	22	700	15,400	Yes
650	18-Mar-2022	X			0104-203908	21IB616	22	700	15,400	Yes
651	18-Mar-2022	X			0104-203909	21IB616	22	700	15,400	Yes
652	18-Mar-2022	X			0104-203910	21IB616	22	700	15,400	Yes
653	18-Mar-2022	X			0104-203911	21IB616	22	700	15,400	Yes
654	18-Mar-2022	X			0104-203912	21IB616	22	700	15,400	Yes

SOLMAX

LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-15

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D3895	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101950-24067-1							
LLDPE 40 mils / 1.00 mm Black Textured			**1.0**	**< 0.926**	**100**		
0104-203802	21IB592	2022-03-11	0.84	0.917	132		
0104-203803	21IB592	2022-03-11	0.84	0.917	132		
0104-203804	21IB592	2022-03-11	0.84	0.917	132		
0104-203805	21IB592	2022-03-11	0.84	0.917	132		
0104-203806	21IB592	2022-03-11	0.84	0.917	132		
0104-203807	21IB592	2022-03-11	0.84	0.917	132		
0104-203808	21IB592	2022-03-11	0.84	0.917	132		
0104-203809	21IB592	2022-03-11	0.84	0.917	132		
0104-203810	21IB592	2022-03-11	0.84	0.917	132		
0104-203811	21IB591	2022-03-11	0.82	0.917	132		
0104-203812	21IB591	2022-03-11	0.82	0.917	132		
0104-203813	21IB591	2022-03-11	0.82	0.917	132		
0104-203814	21IB591	2022-03-11	0.82	0.917	132		
0104-203815	21IB591	2022-03-12	0.82	0.917	132		
0104-203816	21IB591	2022-03-12	0.82	0.917	132		

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-15

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203817	21IB591	2022-03-12	0.82	0.917	132		
0104-203818	21IB591	2022-03-12	0.82	0.917	132		
0104-203819	21IB591	2022-03-12	0.82	0.917	132		
0104-203821	21IB591	2022-03-12	0.82	0.917	132		
0104-203822	21IB591	2022-03-12	0.82	0.917	132		
0104-203823	21IB591	2022-03-12	0.82	0.917	132		
0104-203824	21IB591	2022-03-12	0.82	0.917	132		
0104-203825	21IB591	2022-03-12	0.82	0.917	132		
0104-203826	21IB591	2022-03-12	0.82	0.917	132		
0104-203827	21IB591	2022-03-12	0.82	0.917	132		
0104-203828	21IB591	2022-03-12	0.82	0.917	132		
0104-203829	21IB591	2022-03-12	0.82	0.917	132		
0104-203830	21IB591	2022-03-12	0.82	0.917	132		
0104-203831	21IB591	2022-03-13	0.82	0.917	132		
0104-203832	21IB591	2022-03-13	0.82	0.917	132		
0104-203833	21IB591	2022-03-13	0.82	0.917	132		
0104-203834	21IB591	2022-03-13	0.82	0.917	132		
0104-203835	21IB591	2022-03-13	0.82	0.917	132		
0104-203836	21IB591	2022-03-13	0.82	0.917	132		
0104-203837	21IB591	2022-03-13	0.82	0.917	132		

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SOLMAX.COM

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-15

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203842	21IB591	2022-03-13	0.82	0.917	132		
0104-203843	21IB591	2022-03-13	0.82	0.917	132		
0104-203844	21IB591	2022-03-13	0.82	0.917	132		
0104-203845	21IB592	2022-03-13	0.84	0.917	132		
0104-203846	21IB592	2022-03-14	0.84	0.917	132		
0104-203847	21IB592	2022-03-14	0.84	0.917	132		
0104-203848	21IB592	2022-03-14	0.84	0.917	132		
0104-203849	21IB592	2022-03-14	0.84	0.917	132		
0104-203850	21IB592	2022-03-14	0.84	0.917	132		
0104-203851	21IB592	2022-03-14	0.84	0.917	132		
0104-203852	21IB592	2022-03-14	0.84	0.917	132		
0104-203853	21IB592	2022-03-14	0.84	0.917	132		
0104-203854	21IB592	2022-03-14	0.84	0.917	132		
0104-203855	21IB592	2022-03-14	0.84	0.917	132		
0104-203856	21IB592	2022-03-14	0.84	0.917	132		

QUANTITY (ROLLS): 50

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-15

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1101950-24067-1
LLDPE 40 mils / 1.00 mm Black Textured

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile Yield Strength	Tensile Yield Elong.	Tensile Break Strength	Tensile Break Elong.	Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out
Unit	mils	g/cc	%	Cat 1 and 2	ppi	%	ppi	%	lbs	lbs	%	mils
Test Method	D5994	D792	D4218	D5596	D6693				D1004	D4833	D1204	D7466
Frequency	Each roll	Every 10 rolls	Every 2 rolls	Every 10 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		Every roll
Specification	38.0 / 34.0	≤ 0.939	2.0 - 3.0	Cat. 1 & Cat. 2			100	250	25	56		16 / 16
0104-203802 MD	40.3 / 37.5	0.934	2.27	10/10 views			158	588	32	103		23.0 / 26.6
XD							135	534	33			
0104-203803 MD	41.1 / 37.0	0.934	2.27	10/10 views			158	588	32	103		23.4 / 22.8
XD							135	534	33			
0104-203804 MD	40.0 / 36.5	0.934	2.40	10/10 views			154	573	32	103		21.2 / 22.3
XD							133	536	33			
0104-203805 MD	38.9 / 36.5	0.934	2.40	10/10 views			154	573	32	103		22.4 / 25.3
XD							133	536	33			
0104-203806 MD	40.2 / 38.5	0.934	2.34	10/10 views			173	639	32	103		19.9 / 20.7
XD							145	579	33			
0104-203807 MD	39.9 / 37.0	0.934	2.34	10/10 views			173	639	29	97		21.8 / 21.0
XD							145	579	30			
0104-203808 MD	42.0 / 35.5	0.934	2.27	10/10 views			154	602	29	97		21.6 / 171.4
XD							133	553	30			
0104-203809 MD	42.3 / 35.5	0.934	2.27	10/10 views			154	602	29	97		22.4 / 20.2
XD							133	553	30			
0104-203810 MD	40.6 / 34.0	0.934	2.16	10/10 views			158	612	29	97		23.3 / 22.3
XD							136	582	30			
0104-203811 MD	39.7 / 36.0	0.934	2.16	10/10 views			158	612	29	97		21.1 / 21.9
XD							136	582	30			
0104-203812 MD	42.7 / 38.5	0.931	2.33	10/10 views			196	681	32	94		25.0 / 20.5
XD							177	648	32			
0104-203813 MD	40.1 / 37.5	0.931	2.33	10/10 views			196	681	32	94		19.7 / 20.6
XD							177	648	32			
0104-203814 MD	39.5 / 36.0	0.931	2.34	10/10 views			153	601	32	94		23.5 / 22.3
XD							140	576	32			
0104-203815 MD	42.7 / 39.0	0.931	2.34	10/10 views			153	601	32	94		22.3 / 22.0
XD							140	576	32			

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-15

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203816	**MD**	38.5 / 37.0	0.931	2.34	10/10 views			159	602	32	94		19.5 / 19.8
	XD							137	553	32			
0104-203817	**MD**	38.5 / 37.0	0.931	2.34	10/10 views			159	602	30	93		18.9 / 17.7
	XD							137	553	32			
0104-203818	**MD**	38.3 / 36.5	0.931	2.42	10/10 views			159	616	30	93		21.1 / 22.1
	XD							131	532	32			
0104-203819	**MD**	38.5 / 36.5	0.931	2.42	10/10 views			159	616	30	93		23.3 / 19.7
	XD							131	532	32			
0104-203821	**MD**	39.5 / 37.0	0.931	2.58	10/10 views			173	637	30	93		22.0 / 20.0
	XD							140	551	32			
0104-203822	**MD**	38.9 / 36.0	0.931	2.58	10/10 views			173	637	30	93		21.2 / 19.9
	XD							140	551	32			
0104-203823	**MD**	38.4 / 36.5	0.934	2.40	10/10 views			175	609	33	94		24.5 / 22.9
	XD							141	520	32			
0104-203824	**MD**	38.6 / 35.0	0.934	2.40	10/10 views			175	609	33	94		24.8 / 20.5
	XD							141	520	32			
0104-203825	**MD**	38.4 / 34.0	0.934	2.40	10/10 views			175	609	33	94		21.3 / 19.9
	XD							141	520	32			
0104-203826	**MD**	38.1 / 34.5	0.934	2.40	10/10 views			175	609	33	94		22.4 / 21.2
	XD							141	520	32			
0104-203827	**MD**	38.3 / 34.5	0.934	2.40	10/10 views			175	609	33	94		20.8 / 18.9
	XD							141	520	32			
0104-203828	**MD**	39.3 / 37.0	0.934	2.40	10/10 views			175	609	31	98		25.6 / 20.6
	XD							141	520	33			
0104-203829	**MD**	39.8 / 35.5	0.934	2.29	10/10 views			179	630	31	98		23.0 / 20.9
	XD							139	516	33			
0104-203830	**MD**	41.1 / 37.5	0.934	2.29	10/10 views			179	630	31	98		22.0 / 18.6
	XD							139	516	33			
0104-203831	**MD**	39.8 / 35.5	0.934	2.29	10/10 views			179	630	31	98		23.2 / 19.0
	XD							139	516	33			
0104-203832	**MD**	38.4 / 35.5	0.934	2.29	10/10 views			179	630	31	98		25.0 / 21.4
	XD							139	516	33			
0104-203833	**MD**	38.4 / 35.5	0.934	2.29	10/10 views			179	642	33	99		22.1 / 18.3
	XD							140	530	30			
0104-203834	**MD**	38.1 / 35.0	0.934	2.29	10/10 views			179	642	33	99		23.1 / 20.6
	XD							140	530	30			
0104-203835	**MD**	38.2 / 36.0	0.934	2.34	10/10 views			168	612	33	99		22.9 / 20.7
	XD							142	538	30			
0104-203836	**MD**	38.8 / 36.5	0.934	2.34	10/10 views			168	612	33	99		22.6 / 19.2
	XD							142	538	30			
0104-203837	**MD**	39.7 / 37.0	0.934	2.37	10/10 views			175	622	33	99		23.4 / 20.6

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-15

PROJECT NAME : GIBBONS CREEK SITE A & F LF

	XD							145	537	30			
0104-203842	MD	38.5 / 36.0	0.933	2.26	10/10 views			169	627	30	97		21.4 / 20.0
	XD							146	557	30			
0104-203843	MD	41.1 / 34.5	0.933	2.26	10/10 views			169	627	30	97		19.6 / 17.5
	XD							146	557	30			
0104-203844	MD	40.2 / 37.0	0.933	2.26	10/10 views			169	627	30	97		22.0 / 19.8
	XD							146	557	30			
0104-203845	MD	41.5 / 37.0	0.933	2.26	10/10 views			169	627	30	97		24.2 / 20.3
	XD							146	557	30			
0104-203846	MD	39.1 / 37.5	0.933	2.24	10/10 views			160	603	30	97		22.2 / 19.9
	XD							127	515	30			
0104-203847	MD	39.6 / 36.0	0.933	2.24	10/10 views			160	603	34	99		24.1 / 21.4
	XD							127	515	31			
0104-203848	MD	40.1 / 36.0	0.933	2.20	10/10 views			147	579	34	99		24.5 / 21.9
	XD							145	583	31			
0104-203849	MD	38.9 / 35.5	0.933	2.20	10/10 views			147	579	34	99		23.6 / 22.6
	XD							145	583	31			
0104-203850	MD	38.3 / 36.0	0.933	2.15	10/10 views			160	611	34	99		23.1 / 21.9
	XD							122	486	31			
0104-203851	MD	38.1 / 35.0	0.933	2.15	10/10 views			160	611	34	99		22.5 / 22.0
	XD							122	486	31			
0104-203852	MD	40.8 / 35.5	0.929	2.15	10/10 views			161	594	32	99		19.2 / 21.8
	XD							141	555	32			
0104-203853	MD	40.7 / 35.5	0.929	2.15	10/10 views			161	594	32	99		22.5 / 23.5
	XD							141	555	32			
0104-203854	MD	42.5 / 35.5	0.929	2.16	10/10 views			154	595	32	99		24.2 / 25.2
	XD							136	547	32			
0104-203855	MD	39.6 / 36.5	0.929	2.16	10/10 views			154	595	32	99		22.8 / 22.1
	XD							136	547	32			
0104-203856	MD	40.0 / 35.0	0.929	2.18	10/10 views			155	595	32	99		21.2 / 23.6
	XD							125	517	32			

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Solmax Geosynthetics LLC

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Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX214006
CLEANING/INSPECTION NO: 214006091921

S/O NO : JWCA075
CUSTOMER PO : PO-604230
DATE SHIPPED: 12/07/21
LOT NO : 21IB592
WEIGHT (LB) : 195,500.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.84
Density, g/cm3	ASTM D1505	.9169

Linda Kao

QC SUPERVISOR: LINDA KAO

Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX200947
CLEANING/INSPECTION NO: 200947091921

S/O NO : JWCA073
CUSTOMER PO : PO-604230
DATE SHIPPED: 12/07/21
LOT NO : 21IB591
WEIGHT (LB) : 190,400.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.82
Density, g/cm3	ASTM D1505	.9169

Linda Kao

QC SUPERVISOR: LINDA KAO

Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX214006
CLEANING/INSPECTION NO: 214006091921

S/O NO : JWCA075
CUSTOMER PO : PO-604230
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WEIGHT (LB) : 195,500.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.84
Density, g/cm3	ASTM D1505	.9169

Linda Kao

QC SUPERVISOR: LINDA KAO

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-17

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D3895	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101950-24067-1							
LLDPE 40 mils / 1.00 mm Black Textured			**1.0**	**< 0.926**	**100**		
0104-203857	21IB592	2022-03-14	0.84	0.917	132		
0104-203858	21IB592	2022-03-14	0.84	0.917	132		
0104-203859	21IB592	2022-03-14	0.84	0.917	132		
0104-203860	21IB592	2022-03-14	0.84	0.917	132		
0104-203861	21IB592	2022-03-15	0.84	0.917	132		
0104-203862	21IB592	2022-03-15	0.84	0.917	132		
0104-203863	21IB592	2022-03-15	0.84	0.917	132		
0104-203864	21IB592	2022-03-15	0.84	0.917	132		
0104-203865	21IB592	2022-03-15	0.84	0.917	132		
0104-203866	21IB592	2022-03-15	0.84	0.917	132		
0104-203867	21IB592	2022-03-15	0.84	0.917	132		
0104-203868	21IB592	2022-03-15	0.84	0.917	132		
0104-203869	21IB592	2022-03-15	0.84	0.917	132		
0104-203870	21IB592	2022-03-15	0.84	0.917	132		
0104-203871	21IB592	2022-03-15	0.84	0.917	132		

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-17

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203872	21IB592	2022-03-15	0.84	0.917	132		
0104-203873	21IB591	2022-03-15	0.82	0.917	132		
0104-203874	21IB591	2022-03-16	0.82	0.917	132		
0104-203875	21IB591	2022-03-16	0.82	0.917	132		
0104-203877	21IB591	2022-03-16	0.82	0.917	132		
0104-203878	21IB591	2022-03-16	0.82	0.917	132		
0104-203879	21IB591	2022-03-16	0.82	0.917	132		
0104-203880	21IB591	2022-03-16	0.82	0.917	132		
0104-203882	21IB591	2022-03-16	0.82	0.917	132		
0104-203883	21IB591	2022-03-16	0.82	0.917	132		
0104-203884	21IB591	2022-03-16	0.82	0.917	132		
0104-203885	21IB591	2022-03-16	0.82	0.917	132		
0104-203886	21IB591	2022-03-16	0.82	0.917	132		
0104-203887	21IB591	2022-03-16	0.82	0.917	132		
0104-203888	21IB591	2022-03-16	0.82	0.917	132		
0104-203891	21IB591	2022-03-17	0.82	0.917	132		
0104-203892	21IB591	2022-03-17	0.82	0.917	132		
0104-203893	21IB591	2022-03-17	0.82	0.917	132		
0104-203894	21IB591	2022-03-17	0.82	0.917	132		
0104-203895	21IB591	2022-03-17	0.82	0.917	132		

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-17

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203896	21IB591	2022-03-17	0.82	0.917	132		
0104-203897	21IB591	2022-03-17	0.82	0.917	132		
0104-203898	21IB616	2022-03-17	0.83	0.917	128		
0104-203899	21IB616	2022-03-17	0.83	0.917	128		
0104-203900	21IB616	2022-03-17	0.83	0.917	128		
0104-203901	21IB616	2022-03-17	0.83	0.917	128		
0104-203902	21IB616	2022-03-17	0.83	0.917	128		
0104-203904	21IB616	2022-03-17	0.83	0.917	128		
0104-203905	21IB616	2022-03-18	0.83	0.917	128		
0104-203906	21IB616	2022-03-18	0.83	0.917	128		
0104-203907	21IB616	2022-03-18	0.83	0.917	128		
0104-203908	21IB616	2022-03-18	0.83	0.917	128		
0104-203909	21IB616	2022-03-18	0.83	0.917	128		
0104-203910	21IB616	2022-03-18	0.83	0.917	128		
0104-203911	21IB616	2022-03-18	0.83	0.917	128		
0104-203912	21IB616	2022-03-18	0.83	0.917	128		

QUANTITY (ROLLS): 51

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-17

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1101950-24067-1
LLDPE 40 mils / 1.00 mm Black Textured

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile Yield Strength	Tensile Yield Elong.	Tensile Break Strength	Tensile Break Elong.	Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out
Unit	mils	g/cc	%	Cat 1 and 2	ppi	%	ppi	%	lbs	lbs	%	mils
Test Method	D5994	D792	D4218	D5596	D6693				D1004	D4833	D1204	D7466
Frequency	Each roll	Every 10 rolls	Every 2 rolls	Every 10 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		Every roll
Specification	38.0 / 34.0	≤ 0.939	2.0 - 3.0	Cat. 1 & Cat. 2			100	250	25	56		16 / 16
0104-203857 MD	41.4 / 37.5	0.929	2.18	10/10 views			155	595	30	100		24.7 / 25.2
XD							125	517	33			
0104-203858 MD	40.3 / 34.0	0.929	2.18	10/10 views			155	595	30	100		22.4 / 23.5
XD							125	517	33			
0104-203859 MD	41.9 / 39.5	0.929	2.18	10/10 views			155	595	30	100		22.4 / 19.6
XD							125	517	33			
0104-203860 MD	38.7 / 34.0	0.929	2.23	10/10 views			177	652	30	100		22.7 / 21.3
XD							122	483	33			
0104-203861 MD	40.5 / 36.0	0.929	2.23	10/10 views			177	652	30	100		23.6 / 23.0
XD							122	483	33			
0104-203862 MD	42.0 / 39.5	0.929	2.45	10/10 views			171	608	33	98		23.7 / 19.7
XD							102	417	32			
0104-203863 MD	40.2 / 35.0	0.929	2.57	10/10 views			171	608	33	98		24.9 / 22.3
XD							102	417	32			
0104-203864 MD	40.3 / 36.5	0.929	2.45	10/10 views			163	604	33	98		22.7 / 20.7
XD							130	511	32			
0104-203865 MD	38.2 / 35.5	0.929	2.45	10/10 views			163	604	33	98		21.0 / 20.5
XD							130	511	32			
0104-203866 MD	39.2 / 37.0	0.929	2.13	10/10 views			155	588	33	98		24.0 / 21.1
XD							133	542	32			
0104-203867 MD	40.2 / 37.5	0.929	2.13	10/10 views			155	588	30	93		21.1 / 23.1
XD							133	542	30			
0104-203868 MD	41.2 / 36.5	0.929	2.15	10/10 views			159	616	30	93		23.7 / 23.9
XD							132	546	30			
0104-203869 MD	40.7 / 38.5	0.929	2.15	10/10 views			159	616	30	93		24.3 / 24.4
XD							132	546	30			
0104-203870 MD	40.1 / 37.5	0.929	2.15	10/10 views			154	594	30	93		28.6 / 28.6
XD							124	516	30			

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-17

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203871	**MD**	42.5 / 38.0	0.929	2.15	10/10 views			154	594	30	93		21.5 / 22.0
	XD							124	516	30			
0104-203872	**MD**	42.3 / 36.5	0.929	2.19	10/10 views			154	594	30	93		22.0 / 22.1
	XD							124	516	30			
0104-203873	**MD**	42.1 / 38.5	0.929	2.19	10/10 views			154	594	30	93		26.5 / 24.6
	XD							124	516	30			
0104-203874	**MD**	40.1 / 39.5	0.932	2.14	10/10 views			154	594	30	93		22.5 / 22.5
	XD							124	516	30			
0104-203875	**MD**	40.8 / 37.5	0.932	2.14	10/10 views			156	595	31	84		24.8 / 22.0
	XD							127	524	32			
0104-203877	**MD**	38.4 / 36.5	0.932	2.14	10/10 views			156	595	31	84		21.3 / 23.4
	XD							127	524	32			
0104-203878	**MD**	38.2 / 36.0	0.932	2.21	10/10 views			156	616	31	84		24.6 / 22.7
	XD							133	541	32			
0104-203879	**MD**	38.8 / 36.5	0.932	2.21	10/10 views			156	616	31	84		22.5 / 24.0
	XD							133	541	32			
0104-203880	**MD**	38.7 / 37.0	0.932	2.16	10/10 views			161	628	31	84		24.3 / 22.4
	XD							126	519	32			
0104-203882	**MD**	40.8 / 37.0	0.932	2.16	10/10 views			161	628	31	102		27.5 / 25.7
	XD							126	519	32			
0104-203883	**MD**	43.4 / 40.0	0.932	2.25	10/10 views			164	616	31	102		26.4 / 24.3
	XD							138	541	32			
0104-203884	**MD**	40.4 / 37.0	0.932	2.25	10/10 views			164	616	31	102		25.3 / 25.0
	XD							138	541	32			
0104-203885	**MD**	41.6 / 36.5	0.932	2.13	10/10 views			145	591	31	102		24.3 / 25.6
	XD							118	491	32			
0104-203886	**MD**	43.2 / 39.0	0.932	2.13	10/10 views			145	591	31	102		23.3 / 23.0
	XD							118	491	32			
0104-203887	**MD**	41.5 / 39.0	0.935	2.28	10/10 views			161	630	30	90		24.5 / 24.6
	XD							123	494	31			
0104-203888	**MD**	42.0 / 37.0	0.935	2.28	10/10 views			161	630	30	90		24.0 / 26.1
	XD							123	494	31			
0104-203891	**MD**	41.6 / 37.5	0.934	2.27	10/10 views			177	630	32	87		25.9 / 22.8
	XD							126	481	35			
0104-203892	**MD**	40.5 / 36.5	0.934	2.27	10/10 views			177	630	32	87		24.2 / 21.9
	XD							126	481	35			
0104-203893	**MD**	38.6 / 36.0	0.934	2.25	10/10 views			160	608	32	87		26.8 / 26.1
	XD							132	531	35			
0104-203894	**MD**	39.2 / 35.0	0.934	2.25	10/10 views			160	608	32	87		26.9 / 29.4
	XD							132	531	35			
0104-203895	**MD**	41.1 / 36.0	0.934	2.26	10/10 views			163	599	32	87		26.2 / 23.8

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-17

PROJECT NAME : GIBBONS CREEK SITE A & F LF

	XD							138	554	35			
0104-203896	MD	39.3 / 37.5	0.934	2.26	10/10 views			163	599	31	91		23.7 / 24.2
	XD							138	554	32			
0104-203897	MD	39.7 / 37.5	0.934	2.07	10/10 views			165	613	31	91		26.7 / 26.5
	XD							134	536	32			
0104-203898	MD	42.5 / 40.0	0.934	2.07	10/10 views			165	613	31	91		26.3 / 25.9
	XD							134	536	32			
0104-203899	MD	41.5 / 39.0	0.934	2.07	10/10 views			165	613	31	91		21.0 / 21.3
	XD							134	536	32			
0104-203900	MD	41.6 / 38.5	0.934	2.07	10/10 views			165	613	31	91		23.7 / 23.0
	XD							134	536	32			
0104-203901	MD	40.2 / 37.5	0.933	2.09	10/10 views			171	642	30	96		22.0 / 21.6
	XD							134	529	33			
0104-203902	MD	39.6 / 34.5	0.933	2.09	10/10 views			171	642	30	96		22.2 / 21.6
	XD							134	529	33			
0104-203904	MD	40.3 / 37.0	0.933	2.09	10/10 views			171	642	30	96		21.3 / 20.9
	XD							134	529	33			
0104-203905	MD	38.5 / 36.5	0.933	2.09	10/10 views			171	642	30	96		21.8 / 22.1
	XD							134	529	33			
0104-203906	MD	38.1 / 35.5	0.933	2.20	10/10 views			160	605	30	96		22.1 / 21.4
	XD							118	458	33			
0104-203907	MD	38.2 / 36.5	0.933	2.20	10/10 views			160	605	34	94		22.6 / 22.0
	XD							118	458	30			
0104-203908	MD	39.5 / 37.0	0.933	2.13	10/10 views			167	629	34	94		22.5 / 19.9
	XD							141	574	30			
0104-203909	MD	39.4 / 36.0	0.933	2.13	10/10 views			167	629	34	94		26.2 / 25.1
	XD							141	574	30			
0104-203910	MD	39.4 / 36.5	0.933	2.22	10/10 views			158	591	34	94		23.7 / 20.9
	XD							141	559	30			
0104-203911	MD	39.9 / 37.0	0.933	2.22	10/10 views			158	591	34	94		23.2 / 20.8
	XD							141	559	30			
0104-203912	MD	42.5 / 38.0	0.935	2.29	10/10 views			155	603	31	94		23.4 / 24.0
	XD							129	535	32			

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX214006
CLEANING/INSPECTION NO: 214006091921

S/O NO : JWCA075
CUSTOMER PO : PO-604230
DATE SHIPPED: 12/07/21
LOT NO : 21IB592
WEIGHT (LB) : 195,500.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.84
Density, g/cm3	ASTM D1505	.9169

Linda Kao

QC SUPERVISOR: LINDA KAO

Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT TX 77978

PHONE:(888)FPCUSA3

Certificate of Analysis
(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON TX 77073

PRODUCT :L91507H
RAILCAR FPAX200947
CLEANING/INSPECTION NO: 200947091921

S/O NO : JWCA073
CUSTOMER PO : PO-604230
DATE SHIPPED: 12/07/21
LOT NO : 21IB591
WEIGHT (LB) : 190,400.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.82
Density, g/cm3	ASTM D1505	.9169

Linda Kao

QC SUPERVISOR: LINDA KAO

Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX214534
CLEANING/INSPECTION NO: 214534092021

S/O NO : JX1A051
CUSTOMER PO : PO-604440
DATE SHIPPED: 1/15/22
LOT NO : 21IB616
WEIGHT (LB) : 194,000.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.83
Density, g/cm3	ASTM D1505	.9172

Linda Kao

QC SUPERVISOR: LINDA KAO

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D3895	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101950-24067-1							
LLDPE 40 mils / 1.00 mm Black Textured			**1.0**	**< 0.926**	**100**		
0104-203913	21IB616	2022-03-18	0.83	0.917	128		
0104-203914	21IB616	2022-03-18	0.83	0.917	128		
0104-203915	21IB616	2022-03-18	0.83	0.917	128		
0104-203916	21IB616	2022-03-18	0.83	0.917	128		
0104-203917	21IB616	2022-03-18	0.83	0.917	128		
0104-203918	21IB616	2022-03-18	0.83	0.917	128		
0104-203919	21IB616	2022-03-18	0.83	0.917	128		
0104-203920	21IB616	2022-03-19	0.83	0.917	128		
0104-203921	21IB616	2022-03-19	0.83	0.917	128		
0104-203922	21IB616	2022-03-19	0.83	0.917	128		
0104-203923	21IB616	2022-03-19	0.83	0.917	128		
0104-203924	21IB616	2022-03-19	0.83	0.917	128		
0104-203925	21IB616	2022-03-19	0.83	0.917	128		
0104-203926	21IB616	2022-03-19	0.83	0.917	128		
0104-203927	21IB616	2022-03-19	0.83	0.917	128		

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203928	21IB616	2022-03-19	0.83	0.917	128		
0104-203929	21IB616	2022-03-19	0.83	0.917	128		
0104-203930	21IB616	2022-03-19	0.83	0.917	128		
0104-203931	21IB616	2022-03-19	0.83	0.917	128		
0104-203932	21IB616	2022-03-19	0.83	0.917	128		
0104-203933	21IB616	2022-03-19	0.83	0.917	128		
0104-203934	21IB616	2022-03-19	0.83	0.917	128		
0104-203935	21IB616	2022-03-20	0.83	0.917	128		
0104-203936	21IB616	2022-03-20	0.83	0.917	128		
0104-203937	21IB616	2022-03-20	0.83	0.917	128		
0104-203938	21IB616	2022-03-20	0.83	0.917	128		
0104-203939	21IB616	2022-03-20	0.83	0.917	128		
0104-203941	21IB616	2022-03-20	0.83	0.917	128		
0104-203942	21IB616	2022-03-20	0.83	0.917	128		
0104-203943	21IB616	2022-03-20	0.83	0.917	128		
0104-203944	21IB616	2022-03-20	0.83	0.917	128		
0104-203945	21IB616	2022-03-20	0.83	0.917	128		
0104-203946	21IB616	2022-03-20	0.83	0.917	128		
0104-203947	21IB616	2022-03-20	0.83	0.917	128		
0104-203948	21IB616	2022-03-20	0.83	0.917	128		

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203950	21IB616	2022-03-21	0.83	0.917	128		
0104-203951	21IB616	2022-03-21	0.83	0.917	128		
0104-203952	21IB616	2022-03-21	0.83	0.917	128		
0104-203953	21IB616	2022-03-21	0.83	0.917	128		
0104-203954	21IB616	2022-03-21	0.83	0.917	128		
0104-203955	21IB616	2022-03-21	0.83	0.917	128		
0104-203958	21IB616	2022-03-21	0.83	0.917	128		
0104-203959	21IB616	2022-03-21	0.83	0.917	128		
0104-203960	21IB616	2022-03-21	0.83	0.917	128		
0104-203964	21IB616	2022-03-22	0.83	0.917	128		
0104-203965	21IB616	2022-03-22	0.83	0.917	128		
0104-203966	21IB616	2022-03-22	0.83	0.917	128		
0104-203967	21IB616	2022-03-22	0.83	0.917	128		
0104-203968	21IB616	2022-03-22	0.83	0.917	128		
0104-203969	21IB616	2022-03-22	0.83	0.917	128		
0104-203970	21IB616	2022-03-22	0.83	0.917	128		
0104-203971	21IB616	2022-03-22	0.83	0.917	128		
0104-203974	21IB616	2022-03-22	0.83	0.917	128		
0104-203976	21IB612	2022-03-22	0.83	0.917	131		
0104-203977	21IB612	2022-03-22	0.83	0.917	131		

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203978	21IB612	2022-03-22	0.83	0.917	131		
0104-203979	21IB612	2022-03-22	0.83	0.917	131		
0104-203980	21IB612	2022-03-23	0.83	0.917	131		
0104-203981	21IB612	2022-03-23	0.83	0.917	131		
0104-203982	21IB612	2022-03-23	0.83	0.917	131		
0104-203983	21IB612	2022-03-23	0.83	0.917	131		
0104-203984	21IB612	2022-03-23	0.83	0.917	131		
0104-203985	21IB612	2022-03-23	0.83	0.917	131		
0104-203986	21IB612	2022-03-23	0.83	0.917	131		
0104-203987	21IB612	2022-03-23	0.83	0.917	131		
0104-203988	21IB612	2022-03-23	0.83	0.917	131		
0104-203989	21IB612	2022-03-23	0.83	0.917	131		
0104-203990	21IB612	2022-03-23	0.83	0.917	131		
0104-203991	21IB612	2022-03-23	0.83	0.917	131		
0104-203992	21IB612	2022-03-23	0.83	0.917	131		
0104-203993	21IB612	2022-03-23	0.83	0.917	131		
0104-203994	21IB612	2022-03-23	0.83	0.917	131		
0104-203995	21IB612	2022-03-23	0.83	0.917	131		
0104-203996	21IB612	2022-03-24	0.83	0.917	131		
0104-203997	21IB612	2022-03-24	0.83	0.917	131		

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203998	21IB612	2022-03-24	0.83	0.917	131		
0104-203999	21IB612	2022-03-24	0.83	0.917	131		
0104-204000	21IB612	2022-03-24	0.83	0.917	131		
0104-204001	21IB612	2022-03-24	0.83	0.917	131		

QUANTITY (ROLLS): 79

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1101950-24067-1
LLDPE 40 mils / 1.00 mm Black Textured

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile Yield Strength	Tensile Yield Elong.	Tensile Break Strength	Tensile Break Elong.	Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out
Unit	mils	g/cc	%	Cat 1 and 2	ppi	%	ppi	%	lbs	lbs	%	mils
Test Method	D5994	D792	D4218	D5596	D6693				D1004	D4833	D1204	D7466
Frequency	Each roll	Every 10 rolls	Every 2 rolls	Every 10 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		Every roll
Specification	38.0 / 34.0	≤ 0.939	2.0 - 3.0	Cat. 1 & Cat. 2			100	250	25	56		16 / 16
0104-203913 MD	42.6 / 39.5	0.935	2.29	10/10 views			155	603	31	94		24.0 / 23.2
XD							129	535	32			
0104-203914 MD	40.7 / 36.0	0.935	2.10	10/10 views			156	602	31	94		21.4 / 23.5
XD							131	547	32			
0104-203915 MD	41.0 / 37.5	0.935	2.10	10/10 views			156	602	29	102		22.5 / 24.7
XD							131	547	32			
0104-203916 MD	40.3 / 38.0	0.935	2.16	10/10 views			160	615	29	102		22.3 / 23.3
XD							129	542	32			
0104-203917 MD	41.1 / 37.0	0.935	2.16	10/10 views			160	615	29	102		23.4 / 24.1
XD							129	542	32			
0104-203918 MD	42.3 / 39.0	0.935	2.19	10/10 views			153	587	29	102		22.6 / 23.2
XD							140	555	32			
0104-203919 MD	42.2 / 37.5	0.935	2.19	10/10 views			153	587	29	102		22.5 / 23.5
XD							140	555	32			
0104-203920 MD	38.5 / 37.0	0.936	2.35	10/10 views			145	547	32	96		23.6 / 24.4
XD							122	503	33			
0104-203921 MD	40.3 / 37.0	0.936	2.35	10/10 views			145	547	32	96		23.6 / 24.3
XD							122	503	33			
0104-203922 MD	40.7 / 37.0	0.936	2.34	10/10 views			170	608	32	96		23.3 / 23.4
XD							153	567	33			
0104-203923 MD	39.8 / 37.5	0.936	2.34	10/10 views			170	608	32	96		24.5 / 23.8
XD							153	567	33			
0104-203924 MD	38.8 / 36.5	0.936	2.30	10/10 views			169	602	32	96		22.3 / 22.1
XD							144	539	33			
0104-203925 MD	40.8 / 38.0	0.936	2.30	10/10 views			169	602	32	94		22.1 / 21.6
XD							144	539	33			
0104-203926 MD	43.2 / 38.5	0.936	2.32	10/10 views			166	591	32	94		20.3 / 21.2
XD							157	572	33			

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203927	**MD**	44.1 / 40.5	0.936	2.32	10/10 views			166	591	32	94		22.2 / 21.7
	XD							157	572	33			
0104-203928	**MD**	43.2 / 37.0	0.936	2.21	10/10 views			175	632	32	94		21.8 / 23.1
	XD							138	521	33			
0104-203929	**MD**	41.8 / 36.0	0.936	2.21	10/10 views			175	632	32	94		20.7 / 23.0
	XD							138	521	33			
0104-203930	**MD**	42.6 / 38.0	0.931	2.18	10/10 views			155	598	30	98		26.4 / 22.1
	XD							166	606	31			
0104-203931	**MD**	43.4 / 40.0	0.931	2.18	10/10 views			155	598	30	98		21.0 / 20.4
	XD							166	606	31			
0104-203932	**MD**	42.7 / 36.5	0.931	2.20	10/10 views			160	595	30	98		24.0 / 27.2
	XD							140	544	31			
0104-203933	**MD**	42.0 / 38.0	0.931	2.20	10/10 views			168	613	32	89		20.4 / 18.9
	XD							148	555	31			
0104-203934	**MD**	39.5 / 36.0	0.931	2.45	10/10 views			160	593	32	89		21.1 / 24.6
	XD							130	506	31			
0104-203935	**MD**	38.5 / 36.5	0.931	2.45	10/10 views			160	593	32	89		27.4 / 20.9
	XD							130	506	31			
0104-203936	**MD**	38.9 / 36.5	0.931	2.42	10/10 views			159	605	32	89		19.9 / 20.5
	XD							135	531	31			
0104-203937	**MD**	39.6 / 38.0	0.931	2.42	10/10 views			159	605	32	89		23.5 / 22.1
	XD							135	531	31			
0104-203938	**MD**	38.8 / 37.0	0.933	2.34	10/10 views			162	602	30	100		21.9 / 25.2
	XD							136	544	32			
0104-203939	**MD**	40.1 / 36.5	0.933	2.34	10/10 views			162	602	30	100		21.0 / 21.4
	XD							136	544	32			
0104-203941	**MD**	40.8 / 36.5	0.933	2.38	10/10 views			160	570	30	100		23.8 / 20.8
	XD							150	572	32			
0104-203942	**MD**	41.9 / 36.0	0.933	2.38	10/10 views			160	570	30	100		24.2 / 25.0
	XD							150	572	32			
0104-203943	**MD**	41.7 / 38.0	0.933	2.29	10/10 views			165	610	30	100		22.7 / 25.0
	XD							140	552	32			
0104-203944	**MD**	42.6 / 39.0	0.933	2.29	10/10 views			165	610	31	95		21.7 / 23.5
	XD							140	552	32			
0104-203945	**MD**	42.7 / 37.0	0.933	2.09	10/10 views			161	590	31	95		24.6 / 25.3
	XD							153	587	32			
0104-203946	**MD**	41.0 / 38.0	0.933	2.09	10/10 views			161	590	31	95		20.9 / 28.2
	XD							153	587	32			
0104-203947	**MD**	43.1 / 39.5	0.933	2.29	10/10 views			172	635	31	95		23.6 / 20.8
	XD							146	563	32			
0104-203948	**MD**	41.6 / 38.0	0.933	2.29	10/10 views			172	635	31	95		23.5 / 23.8

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

	XD							146	563	32			
0104-203950	MD	39.4 / 37.5	0.931	2.34	10/10 views			165	591	31	95		20.2 / 23.9
	XD							131	501	33			
0104-203951	MD	38.8 / 36.5	0.931	2.44	10/10 views			174	618	31	95		28.9 / 23.9
	XD							141	524	33			
0104-203952	MD	38.6 / 36.5	0.931	2.44	10/10 views			174	618	31	95		27.7 / 21.9
	XD							141	524	33			
0104-203953	MD	38.5 / 36.0	0.931	2.40	10/10 views			172	621	31	95		22.5 / 23.4
	XD							136	506	33			
0104-203954	MD	38.8 / 37.5	0.931	2.40	10/10 views			172	621	29	102		28.6 / 23.0
	XD							136	506	32			
0104-203955	MD	39.4 / 36.5	0.931	2.48	10/10 views			154	560	29	102		24.7 / 26.6
	XD							134	499	32			
0104-203958	MD	40.4 / 37.5	0.931	2.48	10/10 views			154	560	29	102		23.4 / 25.7
	XD							134	499	32			
0104-203959	MD	42.0 / 39.0	0.931	2.27	10/10 views			132	509	29	102		25.0 / 26.5
	XD							171	599	32			
0104-203960	MD	45.1 / 41.5	0.931	2.27	10/10 views			132	509	29	102		22.5 / 22.3
	XD							171	599	32			
0104-203964	MD	41.7 / 38.0	0.934	2.40	10/10 views			174	591	31	99		24.8 / 22.3
	XD							154	537	32			
0104-203965	MD	42.7 / 41.5	0.934	2.40	10/10 views			174	591	31	99		23.7 / 20.8
	XD							154	537	32			
0104-203966	MD	41.8 / 39.0	0.934	2.30	10/10 views			176	565	31	99		25.0 / 25.2
	XD							159	537	32			
0104-203967	MD	42.4 / 39.0	0.934	2.30	10/10 views			176	565	31	99		21.4 / 24.1
	XD							159	537	32			
0104-203968	MD	40.1 / 39.0	0.934	2.40	10/10 views			170	612	31	99		25.0 / 21.7
	XD							138	524	32			
0104-203969	MD	41.1 / 38.0	0.934	2.40	10/10 views			170	612	35	97		25.4 / 24.9
	XD							138	524	39			
0104-203970	MD	43.6 / 40.5	0.934	2.36	10/10 views			170	612	35	97		23.7 / 19.6
	XD							138	524	39			
0104-203971	MD	42.4 / 39.5	0.934	2.36	10/10 views			170	612	35	97		268.8 / 20.2
	XD							138	524	39			
0104-203974	MD	42.6 / 41.0	0.934	2.18	10/10 views			170	612	35	97		21.3 / 19.0
	XD							138	524	39			
0104-203976	MD	42.0 / 35.5	0.934	2.18	10/10 views			170	612	35	97		19.0 / 20.4
	XD							138	524	39			
0104-203977	MD	43.4 / 37.5	0.930	2.18	10/10 views			156	587	33	95		18.8 / 22.1
	XD							148	577	33			

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-203978	**MD**	43.6 / 41.0	0.930	2.18	10/10 views			156	587	33	95		18.8 / 20.3
	XD							148	577	33			
0104-203979	**MD**	42.7 / 40.0	0.930	2.15	10/10 views			156	598	33	95		19.0 / 18.6
	XD							126	513	33			
0104-203980	**MD**	40.7 / 38.5	0.930	2.15	10/10 views			156	598	33	95		19.9 / 22.0
	XD							126	513	33			
0104-203981	**MD**	41.6 / 37.5	0.930	2.15	10/10 views			156	598	33	95		19.7 / 19.3
	XD							126	513	33			
0104-203982	**MD**	41.1 / 36.0	0.930	2.15	10/10 views			156	598	33	95		20.5 / 19.7
	XD							126	513	33			
0104-203983	**MD**	41.5 / 37.0	0.930	2.15	10/10 views			156	598	33	95		18.9 / 18.6
	XD							126	513	33			
0104-203984	**MD**	41.4 / 36.0	0.930	2.15	10/10 views			156	598	33	95		20.9 / 19.8
	XD							126	513	33			
0104-203985	**MD**	40.3 / 38.0	0.927	2.22	10/10 views			165	609	31	97		19.6 / 18.8
	XD							134	537	35			
0104-203986	**MD**	40.6 / 38.5	0.927	2.22	10/10 views			165	609	31	97		21.5 / 20.5
	XD							134	537	35			
0104-203987	**MD**	41.6 / 38.5	0.927	2.36	10/10 views			143	555	31	97		19.3 / 19.3
	XD							139	547	35			
0104-203988	**MD**	43.5 / 37.0	0.927	2.36	10/10 views			143	555	31	97		20.3 / 22.3
	XD							139	547	35			
0104-203989	**MD**	40.7 / 36.5	0.927	2.20	10/10 views			156	611	31	97		18.9 / 20.2
	XD							132	544	35			
0104-203990	**MD**	41.7 / 38.5	0.927	2.20	10/10 views			156	611	31	97		17.6 / 19.1
	XD							132	544	35			
0104-203991	**MD**	40.5 / 35.0	0.927	2.24	10/10 views			165	643	31	97		19.1 / 18.5
	XD							136	553	35			
0104-203992	**MD**	43.2 / 37.5	0.927	2.24	10/10 views			165	643	31	97		18.5 / 17.6
	XD							136	553	35			
0104-203993	**MD**	42.2 / 39.0	0.927	2.35	10/10 views			155	598	31	97		20.7 / 21.0
	XD							130	526	35			
0104-203994	**MD**	44.8 / 41.0	0.927	2.35	10/10 views			155	598	31	97		18.9 / 20.0
	XD							130	526	35			
0104-203995	**MD**	41.0 / 37.5	0.927	2.35	10/10 views			155	598	31	97		20.5 / 21.5
	XD							130	526	35			
0104-203996	**MD**	42.3 / 36.5	0.927	2.35	10/10 views			155	598	31	97		21.1 / 21.2
	XD							130	526	35			
0104-203997	**MD**	41.2 / 37.5	0.927	2.35	10/10 views			155	598	31	97		19.8 / 19.3
	XD							130	526	35			
0104-203998	**MD**	41.4 / 38.0	0.927	2.35	10/10 views			155	598	31	97		23.2 / 22.7

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-18

PROJECT NAME : GIBBONS CREEK SITE A & F LF

	XD							130	526	35			
0104-203999	MD	39.5 / 36.0	0.927	2.22	10/10 views			167	632	31	97		22.0 / 20.5
	XD							128	529	35			
0104-204000	MD	41.0 / 36.5	0.927	2.22	10/10 views			167	632	31	97		19.7 / 17.7
	XD							128	529	35			
0104-204001	MD	40.7 / 37.0	0.934	2.27	10/10 views			147	572	30	95		23.7 / 21.6
	XD							126	520	33			

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Solmax Geosynthetics LLC

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Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX214534
CLEANING/INSPECTION NO: 214534092021

S/O NO : JX1A051
CUSTOMER PO : PO-604440
DATE SHIPPED: 1/15/22
LOT NO : 21IB616
WEIGHT (LB) : 194,000.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.83
Density, g/cm3	ASTM D1505	.9172

Linda Kao

QC SUPERVISOR: LINDA KAO

Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT TX 77978

PHONE:(888)FPCUSA3

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON TX 77073

PRODUCT :L91507H
RAILCAR FPAX940119
CLEANING/INSPECTION NO: 940119092121

S/O NO : JX1A052
CUSTOMER PO : PO-604440
DATE SHIPPED: 1/15/22
LOT NO : 21IB612
WEIGHT (LB) : 179,200.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.83
Density, g/cm3	ASTM D1505	.9171

Linda Kao

QC SUPERVISOR: LINDA KAO

LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D3895	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101950-24067-1							
LLDPE 40 mils / 1.00 mm Black Textured			**1.0**	**< 0.926**	**100**		
0104-204002	21IB612	2022-03-24	0.83	0.917	126		
0104-204003	21IB612	2022-03-24	0.83	0.917	126		
0104-204004	21IB612	2022-03-24	0.83	0.917	126		
0104-204005	21IB612	2022-03-24	0.83	0.917	126		
0104-204006	21IB612	2022-03-24	0.83	0.917	126		
0104-204007	21IB612	2022-03-24	0.83	0.917	126		
0104-204008	21IB612	2022-03-24	0.83	0.917	126		
0104-204009	21IB612	2022-03-24	0.83	0.917	126		
0104-204010	21IB612	2022-03-24	0.83	0.917	126		
0104-204011	21IB612	2022-03-25	0.83	0.917	126		
0104-204012	21IB612	2022-03-25	0.83	0.917	126		
0104-204013	21IB612	2022-03-25	0.83	0.917	126		
0104-204014	21IB612	2022-03-25	0.83	0.917	126		
0104-204015	21IB612	2022-03-25	0.83	0.917	126		
0104-204016	21IB612	2022-03-25	0.83	0.917	126		

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-204017	21IB612	2022-03-25	0.83	0.917	126		
0104-204018	21IB612	2022-03-25	0.83	0.917	126		
0104-204019	21IB612	2022-03-25	0.83	0.917	126		
0104-204020	21IB612	2022-03-25	0.83	0.917	126		
0104-204021	21IB612	2022-03-25	0.83	0.917	126		
0104-204022	21IB612	2022-03-25	0.83	0.917	126		
0104-204023	21IB612	2022-03-25	0.83	0.917	126		
0104-204024	21IB612	2022-03-25	0.83	0.917	126		
0104-204025	21IB612	2022-03-25	0.83	0.917	126		
0104-204026	21IB612	2022-03-26	0.83	0.917	126		
0104-204027	21IB612	2022-03-26	0.83	0.917	126		
0104-204028	21IB612	2022-03-26	0.83	0.917	126		
0104-204029	21IB612	2022-03-26	0.83	0.917	126		
0104-204030	21IB612	2022-03-26	0.83	0.917	126		
0104-204031	21IB612	2022-03-26	0.83	0.917	126		
0104-204032	21IB612	2022-03-26	0.83	0.917	126		
0104-204033	21IB612	2022-03-26	0.83	0.917	126		
0104-204034	21IB612	2022-03-26	0.83	0.917	126		
0104-204035	21IB612	2022-03-26	0.83	0.917	126		
0104-204036	21IB612	2022-03-26	0.83	0.917	126		

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-204037	21IB612	2022-03-26	0.83	0.917	126		
0104-204038	21IB612	2022-03-26	0.83	0.917	126		
0104-204039	21IB612	2022-03-26	0.83	0.917	126		
0104-204040	21IB612	2022-03-27	0.83	0.917	126		
0104-204041	21IB612	2022-03-27	0.83	0.917	126		
0104-204042	21IB612	2022-03-27	0.83	0.917	126		
0104-204044	21IB612	2022-03-27	0.83	0.917	126		
0104-204045	21IB612	2022-03-27	0.83	0.917	126		
0104-204046	21IB612	2022-03-27	0.83	0.917	126		
0104-204047	21IB612	2022-03-27	0.83	0.917	126		
0104-204048	21IB612	2022-03-27	0.83	0.917	126		
0104-204049	21IB612	2022-03-27	0.83	0.917	126		
0104-204050	21IB612	2022-03-27	0.83	0.917	126		
0104-204051	21IB612	2022-03-27	0.83	0.917	126		
0104-204052	21IB612	2022-03-27	0.83	0.917	126		
0104-204053	21IB612	2022-03-27	0.83	0.917	126		
0104-204054	21IB620	2022-03-27	0.86	0.918	133		
0104-204055	21IB620	2022-03-28	0.86	0.918	133		
0104-204056	21IB620	2022-03-28	0.86	0.918	133		
0104-204057	21IB620	2022-03-28	0.86	0.918	133		

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-204058	21IB620	2022-03-28	0.86	0.918	133		
0104-204059	21IB620	2022-03-28	0.86	0.918	133		
0104-204060	21IB620	2022-03-28	0.86	0.918	133		
0104-204061	21IB620	2022-03-28	0.86	0.918	133		
0104-204062	21IB620	2022-03-28	0.86	0.918	133		
0104-204063	21IB620	2022-03-28	0.86	0.918	133		
0104-204064	21IB620	2022-03-28	0.86	0.918	133		
0104-204065	21IB620	2022-03-28	0.86	0.918	133		
0104-204066	21IB620	2022-03-28	0.86	0.918	133		
0104-204067	21IB620	2022-03-28	0.86	0.918	133		
0104-204068	21IB620	2022-03-28	0.86	0.918	133		
0104-204069	21IB620	2022-03-28	0.86	0.918	133		
0104-204070	21IB620	2022-03-29	0.86	0.918	133		
0104-204071	21IB620	2022-03-29	0.86	0.918	133		
0104-204072	21IB620	2022-03-29	0.86	0.918	133		
0104-204073	21IB620	2022-03-29	0.86	0.918	133		
0104-204074	21IB620	2022-03-29	0.86	0.918	133		
0104-204075	21IB620	2022-03-29	0.86	0.918	133		
0104-204076	21IB620	2022-03-29	0.86	0.918	133		
0104-204077	21IB620	2022-03-29	0.86	0.918	133		

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LIST OF GEOMEMBRANE ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-204078	21IB620	2022-03-29	0.86	0.918	133		
0104-204079	21IB620	2022-03-29	0.86	0.918	133		
0104-204080	21IB620	2022-03-29	0.86	0.918	133		
0104-204081	21IB620	2022-03-29	0.86	0.918	133		
0104-204082	21IB620	2022-03-29	0.86	0.918	133		
0104-204083	21IB620	2022-03-29	0.86	0.918	133		
0104-204084	21IB620	2022-03-29	0.86	0.918	133		
0104-204085	21IB620	2022-03-30	0.86	0.918	133		
0104-204086	21IB620	2022-03-30	0.86	0.918	133		
0104-204087	21IB620	2022-03-30	0.86	0.918	133		
0104-204088	21IB620	2022-03-30	0.86	0.918	133		
0104-204089	21IB620	2022-03-30	0.86	0.918	133		

QUANTITY (ROLLS): 87

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1101950-24067-1
LLDPE 40 mils / 1.00 mm Black Textured

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile Yield Strength	Tensile Yield Elong.	Tensile Break Strength	Tensile Break Elong.	Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out
Unit	mils	g/cc	%	Cat 1 and 2	ppi	%	ppi	%	lbs	lbs	%	mils
Test Method	D5994	D792	D4218	D5596	D6693				D1004	D4833	D1204	D7466
Frequency	Each roll	Every 10 rolls	Every 2 rolls	Every 10 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		Every roll
Specification	38.0 / 34.0	≤ 0.939	2.0 - 3.0	Cat. 1 & Cat. 2			100	250	25	56		16 / 16
0104-204002 MD	38.4 / 36.5	0.934	2.27	10/10 views			147	572	30	95		26.8 / 18.7
XD							126	520	33			
0104-204003 MD	39.1 / 36.5	0.934	2.33	10/10 views			154	594	30	95		20.0 / 19.7
XD							132	546	33			
0104-204004 MD	38.7 / 37.0	0.934	2.33	10/10 views			154	594	30	95		22.4 / 23.0
XD							132	546	33			
0104-204005 MD	38.5 / 36.5	0.934	2.27	10/10 views			164	637	30	95		21.7 / 19.3
XD							131	555	33			
0104-204006 MD	38.5 / 35.5	0.934	2.27	10/10 views			164	637	30	93		22.9 / 20.1
XD							131	555	34			
0104-204007 MD	38.8 / 36.5	0.934	2.37	10/10 views			159	616	30	93		25.9 / 21.1
XD							133	555	34			
0104-204008 MD	38.2 / 36.5	0.934	2.37	10/10 views			159	616	30	93		20.7 / 23.1
XD							133	555	34			
0104-204009 MD	39.9 / 37.0	0.934	2.41	10/10 views			160	597	30	93		18.0 / 22.4
XD							133	531	34			
0104-204010 MD	43.1 / 39.0	0.934	2.41	10/10 views			160	597	30	93		21.5 / 22.1
XD							133	531	34			
0104-204011 MD	42.7 / 39.5	0.931	2.22	10/10 views			158	598	31	95		20.9 / 21.9
XD							139	546	35			
0104-204012 MD	46.4 / 43.5	0.931	2.22	10/10 views			158	598	31	95		23.2 / 24.6
XD							139	546	35			
0104-204013 MD	44.2 / 40.0	0.931	2.17	10/10 views			174	636	31	95		24.7 / 26.4
XD							140	549	35			
0104-204014 MD	44.7 / 40.0	0.931	2.17	10/10 views			174	636	31	95		21.2 / 22.6
XD							140	549	35			
0104-204015 MD	43.8 / 40.0	0.931	2.38	10/10 views			173	628	31	95		20.7 / 22.0
XD							152	574	35			

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PACKING SLIP NUMBER: Pre-SO-092691-20

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-204016	**MD**	43.8 / 40.0	0.931	2.38	10/10 views			173	628	32	96		22.7 / 25.3
	XD							152	574	35			
0104-204017	**MD**	43.5 / 38.0	0.931	2.51	10/10 views			165	624	32	96		24.4 / 26.0
	XD							134	535	35			
0104-204018	**MD**	40.0 / 36.0	0.931	2.51	10/10 views			165	624	32	96		23.7 / 18.6
	XD							134	535	35			
0104-204019	**MD**	39.6 / 38.0	0.931	2.29	10/10 views			163	614	32	96		20.2 / 22.6
	XD							128	507	35			
0104-204020	**MD**	39.6 / 37.5	0.931	2.29	10/10 views			163	614	32	96		22.1 / 24.6
	XD							128	507	35			
0104-204021	**MD**	39.3 / 36.5	0.934	2.28	10/10 views			162	607	29	96		20.7 / 19.9
	XD							136	568	34			
0104-204022	**MD**	39.7 / 36.0	0.934	2.28	10/10 views			162	607	29	96		18.3 / 21.1
	XD							136	568	34			
0104-204023	**MD**	41.4 / 39.0	0.934	2.22	10/10 views			162	589	29	96		22.8 / 20.9
	XD							141	525	34			
0104-204024	**MD**	39.2 / 37.5	0.934	2.22	10/10 views			162	589	29	96		19.8 / 21.5
	XD							141	525	34			
0104-204025	**MD**	40.7 / 36.0	0.934	2.15	10/10 views			165	601	29	96		21.3 / 22.4
	XD							158	611	34			
0104-204026	**MD**	44.2 / 40.5	0.934	2.15	10/10 views			165	601	29	96		20.9 / 21.8
	XD							158	611	34			
0104-204027	**MD**	45.5 / 39.0	0.934	2.24	10/10 views			155	573	29	96		21.2 / 22.7
	XD							140	542	34			
0104-204028	**MD**	43.1 / 41.0	0.934	2.24	10/10 views			155	573	32	93		20.6 / 22.6
	XD							140	542	33			
0104-204029	**MD**	44.5 / 39.5	0.934	2.18	10/10 views			176	653	32	93		21.9 / 22.4
	XD							138	548	33			
0104-204030	**MD**	43.9 / 41.0	0.934	2.18	10/10 views			176	653	32	93		20.9 / 22.2
	XD							138	548	33			
0104-204031	**MD**	45.3 / 41.0	0.934	2.11	10/10 views			173	634	32	93		21.7 / 22.6
	XD							132	530	33			
0104-204032	**MD**	42.1 / 38.5	0.934	2.11	10/10 views			173	634	32	93		22.1 / 22.8
	XD							132	530	33			
0104-204033	**MD**	43.7 / 37.5	0.929	2.21	10/10 views			161	617	32	92		22.0 / 19.9
	XD							138	557	34			
0104-204034	**MD**	42.7 / 39.5	0.929	2.21	10/10 views			161	617	32	92		20.1 / 19.6
	XD							138	557	34			
0104-204035	**MD**	43.3 / 38.0	0.929	2.34	10/10 views			161	617	32	92		19.3 / 19.8
	XD							138	557	34			
0104-204036	**MD**	42.0 / 38.5	0.929	2.34	10/10 views			161	617	32	92		20.6 / 21.5

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	XD							138	557	34			
0104-204037	MD	42.8 / 38.5	0.929	2.28	10/10 views			169	636	32	92		17.5 / 20.5
	XD							133	538	34			
0104-204038	MD	43.1 / 37.5	0.929	2.28	10/10 views			169	636	34	102		21.6 / 17.9
	XD							133	538	33			
0104-204039	MD	44.4 / 40.0	0.929	2.20	10/10 views			156	592	34	102		20.5 / 21.1
	XD							136	549	33			
0104-204040	MD	40.4 / 35.0	0.929	2.20	10/10 views			156	592	34	102		20.6 / 20.7
	XD							136	549	33			
0104-204041	MD	40.4 / 37.0	0.929	2.20	10/10 views			156	592	34	102		19.0 / 18.7
	XD							136	549	33			
0104-204042	MD	40.8 / 39.0	0.929	2.20	10/10 views			156	592	34	102		19.0 / 20.8
	XD							136	549	33			
0104-204044	MD	39.1 / 35.5	0.931	2.30	10/10 views			164	632	31	91		19.8 / 21.0
	XD							130	526	34			
0104-204045	MD	40.8 / 35.0	0.931	2.30	10/10 views			164	632	31	91		18.3 / 18.6
	XD							130	526	34			
0104-204046	MD	39.7 / 37.0	0.931	2.30	10/10 views			164	632	31	91		20.3 / 20.9
	XD							130	526	34			
0104-204047	MD	43.4 / 38.0	0.931	2.30	10/10 views			164	632	31	91		20.2 / 25.1
	XD							130	526	34			
0104-204048	MD	43.1 / 37.0	0.931	2.35	10/10 views			166	643	31	91		18.0 / 19.0
	XD							132	531	34			
0104-204049	MD	43.6 / 39.0	0.931	2.35	10/10 views			166	643	33	91		22.2 / 21.7
	XD							132	531	32			
0104-204050	MD	40.9 / 37.0	0.931	2.46	10/10 views			150	573	33	91		21.5 / 23.4
	XD							128	513	32			
0104-204051	MD	41.3 / 37.5	0.931	2.46	10/10 views			150	573	33	91		19.8 / 39.3
	XD							128	513	32			
0104-204052	MD	41.1 / 35.5	0.931	2.38	10/10 views			166	624	33	91		19.7 / 20.8
	XD							142	564	32			
0104-204053	MD	42.8 / 34.5	0.931	2.38	10/10 views			166	624	33	91		19.9 / 23.3
	XD							142	564	32			
0104-204054	MD	41.0 / 35.5	0.933	2.33	10/10 views			160	620	33	103		20.2 / 17.9
	XD							135	535	34			
0104-204055	MD	39.3 / 35.5	0.933	2.33	10/10 views			160	620	33	103		20.2 / 19.1
	XD							135	535	34			
0104-204056	MD	41.6 / 39.0	0.933	2.33	10/10 views			160	620	33	103		19.3 / 17.9
	XD							135	535	34			
0104-204057	MD	40.1 / 36.5	0.933	2.33	10/10 views			160	620	33	103		19.1 / 18.5
	XD							135	535	34			

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0104-204058	**MD**	40.7 / 34.5	0.933	2.33	10/10 views			160	620	33	103		18.5 / 18.8
	XD							135	535	34			
0104-204059	**MD**	40.4 / 35.0	0.933	2.33	10/10 views			160	620	32	102		17.9 / 17.8
	XD							135	535	34			
0104-204060	**MD**	40.8 / 37.5	0.933	2.34	10/10 views			176	607	32	102		18.9 / 18.8
	XD							153	567	34			
0104-204061	**MD**	40.3 / 37.5	0.933	2.34	10/10 views			176	607	32	102		20.2 / 20.9
	XD							153	567	34			
0104-204062	**MD**	43.3 / 39.5	0.933	2.26	10/10 views			153	631	32	102		19.3 / 19.4
	XD							133	564	34			
0104-204063	**MD**	42.1 / 38.0	0.933	2.26	10/10 views			166	634	32	102		18.1 / 20.9
	XD							139	549	34			
0104-204064	**MD**	42.2 / 35.5	0.930	2.25	10/10 views			170	660	30	97		20.5 / 23.1
	XD							137	562	32			
0104-204065	**MD**	42.3 / 38.0	0.930	2.25	10/10 views			170	660	30	97		20.9 / 20.0
	XD							137	562	32			
0104-204066	**MD**	41.6 / 38.5	0.930	2.25	10/10 views			166	630	30	97		19.9 / 20.3
	XD							146	577	32			
0104-204067	**MD**	42.2 / 38.0	0.930	2.25	10/10 views			166	630	30	97		20.7 / 23.2
	XD							146	577	32			
0104-204068	**MD**	41.4 / 38.0	0.930	2.13	10/10 views			151	580	30	97		21.9 / 19.5
	XD							137	554	32			
0104-204069	**MD**	43.3 / 39.5	0.930	2.13	10/10 views			151	580	30	97		18.4 / 19.0
	XD							137	554	32			
0104-204070	**MD**	39.5 / 35.5	0.930	2.25	10/10 views			168	728	30	97		21.1 / 23.4
	XD							135	544	32			
0104-204071	**MD**	38.6 / 34.0	0.930	2.25	10/10 views			168	728	31	96		21.5 / 18.5
	XD							135	544	33			
0104-204072	**MD**	39.4 / 34.0	0.930	2.25	10/10 views			168	728	31	96		19.0 / 18.0
	XD							135	544	33			
0104-204073	**MD**	40.2 / 35.5	0.930	2.25	10/10 views			168	728	31	96		18.5 / 18.9
	XD							135	544	33			
0104-204074	**MD**	38.1 / 34.0	0.930	2.25	10/10 views			168	728	31	96		20.3 / 19.6
	XD							135	544	33			
0104-204075	**MD**	39.2 / 36.0	0.930	2.25	10/10 views			168	728	31	96		18.7 / 18.4
	XD							135	544	33			
0104-204076	**MD**	40.6 / 37.0	0.934	2.46	10/10 views			162	625	32	94		21.0 / 19.3
	XD							131	517	33			
0104-204077	**MD**	39.5 / 37.5	0.934	2.46	10/10 views			162	625	32	94		20.2 / 22.7
	XD							131	517	33			
0104-204078	**MD**	39.5 / 36.5	0.934	2.22	10/10 views			194	634	32	94		21.4 / 20.3

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

	XD							175	578	33			
0104-204079	MD	39.8 / 36.0	0.934	2.22	10/10 views			194	634	32	94		24.4 / 21.6
	XD							175	578	33			
0104-204080	MD	39.7 / 38.0	0.934	2.40	10/10 views			150	565	32	94		24.5 / 23.0
	XD							136	548	33			
0104-204081	MD	39.9 / 36.0	0.934	2.40	10/10 views			150	565	32	92		20.8 / 18.5
	XD							136	548	35			
0104-204082	MD	39.4 / 37.5	0.934	2.35	10/10 views			161	605	32	92		19.0 / 19.5
	XD							136	529	35			
0104-204083	MD	38.5 / 35.5	0.934	2.35	10/10 views			161	605	32	92		25.4 / 21.6
	XD							136	529	35			
0104-204084	MD	42.6 / 39.0	0.934	2.44	10/10 views			161	584	32	92		20.5 / 22.8
	XD							146	546	35			
0104-204085	MD	44.1 / 41.0	0.934	2.44	10/10 views			161	584	32	92		20.0 / 20.3
	XD							146	546	35			
0104-204086	MD	42.7 / 38.0	0.931	2.36	10/10 views			161	610	31	100		22.3 / 20.8
	XD							138	554	35			
0104-204087	MD	41.7 / 38.0	0.931	2.36	10/10 views			161	610	31	100		20.7 / 20.4
	XD							138	554	35			
0104-204088	MD	43.0 / 40.5	0.931	2.36	10/10 views			161	610	31	100		18.9 / 19.8
	XD							138	554	35			
0104-204089	MD	41.4 / 37.5	0.931	2.36	10/10 views			161	610	31	100		23.2 / 20.3
	XD							138	554	35			

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Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX940119
CLEANING/INSPECTION NO: 940119092121

S/O NO : JX1A052
CUSTOMER PO : PO-604440
DATE SHIPPED: 1/15/22
LOT NO : 21IB612
WEIGHT (LB) : 179,200.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.83
Density, g/cm3	ASTM D1505	.9171

Linda Kao

QC SUPERVISOR: LINDA KAO

Formosa Plastics

FORMOSA PLASTICS CORPORATION, TEXAS
201 FORMOSA DRIVE PHONE:(888)FPCUSA3
PO BOX 700
POINT COMFORT TX 77978

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER:SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
PRODUCT :L91507H
RAILCAR FPAX218048
CLEANING/INSPECTION NO: 218048092321

S/O NO : JX1A053
CUSTOMER PO : PO-604440
DATE SHIPPED: 1/15/22
LOT NO : 21IB620
WEIGHT (LB) : 189,700.00
CUSTID:FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.86
Density, g/cm3	ASTM D1505	.9177

Linda Kao

QC SUPERVISOR: LINDA KAO

SOLMAX

Technical data sheet

FabriNet Series, 200 mil Nonwoven calendered,

PROPERTY	TEST METHOD	FREQUENCY(1)	UNIT Imperial	1106375
SPECIFICATIONS				
GEOCOMPOSITE		-		
Transmissivity	ASTM D4716	1/540,000 ft²	m²/sec	1x10⁻⁴
Load / Seat Time / Gradient			psf/min/-	10000/15/0.1
Boundary Conditions				Steel plates
Ply Adhesion Average (min. avg.)	ASTM D7005	1/50,000 ft²	lbf/in	1.0
GEONET CORE		-		
Thickness (min. avg.)	ASTM D5199	1/50,000 ft²	mils	200
Transmissivity	ASTM D4716	1/Shift	m²/sec	2x10⁻³
Load / Seat Time / Gradient			psf/min/-	10000/15/0.1
Boundary Conditions				Steel plates
Density (min.)	ASTM D792	1/50,000 ft²	g/cc	0.94
Carbon Black Content	ASTM D4218	1/50,000 ft²	%	2.0
Tensile Stength (MD)	ASTM D7179	1/50,000 ft²	lbf/in	45
GEOTEXTILE (2)		-		
Mass	ASTM D5261	1/90,000 ft²	oz/yd²	8
Grab Tensile Strength	ASTM D4632	1/90,000 ft²	lbf	220
Grab Elongation	ASTM D4632	1/90,000 ft²	%	50
CBR Puncture Strength	ASTM D6241	1/540,000 ft²	lbf	575
Trapezoidal Tear Strength	ASTM D4533	1/90,000 ft²	lbf	90
Apparent Opening Size (max.)	ASTM D4751	1/540,000 ft²	mm	0.180
Permittivity	ASTM D4491	1/540,000 ft²	sec-1	1.3
Water Flow Rate	ASTM D4491	1/540,000 ft²	gpm/ft²	95
UV Resistance-% retained after 500 hrs (typ.)	ASTM D4355	Per formulation	%	70
SUPPLY SPECIFICATIONS(Roll dimensions may vary ±1%)				
Roll Dimension - Width	-		ft	14.75
Roll Dimension - Length	-		ft	260
Area (Surface/Roll)	-		ft²	3835

NOTES

2. Component properties prior to lamination.

* All geotextile properties are minimum average roll values except AOS which is maximum average roll value and UV resistance is typical value.
* The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-010965	2021-11-29	PNJ720430	2330-541403	2330-541402
0116-010966	2021-11-29	PNJ720430	2330-541403	2330-541402
0116-010967	2021-11-29	PNJ720430	2330-541437	2330-541402
0116-010968	2021-11-29	PNJ720430	2330-541437	2330-541402
0116-010969	2021-11-29	PNJ720430	2330-541437	2330-541402
0116-010970	2021-11-29	PNJ720430	2330-541437	2330-541402
0116-010971	2021-11-29	PNJ720430	2330-541437	2330-541436
0116-010972	2021-11-29	PNJ720430	2330-541423	2330-541436
0116-010973	2021-11-29	PNJ720430	2330-541423	2330-541436
0116-010974	2021-11-29	PNJ720430	2330-541423	2330-541436
0116-010975	2021-11-29	PNJ720430	2330-541423	2330-541436
0116-010976	2021-11-29	PNJ720430	2330-541423	2330-541451
0116-010977	2021-11-29	PNJ720430	2330-541423	2330-541451
0116-010978	2021-11-29	PNJ720430	2330-541400	2330-541451
0116-010979	2021-11-30	PNJ720430	2330-541400	2330-541451
0116-010980	2021-11-30	PNJ720430	2330-541400	2330-541451
0116-010981	2021-11-30	PNJ720430	2330-541400	2330-541451
0116-010982	2021-11-30	PNJ720430	2330-541400	2330-541451
0116-010983	2021-11-30	PNJ720430	2330-541400	2330-541451
0116-010984	2021-11-30	PNJ720430	2330-541400	2330-541451

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-010985	2021-11-30	PNJ720430	2330-541400	2330-541451	
0116-010987	2021-11-30	PNJ720430	2330-541408	2330-541451	
0116-010988	2021-11-30	PNJ720430	2330-541408	2330-541451	
0116-010989	2021-11-30	PNJ720430	2330-541408	2330-541451	
0116-010990	2021-11-30	PNJ720430	2330-541408	2330-541451	
0116-010991	2021-11-30	PNJ720430	2330-541408	2330-540965	
0116-010992	2021-11-30	PNJ720430	2330-540967	2330-540965	
0116-010993	2021-11-30	PNJ720430	2330-540967	2330-540965	
0116-010994	2021-11-30	PNJ720430	2330-540967	2330-540965	
0116-010995	2021-11-30	PNJ720430	2330-540967	2330-540965	
0116-010996	2021-11-30	PNJ720430	2330-540967	2330-540965	
0116-010997	2021-11-30	PNJ720430	2330-540967	2330-540972	
0116-010998	2021-11-30	PNJ720430	2330-541455	2330-540972	
0116-010999	2021-11-30	PNJ720430	2330-541455	2330-540972	
0116-011000	2021-11-30	PNJ720430	2330-541455	2330-540972	
0116-011001	2021-11-30	PNJ720430	2330-541455	2330-541015	
0116-011002	2021-11-30	PNJ720430	2330-541455	2330-541015	
0116-011003	2021-11-30	PNJ720430	2330-540973	2330-541015	
0116-011004	2021-11-30	PNJ720430	2330-540973	2330-541015	
0116-011005	2021-11-30	PNJ720430	2330-540973	2330-541015	
0116-011006	2021-11-30	PNJ720430	2330-540973	2330-540970	
0116-011007	2021-11-30	PNJ720430	2330-540973	2330-540970	
0116-011008	2021-11-30	PNJ720430	2330-540973	2330-540970	
0116-011009	2021-11-30	PNJ720430	2330-541453	2330-540970	
0116-011010	2021-11-30	PNJ720430	2330-541453	2330-540970	
0116-011011	2021-11-30	PNJ720430	2330-541453	2330-540970	
0116-011012	2021-11-30	PNJ720430	2330-541453	2330-541000	
0116-011013	2021-12-01	PNJ720430	2330-541014	2330-541000	
0116-011014	2021-12-01	PNJ720430	2330-541014	2330-541000	

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011015	2021-12-01	PNJ720430	2330-541014	2330-541000	
0116-011016	2021-12-01	PNJ720430	2330-541014	2330-541000	
0116-011017	2021-12-01	PNJ720430	2330-541014	2330-541000	
0116-011018	2021-12-01	PNJ720430	2330-541014	2330-540960	
0116-011019	2021-12-01	PNJ720430	2330-541014	2330-540960	
0116-011020	2021-12-01	PNJ720430	2330-541452	2330-540960	
0116-011021	2021-12-01	PNJ720430	2330-541452	2330-540960	
0116-011022	2021-12-01	PNJ720430	2330-541452	2330-540960	
0116-011023	2021-12-01	PNJ720430	2330-541452	2330-537688	
0116-011024	2021-12-01	PNJ720430	2330-541452	2330-537688	
0116-011025	2021-12-01	PNJ720430	2330-541457	2330-537688	
0116-011026	2021-12-01	PNJ720430	2330-541457	2330-537688	
0116-011027	2021-12-01	PNJ720430	2330-541457	2330-537688	
0116-011028	2021-12-01	PNJ720430	2330-541457	2330-537688	
0116-011029	2021-12-01	PNJ720430	2330-541457	2330-541450	
0116-011030	2021-12-01	PNJ720430	2330-541457	2330-541450	
0116-011031	2021-12-01	PNJ720430	2330-541449	2330-541450	
0116-011032	2021-12-01	PNJ720430	2330-541449	2330-541450	
0116-011033	2021-12-01	PNJ720430	2330-541449	2330-541450	
0116-011034	2021-12-01	PNJ720430	2330-541449	2330-541435	
0116-011035	2021-12-01	PNJ720430	2330-541449	2330-541435	
0116-011036	2021-12-01	PNJ720430	2330-541445	2330-541435	
0116-011037	2021-12-01	PNJ720430	2330-541445	2330-541435	
0116-011038	2021-12-01	PNJ720430	2330-541445	2330-541435	
0116-011039	2021-12-01	PNJ720430	2330-541445	2330-541435	
0116-011046	2021-12-02	PNJ720430	2330-541434	2330-540762	
0116-011047	2021-12-02	PNJ720430	2330-541434	2330-540762	
0116-011048	2021-12-02	PNJ720430	2330-541434	2330-540762	
0116-011049	2021-12-02	PNJ720430	2330-541434	2330-540762	

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011050	2021-12-02	PNJ720430	2330-541434	2330-540762
0116-011051	2021-12-02	PNJ720430	2330-541434	2330-531593
0116-011052	2021-12-02	PNJ720430	2330-540980	2330-531593
0116-011053	2021-12-02	PNJ720430	2330-540980	2330-531593
0116-011054	2021-12-02	PNJ720430	2330-540980	2330-531593
0116-011055	2021-12-02	PNJ720430	2330-540980	2330-531593
0116-011056	2021-12-02	PNJ720430	2330-540980	2330-531593
0116-011057	2021-12-02	PNJ720430	2330-540980	2330-540759
0116-011058	2021-12-02	PNJ720430	2330-541714	2330-540759
0116-011059	2021-12-02	PNJ720430	2330-541714	2330-540759
0116-011060	2021-12-02	PNJ720430	2330-541714	2330-540759
0116-011061	2021-12-02	PNJ720430	2330-541714	2330-540759
0116-011062	2021-12-02	PNJ720430	2330-541714	2330-541710
0116-011063	2021-12-02	PNJ720430	2330-541703	2330-541710
0116-011064	2021-12-02	PNJ720430	2330-541703	2330-541710
0116-011065	2021-12-02	PNJ720430	2330-541703	2330-541710
0116-011066	2021-12-02	PNJ720430	2330-541703	2330-541710
0116-011067	2021-12-02	PNJ720430	2330-541703	2330-541710
0116-011068	2021-12-02	PNJ720430	2330-541703	2330-541716
0116-011069	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011070	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011071	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011072	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011073	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011075	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011076	2021-12-02	PNJ720430	2330-541700	2330-541716
0116-011077	2021-12-02	PNJ720430	2330-541701	2330-541702
0116-011078	2021-12-02	PNJ720430	2330-541701	2330-541702

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:	856
SALES ORDER:	SO-092691
PACKING SLIP NUMBER:	Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

QUANTITY (ROLLS): 106

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-010965	232.00	2.33	0.954	77	4	6
0116-010966	232.00	2.33	0.954	77	4	6
0116-010967	232.00	2.33	0.954	77	4	6
0116-010968	232.00	2.33	0.954	77	4	6
0116-010969	232.00	2.33	0.954	77	4	6
0116-010970	224.00	2.51	0.954	77	4	6
0116-010971	224.00	2.51	0.954	77	4	6
0116-010972	224.00	2.51	0.954	77	4	6
0116-010973	224.00	2.51	0.954	77	4	6
0116-010974	224.00	2.51	0.954	77	4	6
0116-010975	224.30	2.52	0.955	77	6	4
0116-010976	224.30	2.52	0.955	77	6	4
0116-010977	224.30	2.52	0.955	77	6	4
0116-010978	224.30	2.52	0.955	77	6	4
0116-010979	224.30	2.52	0.955	77	6	4
0116-010980	223.00	2.32	0.955	77	6	4
0116-010981	223.00	2.32	0.955	77	6	4
0116-010982	223.00	2.32	0.955	77	6	4
0116-010983	223.00	2.32	0.955	77	6	4
0116-010984	223.00	2.32	0.955	77	6	4
0116-010985	223.00	2.32	0.955	77	6	4
0116-010987	234.80	2.41	0.952	75	4	5
0116-010988	234.80	2.41	0.952	75	4	5
0116-010989	234.80	2.41	0.952	75	4	5

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-010990	234.80	2.41	0.952	75	4	5
0116-010991	234.80	2.41	0.952	75	4	5
0116-010992	220.00	2.49	0.952	75	4	5
0116-010993	220.00	2.49	0.952	75	4	5
0116-010994	220.00	2.49	0.952	75	4	5
0116-010995	220.00	2.49	0.952	75	4	5
0116-010996	220.00	2.49	0.952	75	4	5
0116-010997	220.00	2.49	0.952	75	4	5
0116-010998	226.00	2.50	0.957	79	7	4
0116-010999	226.00	2.50	0.957	79	7	4
0116-011000	226.00	2.50	0.957	79	7	4
0116-011001	226.00	2.50	0.957	79	7	4
0116-011002	226.00	2.50	0.957	79	7	4
0116-011003	217.00	2.49	0.957	79	7	4
0116-011004	217.00	2.49	0.957	79	7	4
0116-011005	217.00	2.49	0.957	79	7	4
0116-011006	217.00	2.49	0.957	79	7	4
0116-011007	217.00	2.49	0.957	79	7	4
0116-011008	235.00	2.60	0.957	74	6	5
0116-011009	235.00	2.60	0.957	74	6	5
0116-011010	235.00	2.60	0.957	74	6	5
0116-011011	235.00	2.60	0.957	74	6	5
0116-011012	235.00	2.60	0.957	74	6	5
0116-011013	232.00	2.59	0.957	74	6	5
0116-011014	232.00	2.59	0.957	74	6	5
0116-011015	232.00	2.59	0.957	74	6	5
0116-011016	232.00	2.59	0.957	74	6	5
0116-011017	232.00	2.59	0.957	74	6	5
0116-011018	241.00	2.51	0.958	73	7	4
0116-011019	241.00	2.51	0.958	73	7	4
0116-011020	241.00	2.51	0.958	73	7	4
0116-011021	241.00	2.51	0.958	73	7	4
0116-011022	241.00	2.51	0.958	73	7	4
0116-011023	241.00	2.35	0.958	73	7	4
0116-011024	241.00	2.35	0.958	73	7	4
0116-011025	241.00	2.35	0.958	73	7	4

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011026	241.00	2.35	0.958	73	7	4
0116-011027	241.00	2.35	0.958	73	7	4
0116-011028	220.00	2.30	0.954	64	6	3
0116-011029	220.00	2.30	0.954	64	6	3
0116-011030	220.00	2.30	0.954	64	6	3
0116-011031	220.00	2.30	0.954	64	6	3
0116-011032	220.00	2.30	0.954	64	6	3
0116-011033	217.00	2.36	0.954	64	6	3
0116-011034	217.00	2.36	0.954	64	6	3
0116-011035	217.00	2.36	0.954	64	6	3
0116-011036	217.00	2.36	0.954	64	6	3
0116-011037	217.00	2.36	0.954	64	6	3
0116-011038	223.00	2.33	0.955	70	4	4
0116-011039	223.00	2.33	0.955	70	4	4
0116-011046	216.00	2.30	0.953	60	7	6
0116-011047	216.00	2.30	0.953	60	7	6
0116-011048	216.00	2.30	0.953	60	7	6
0116-011049	216.00	2.30	0.953	60	7	6
0116-011050	216.00	2.30	0.953	60	7	6
0116-011051	219.00	2.25	0.953	60	7	6
0116-011052	219.00	2.25	0.953	60	7	6
0116-011053	219.00	2.25	0.953	60	7	6
0116-011054	219.00	2.25	0.953	60	7	6
0116-011055	219.00	2.25	0.953	60	7	6
0116-011056	227.00	2.39	0.955	67	6	6
0116-011057	227.00	2.39	0.955	67	6	6
0116-011058	227.00	2.39	0.955	67	6	6
0116-011059	227.00	2.39	0.955	67	6	6
0116-011060	227.00	2.39	0.955	67	6	6
0116-011061	235.00	2.42	0.955	67	6	6
0116-011062	235.00	2.42	0.955	67	6	6
0116-011063	235.00	2.42	0.955	67	6	6
0116-011064	235.00	2.42	0.955	67	6	6
0116-011065	235.00	2.42	0.955	67	6	6
0116-011066	232.00	2.34	0.954	67	5	4
0116-011067	232.00	2.34	0.954	67	5	4

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011068	232.00	2.34	0.954	67	5	4
0116-011069	232.00	2.34	0.954	67	5	4
0116-011070	232.00	2.34	0.954	67	5	4
0116-011071	227.00	2.34	0.954	67	5	4
0116-011072	227.00	2.34	0.954	67	5	4
0116-011073	227.00	2.34	0.954	67	5	4
0116-011075	227.00	2.34	0.954	67	5	4
0116-011076	227.00	2.34	0.954	67	5	4
0116-011077	233.30	2.33	0.953	76	6	5
0116-011078	233.30	2.33	0.953	76	6	5

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-540967	8.8	259	277	83	107	112	129	171	777	0.180	1.8
2330-540973	8.3	239	284	86	125	117	145	172	772	0.180	1.8
2330-540980	8.6	240	280	73	126	113	144	173	746	0.180	1.8
2330-541014	8.5	255	263	87	124	117	152	156	789	0.180	2.6
2330-541400	8.6	241	259	95	108	115	157	158	753	0.180	2.1
2330-541403	8.7	244	252	91	107	137	184	161	736	0.180	2.1
2330-541408	8.8	263	271	106	143	125	151	196	762	0.180	2.1
2330-541423	8.8	232	292	87	119	133	175	162	812	0.180	1.8
2330-541434	8.7	234	282	88	106	113	153	170	807	0.180	1.9
2330-541437	8.7	234	282	88	106	113	153	170	807	0.180	1.9
2330-541445	8.9	253	277	77	110	134	172	180	830	0.180	1.9
2330-541449	8.7	264	298	88	126	153	181	171	807	0.180	1.9
2330-541452	8.8	289	294	72	113	134	180	191	808	0.180	1.9
2330-541453	8.8	289	294	72	113	134	180	191	808	0.180	1.9
2330-541455	8.8	249	278	89	125	130	154	183	751	0.180	2.0
2330-541457	8.8	249	278	89	125	130	154	183	751	0.180	2.0

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2330-541700	8.4	237	270	91	112	117	161	162	775	0.180	2.0
2330-541701	9.0	260	285	97	107	133	167	165	795	0.180	1.7
2330-541703	9.0	260	285	97	107	133	167	165	795	0.180	1.7
2330-541714	8.9	272	286	87	123	126	143	173	809	0.180	1.7
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-531593	8.7	258	261	76	80	122	179	141	812	0.180	
2330-537688	9.2	248	284	88	100	130	178	167	785	0.180	1.5
2330-540759	8.9	270	293	80	140	160	209	187	792	0.180	2.0
2330-540762	8.9	270	293	80	140	160	209	187	792	0.180	2.0
2330-540960	8.6	245	284	96	148	125	163	184	800	0.180	1.8
2330-540965	8.9	268	308	81	134	123	160	163	770	0.180	1.7
2330-540970	8.3	239	284	86	125	117	145	172	772	0.180	1.8
2330-540972	8.3	239	284	86	125	117	145	172	772	0.180	1.8
2330-541000	8.8	267	300	83	107	117	135	167	731	0.180	1.7
2330-541015	8.5	255	263	87	124	117	152	156	789	0.180	2.6
2330-541402	8.7	244	252	91	107	137	184	161	736	0.180	2.1
2330-541435	8.7	234	282	88	106	113	153	170	807	0.180	1.9
2330-541436	8.7	234	282	88	106	113	153	170	807	0.180	1.9
2330-541450	8.8	289	294	72	113	134	180	191	808	0.180	1.9
2330-541451	8.8	289	294	72	113	134	180	191	808	0.180	1.9
2330-541702	9.0	260	285	97	107	133	167	165	795	0.180	1.7
2330-541710	9.0	253	296	75	101	124	170	165	790	0.180	1.7
2330-541716	8.9	272	286	87	123	126	143	173	809	0.180	1.7

Test	12
Specification	**95**
2330-540967	131
2330-540973	133
2330-540980	135
2330-541014	193
2330-541400	158
2330-541403	154
2330-541408	156
2330-541423	135
2330-541434	143
2330-541437	143

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-10

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2330-541445	141
2330-541449	148
2330-541452	144
2330-541453	144
2330-541455	151
2330-541457	151
2330-541700	153
2330-541701	125
2330-541703	125
2330-541714	127
Specification	**95**
2330-531593	
2330-537688	111
2330-540759	151
2330-540762	151
2330-540960	134
2330-540965	125
2330-540970	133
2330-540972	133
2330-541000	130
2330-541015	193
2330-541402	154
2330-541435	143
2330-541436	143
2330-541450	144
2330-541451	144
2330-541702	125
2330-541710	124
2330-541716	127

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 09/08/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80509937
PO #: 603725
Weight: 187600.000 LB
Ship Date: 09/08/2021
Package: BULK
Mode: Hopper Car
Car #: CPCX815854
Seal No: 235762

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PNJ720430

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.380	g/10min
Density	D1505 or D4883	0.9560	g/cm3
Production Date		09/06/2021	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

Erin Xiao
Quality Systems Coordinator

For CoA questions contact Shannon Blacknall at +1-832-813-4807

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-011082	2021-12-02	PNJ720430	2330-541701	2330-541702
0116-011083	2021-12-02	PNJ720430	2330-541701	2330-541702
0116-011085	2021-12-02	PNJ720430	2330-541677	2330-541699
0116-011086	2021-12-02	PNJ720430	2330-541677	2330-541699
0116-011087	2021-12-02	PNJ720430	2330-541677	2330-541699
0116-011088	2021-12-02	PNJ720430	2330-541677	2330-541699
0116-011089	2021-12-03	PNJ720430	2330-541677	2330-541699
0116-011090	2021-12-03	PNJ720430	2330-540956	2330-541721
0116-011091	2021-12-03	PNJ720430	2330-540956	2330-541721
0116-011092	2021-12-03	PNJ720430	2330-540956	2330-541721
0116-011093	2021-12-03	PNJ720430	2330-541722	2330-541721
0116-011094	2021-12-03	PNJ720430	2330-541722	2330-541721
0116-011097	2021-12-03	PNJ720430	2330-541722	2330-541721
0116-011098	2021-12-03	PNJ720430	2330-541722	2330-541721
0116-011099	2021-12-03	PNJ720430	2330-541722	2330-541708
0116-011100	2021-12-03	PNJ720430	2330-541682	2330-541708
0116-011101	2021-12-03	PNJ720430	2330-541682	2330-541708
0116-011102	2021-12-03	PNJ720430	2330-541682	2330-541708
0116-011103	2021-12-03	PNJ720430	2330-541682	2330-541708
0116-011104	2021-12-03	PNJ720430	2330-541682	2330-541708

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

9 Dec 2021

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011105	2021-12-03	PNJ720430	2330-541723	2330-541683
0116-011106	2021-12-03	PNJ720430	2330-541723	2330-541683
0116-011107	2021-12-03	PNJ720430	2330-541723	2330-541683
0116-011117	2021-12-04	PNJ720430	2330-541723	2330-541679
0116-011118	2021-12-04	PNJ720430	2330-541706	2330-541679
0116-011119	2021-12-04	PNJ720430	2330-541706	2330-541679
0116-011120	2021-12-04	PNJ720430	2330-541706	2330-541679
0116-011121	2021-12-04	PNJ720430	2330-541706	2330-541679
0116-011122	2021-12-04	PNJ720430	2330-541706	2330-541680
0116-011123	2021-12-04	PNJ720430	2330-541706	2330-541680
0116-011124	2021-12-04	PNJ720430	2330-541704	2330-541680
0116-011125	2021-12-04	PNJ720430	2330-541704	2330-541680
0116-011126	2021-12-04	PNJ720430	2330-541704	2330-541680
0116-011127	2021-12-04	PNJ720430	2330-541704	2330-541680
0116-011128	2021-12-04	PNJ720430	2330-541704	2330-541691
0116-011129	2021-12-04	PNJ720430	2330-541686	2330-541691
0116-011131	2021-12-04	PNJ720430	2330-541686	2330-541691
0116-011132	2021-12-04	PNJ720430	2330-541686	2330-541691
0116-011133	2021-12-04	PNJ720430	2330-541686	2330-541690
0116-011134	2021-12-04	PNJ720430	2330-541686	2330-541690
0116-011135	2021-12-04	PNJ720430	2330-540743	2330-541690
0116-011136	2021-12-04	PNJ720430	2330-540743	2330-541690
0116-011137	2021-12-04	PNJ720430	2330-540743	2330-541690
0116-011138	2021-12-04	PNJ720430	2330-540743	2330-541690
0116-011139	2021-12-04	PNJ720430	2330-541687	2330-541690
0116-011140	2021-12-04	PNJ720430	2330-541687	2330-541690
0116-011141	2021-12-04	PNJ720430	2330-541687	2330-541690
0116-011142	2021-12-04	PNJ720430	2330-541687	2330-541690

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011143	2021-12-04	PNJ720430	2330-541687	2330-540586
0116-011144	2021-12-04	PNJ720430	2330-541687	2330-540586
0116-011145	2021-12-04	PNJ720430	2330-541687	2330-540586
0116-011146	2021-12-04	PNJ720430	2330-541687	2330-540586
0116-011147	2021-12-04	PNJ720430	2330-541687	2330-540586
0116-011148	2021-12-04	PNJ720430	2330-541687	2330-540586
0116-011149	2021-12-04	PNJ720430	2330-541687	2330-540587
0116-011154	2021-12-04	PNJ720430	2330-540950	2330-540587
0116-011155	2021-12-04	PNJ720430	2330-540950	2330-540587
0116-011156	2021-12-05	PNJ720430	2330-540950	2330-540587
0116-011157	2021-12-05	PNJ720430	2330-540950	2330-540587
0116-011177	2021-12-05	PNM620530	2330-540950	2330-540588
0116-011178	2021-12-05	PNM620530	2330-540950	2330-540588
0116-011179	2021-12-05	PNM620530	2330-540950	2330-540588
0116-011228	2021-12-08	PNM620530	2330-540941	2330-540949
0116-011229	2021-12-08	PNM620530	2330-540941	2330-540949
0116-011236	2021-12-08	PNM620530	2330-540941	2330-540551
0116-011237	2021-12-08	PNM620530	2330-540941	2330-540551
0116-011238	2021-12-08	PNM620530	2330-540941	2330-540551
0116-011240	2021-12-08	PNM620530	2330-540554	2330-540551
0116-011241	2021-12-08	PNM620530	2330-540554	2330-540551
0116-011242	2021-12-08	PNM620530	2330-540554	2330-541398
0116-011243	2021-12-08	PNM620530	2330-540554	2330-541398
0116-011244	2021-12-08	PNM620530	2330-540742	2330-541398
0116-011245	2021-12-08	PNM620530	2330-540742	2330-541398
0116-011246	2021-12-08	PNM620530	2330-540742	2330-541398
0116-011247	2021-12-08	PNM620530	2330-540742	2330-540548
0116-011248	2021-12-08	PNM620530	2330-540742	2330-540548

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL

PROJECT NUMBER:	856
SALES ORDER:	SO-092691
PACKING SLIP NUMBER:	Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

QUANTITY (ROLLS): 76

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-011082	240.30	2.30	0.954	78	4	5
0116-011083	240.30	2.30	0.954	78	4	5
0116-011085	240.30	2.30	0.954	78	4	5
0116-011086	240.30	2.30	0.954	78	4	5
0116-011087	243.30	2.26	0.954	78	4	5
0116-011088	243.30	2.26	0.954	78	4	5
0116-011089	243.30	2.26	0.954	78	4	5
0116-011090	243.30	2.26	0.954	78	4	5
0116-011091	243.30	2.26	0.954	78	4	5
0116-011092	243.30	2.26	0.954	78	4	5
0116-011093	237.00	2.17	0.958	69	4	5
0116-011094	237.00	2.17	0.958	69	4	5
0116-011097	230.00	2.34	0.954	69	4	5
0116-011098	230.00	2.34	0.954	69	4	5
0116-011099	230.00	2.34	0.954	69	4	5
0116-011100	230.00	2.34	0.954	69	4	5
0116-011101	230.00	2.34	0.954	69	4	5
0116-011102	223.00	2.18	0.954	69	4	5
0116-011103	223.00	2.18	0.954	69	4	5
0116-011104	223.00	2.18	0.954	69	4	5
0116-011105	223.00	2.18	0.954	69	4	5
0116-011106	223.00	2.18	0.954	69	4	5
0116-011107	223.00	2.18	0.954	69	4	5
0116-011117	222.00	2.34	0.952	72	5	3

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011118	222.00	2.34	0.952	72	5	3
0116-011119	222.00	2.34	0.952	72	5	3
0116-011120	222.00	2.34	0.952	72	5	3
0116-011121	222.00	2.22	0.952	72	5	3
0116-011122	214.00	2.15	0.952	72	5	3
0116-011123	214.00	2.15	0.952	72	5	3
0116-011124	214.00	2.15	0.952	72	5	3
0116-011125	214.00	2.15	0.952	72	5	3
0116-011126	214.00	2.15	0.952	72	5	3
0116-011127	224.00	2.24	0.958	69	4	3
0116-011128	224.00	2.24	0.958	69	4	3
0116-011129	224.00	2.24	0.958	69	4	3
0116-011131	218.00	2.24	0.953	66	4	5
0116-011132	218.00	2.24	0.953	66	4	5
0116-011133	218.00	2.24	0.953	66	4	5
0116-011134	218.00	2.24	0.953	66	4	5
0116-011135	218.00	2.24	0.953	66	4	5
0116-011136	219.00	2.57	0.953	66	4	5
0116-011137	219.00	2.57	0.953	66	4	5
0116-011138	219.00	2.57	0.953	66	4	5
0116-011139	219.00	2.57	0.953	66	4	5
0116-011140	219.00	2.57	0.953	66	4	5
0116-011141	220.00	2.58	0.956	64	6	5
0116-011142	220.00	2.58	0.956	64	6	5
0116-011143	220.00	2.58	0.956	64	6	5
0116-011144	220.00	2.58	0.956	64	6	5
0116-011145	220.00	2.58	0.956	64	6	5
0116-011146	219.00	2.63	0.956	64	6	5
0116-011147	219.00	2.63	0.956	64	6	5
0116-011148	219.00	2.63	0.956	64	6	5
0116-011149	219.00	2.63	0.956	64	6	5
0116-011154	222.00	2.30	0.954	65	3	4
0116-011155	222.00	2.30	0.954	65	3	4
0116-011156	222.00	2.30	0.954	65	3	4
0116-011157	222.00	2.30	0.954	65	3	4
0116-011177	237.00	2.33	0.954	69	5	5

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011178	237.00	2.33	0.954	69	5	5
0116-011179	237.00	2.33	0.954	69	5	5
0116-011228	231.00	2.32	0.952	73	3	4
0116-011229	231.00	2.32	0.952	73	3	4
0116-011236	233.00	2.27	0.953	75	5	5
0116-011237	233.00	2.27	0.953	75	5	5
0116-011238	233.00	2.27	0.953	75	5	5
0116-011240	233.00	2.27	0.953	75	5	5
0116-011241	233.00	2.27	0.953	75	5	5
0116-011242	219.00	2.36	0.953	75	5	5
0116-011243	219.00	2.36	0.953	75	5	5
0116-011244	219.00	2.36	0.953	75	5	5
0116-011245	219.00	2.36	0.953	75	5	5
0116-011246	219.00	2.36	0.953	75	5	5
0116-011247	220.30	2.25	0.954	70	5	4
0116-011248	220.30	2.25	0.954	70	5	4

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-540554	8.8	259	288	81	103	128	168	162	726	0.180	2.0
2330-540742	9.0	251	297	86	125	139	165	178	830	0.180	2.2
2330-540743	9.0	264	298	88	146	146	174	187	725	0.180	2.0
2330-540941	8.7	244	293	82	115	115	153	178	754	0.180	1.8
2330-540950	8.8	250	293	74	118	138	176	170	766	0.180	1.8
2330-540956	8.9	241	297	77	142	124	137	163	783	0.180	1.7
2330-541677	8.7	265	283	74	123	122	157	171	783	0.180	2.2
2330-541682	8.5	269	279	79	153	129	166	181	805	0.180	2.2
2330-541686	10.0	300	340	78	97	144	142	184	905	0.180	1.6
2330-541687	10.0	300	340	78	97	144	142	184	905	0.180	1.6
2330-541701	9.0	260	285	97	107	133	167	165	795	0.180	1.7
2330-541704	9.0	260	285	97	107	133	167	165	795	0.180	1.7
2330-541706	8.7	267	283	86	112	131	161	166	785	0.180	1.8
2330-541722	8.7	277	271	101	155	126	142	192	815	0.180	1.7
2330-541723	8.7	277	271	101	155	126	142	192	815	0.180	1.7
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-540548	8.8	252	282	74	104	131	158	149	676	0.180	1.9
2330-540551	8.9	254	278	81	105	136	169	154	677	0.180	2.0
2330-540586	9.1	276	299	77	113	140	172	157	847	0.180	1.7
2330-540587	9.1	276	299	77	113	140	172	157	847	0.180	1.7
2330-540588	9.1	276	299	77	113	140	172	157	847	0.180	1.7
2330-540949	8.8	235	298	80	109	132	157	175	733	0.180	1.7
2330-541398	8.6	241	259	95	108	115	157	158	753	0.180	2.1
2330-541679	8.7	265	283	74	123	122	157	171	783	0.180	2.2
2330-541680	8.5	269	279	79	153	129	166	181	805	0.180	2.2
2330-541683	8.5	269	279	79	153	129	166	181	805	0.180	2.2
2330-541690	8.9	261	275	81	118	153	192	190	784	0.180	1.9
2330-541691	8.9	261	275	81	118	153	192	190	784	0.180	1.9
2330-541699	8.4	237	270	91	112	117	161	162	775	0.180	2.0
2330-541702	9.0	260	285	97	107	133	167	165	795	0.180	1.7
2330-541708	8.7	267	283	86	112	131	161	166	785	0.180	1.8
2330-541721	8.7	277	271	101	155	126	142	192	815	0.180	1.7

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-11

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
Specification	**95**
2330-540554	164
2330-540742	165
2330-540743	152
2330-540941	135
2330-540950	137
2330-540956	128
2330-541677	162
2330-541682	162
2330-541686	117
2330-541687	117
2330-541701	125
2330-541704	125
2330-541706	134
2330-541722	126
2330-541723	126
Specification	**95**
2330-540548	161
2330-540551	163
2330-540586	127
2330-540587	127
2330-540588	127
2330-540949	
2330-541398	158
2330-541679	162
2330-541680	162
2330-541683	162
2330-541690	138
2330-541691	138
2330-541699	153
2330-541702	125
2330-541708	134
2330-541721	126

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - Transmissivity



PROJECT NUMBER: 856
REFERENCE NUMBER: SO-092691

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Test Method	Frequency		Unit
	Transmissivity	ASTM D4716	1/540,000	ft²	*(m²/sec)*

Specification: Geocomposite

Roll Number	Pressure (psf)	Gradient	Net/Composite	Transmissivity Results (m²/sec)	(gal/min/ft)	Seat Time (min)	Boundary
0116-011082	10,000	0.10	Geocomposite	1.03E-03	4.98	15	Steel plates
Geonet	10,000	0.10	Geonet	4.75E-03	22.95	15	Steel plates
0116-011126	10,000	0.10	Geocomposite	4.91E-04	2.37	15	Steel plates
Geonet	10,000	0.10	Geonet	6.63E-03	32.03	15	Steel plates
0116-011178	10,000	0.10	Geocomposite	1.35E-04	0.65	15	Steel plates
Geonet	10,000	0.10	Geonet	5.31E-03	25.65	15	Steel plates

CoA Date: 09/08/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80509937
PO #: 603725
Weight: 187600.000 LB
Ship Date: 09/08/2021
Package: BULK
Mode: Hopper Car
Car #: CPCX815854
Seal No: 235762

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PNJ720430

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.380	g/10min
Density	D1505 or D4883	0.9560	g/cm3
Production Date		09/06/2021	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

Erin Xiao
Quality Systems Coordinator

For CoA questions contact Shannon Blacknall at +1-832-813-4807

CoA Date: 11/15/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80554909
PO #: PO-603923
Weight: 186000.000 LB
Ship Date: 11/15/2021
Package: BULK
Mode: Hopper Car
Car #: SHPX463721
Seal No: 270836

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PNM620530

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.350	g/10min
Density	D1505 or D4883	0.9550	g/cm3
Production Date		11/09/2021	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

Erin Xiao
Quality Systems Coordinator

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & E I F

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-011228	2021-12-08	PNM620530	2330-540941	2330-540949
0116-011229	2021-12-08	PNM620530	2330-540941	2330-540949
0116-011236	2021-12-08	PNM620530	2330-540941	2330-540551
0116-011237	2021-12-08	PNM620530	2330-540941	2330-540551
0116-011238	2021-12-08	PNM620530	2330-540941	2330-540551
0116-011240	2021-12-08	PNM620530	2330-540554	2330-540551
0116-011241	2021-12-08	PNM620530	2330-540554	2330-540551
0116-011242	2021-12-08	PNM620530	2330-540554	2330-541398
0116-011243	2021-12-08	PNM620530	2330-540554	2330-541398
0116-011244	2021-12-08	PNM620530	2330-540742	2330-541398
0116-011245	2021-12-08	PNM620530	2330-540742	2330-541398
0116-011246	2021-12-08	PNM620530	2330-540742	2330-541398
0116-011247	2021-12-08	PNM620530	2330-540742	2330-540548
0116-011248	2021-12-08	PNM620530	2330-540742	2330-540548
0116-011708	2021-12-23	PNM620520	2330-540921	2330-541718
0116-011709	2021-12-23	PNM620520	2330-540549	2330-541718
0116-011711	2021-12-23	PNM620520	2330-540549	2330-541718
0116-011712	2021-12-23	PNM620520	2330-540549	2330-541718
0116-011713	2021-12-23	PNM620520	2330-540549	2330-540940
0116-011714	2021-12-23	PNM620520	2330-540549	2330-540940
0116-011715	2021-12-23	PNM620520	2330-540918	2330-540940

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011716	2021-12-23	PNM620520	2330-540918	2330-540940
0116-011717	2021-12-23	PNM620520	2330-540918	2330-540940
0116-011718	2021-12-23	PNM620520	2330-540918	2330-541964
0116-011719	2021-12-23	PNM620520	2330-540918	2330-541964
0116-011720	2021-12-23	PNM620520	2330-540918	2330-541964
0116-011721	2021-12-23	PNM620520	2330-541963	2330-541964
0116-011722	2021-12-23	PNM620520	2330-541963	2330-541964
0116-011723	2021-12-23	PNM620520	2330-541963	2330-541964
0116-011724	2021-12-23	PNM620520	2330-541963	2330-541932
0116-011725	2021-12-23	PNM620520	2330-541963	2330-541932
0116-011726	2021-12-23	PNM620520	2330-541944	2330-541932
0116-011727	2021-12-23	PNM620520	2330-541944	2330-541932
0116-011728	2021-12-23	PNM620520	2330-541944	2330-541932
0116-011729	2021-12-23	PNM620520	2330-541944	2330-541932
0116-011730	2021-12-23	PNM620520	2330-541944	2330-541946
0116-011731	2021-12-23	PNM620520	2330-541944	2330-541946
0116-011732	2021-12-23	PNM620520	2330-541945	2330-541946
0116-011733	2021-12-23	PNM620520	2330-541945	2330-541946
0116-011734	2021-12-23	PNM620520	2330-541945	2330-541946
0116-011735	2021-12-23	PNM620520	2330-541945	2330-541943
0116-011736	2021-12-23	PNM620520	2330-541945	2330-541943
0116-011737	2021-12-23	PNM620520	2330-541934	2330-541943
0116-011738	2021-12-23	PNM620520	2330-541934	2330-541943
0116-011739	2021-12-23	PNM620520	2330-541934	2330-541943
0116-011740	2021-12-23	PNM620520	2330-541934	2330-541943
0116-011741	2021-12-23	PNM620520	2330-541934	2330-540460
0116-011744	2021-12-24	PNM620520	2330-541411	2330-540460
0116-011745	2021-12-24	PNM620520	2330-541411	2330-540808
0116-011746	2021-12-24	PNM620520	2330-541411	2330-540808

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011747	2021-12-24	PNM620520	2330-541411	2330-540808
0116-011748	2021-12-24	PNM620520	2330-541411	2330-540808
0116-011749	2021-12-24	PNM620520	2330-541926	2330-540808
0116-011750	2021-12-24	PNM620520	2330-541926	2330-540808
0116-011751	2021-12-24	PNM620520	2330-541926	2330-540808
0116-011753	2021-12-24	PNM620520	2330-541926	2330-541922
0116-011754	2021-12-24	PNM620520	2330-540807	2330-541922
0116-011759	2021-12-24	PNM620520	2330-540807	2330-541922
0116-011760	2021-12-24	PNM620520	2330-540807	2330-541925
0116-011761	2021-12-24	PNM620520	2330-540807	2330-541925
0116-011768	2021-12-25	PNM620520	2330-541928	2330-541931
0116-011769	2021-12-25	PNM620520	2330-541928	2330-541931
0116-011770	2021-12-25	PNM620520	2330-541928	2330-541931
0116-011771	2021-12-25	PNM620520	2330-541959	2330-541931
0116-011772	2021-12-25	PNM620520	2330-541959	2330-541931
0116-011773	2021-12-25	PNM620520	2330-541959	2330-541931
0116-011778	2021-12-25	PNM620520	2330-541959	2330-540915
0116-011779	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011780	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011781	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011782	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011788	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011789	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011790	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011791	2021-12-25	PNM620520	2330-541929	2330-540915
0116-011792	2021-12-25	PNM620520	2330-541979	2330-541960
0116-011793	2021-12-25	PNM620520	2330-541979	2330-541960
0116-011794	2021-12-25	PNM620520	2330-541979	2330-541960
0116-011795	2021-12-25	PNM620520	2330-541979	2330-541960

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SOLMAX.COM

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-011796	2021-12-25	PNM620520	2330-541979	2330-541960
0116-011797	2021-12-25	PNM620520	2330-541967	2330-541924
0116-011798	2021-12-25	PNM620520	2330-541967	2330-541924
0116-011799	2021-12-25	PNM620520	2330-541967	2330-541924
0116-011800	2021-12-25	PNM620520	2330-541967	2330-541924
0116-011802	2021-12-25	PNM620520	2330-541967	2330-541924
0116-011803	2021-12-25	PNM620520	2330-541933	2330-541924
0116-011804	2021-12-26	PNM620520	2330-541933	2330-540457
0116-011805	2021-12-26	PNM620520	2330-541933	2330-540457
0116-011806	2021-12-26	PNM620520	2330-541921	2330-540457
0116-011807	2021-12-26	PNM620520	2330-541921	2330-541980
0116-011808	2021-12-26	PNM620520	2330-541921	2330-541980
0116-011809	2021-12-26	PNM620520	2330-541921	2330-541980
0116-011810	2021-12-26	PNM620520	2330-541921	2330-541980
0116-011814	2021-12-26	PNM620520	2330-541921	2330-541980
0116-011815	2021-12-26	PNM620520	2330-540919	2330-541980
0116-011816	2021-12-26	PNM620520	2330-540919	2330-541711
0116-011817	2021-12-26	PNM620520	2330-540919	2330-541711
0116-011818	2021-12-26	PNM620520	2330-540919	2330-541711
0116-011819	2021-12-26	PNM620520	2330-540919	2330-541711
0116-011820	2021-12-26	PNM620520	2330-541399	2330-541711
0116-011821	2021-12-26	PNM620520	2330-541399	2330-540816
0116-011822	2021-12-26	PNM620520	2330-541399	2330-540816
0116-011823	2021-12-26	PNM620520	2330-541399	2330-540816
0116-011824	2021-12-26	PNM620520	2330-541399	2330-540816
0116-011825	2021-12-26	PNM620520	2330-541399	2330-540816
0116-011826	2021-12-26	PNM620520	2330-541399	2330-540816
0116-011827	2021-12-26	PNM620520	2330-541399	2330-538825
0116-011828	2021-12-26	PNM620520	2330-541399	2330-538825

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011829	2021-12-26	PNM620520	2330-541399	2330-538825
0116-011830	2021-12-26	PNM620520	2330-541399	2330-538825
0116-011831	2021-12-26	PNM620520	2330-541399	2330-538825
0116-011832	2021-12-26	PNM620520	2330-541399	2330-540810
0116-011833	2021-12-26	PNM620520	2330-541399	2330-540810
0116-011834	2021-12-26	PNM620520	2330-541399	2330-540810
0116-011835	2021-12-26	PNM620520	2330-541399	2330-540810
0116-011836	2021-12-26	PNM620520	2330-541684	2330-540810
0116-011837	2021-12-26	PNM620520	2330-541684	2330-540810
0116-011838	2021-12-26	PNM620520	2330-541684	2330-540813
0116-011839	2021-12-26	PNM620520	2330-541684	2330-540813
0116-011840	2021-12-26	PNM620520	2330-541392	2330-540813
0116-011841	2021-12-26	PNM620520	2330-541392	2330-540813
0116-011845	2021-12-27	PNM620520	2330-541392	2330-540813
0116-011846	2021-12-27	PNM620520	2330-541392	2330-540814
0116-011847	2021-12-27	PNM620520	2330-541392	2330-540814
0116-011860	2021-12-28	PNM620520	2330-541410	2330-540814
0116-011861	2021-12-28	PNM620520	2330-541410	2330-540814
0116-011862	2021-12-28	PNM620520	2330-541410	2330-540814
0116-011863	2021-12-28	PNM620520	2330-541410	2330-540812
0116-011864	2021-12-28	PNM620520	2330-541410	2330-540812
0116-011866	2021-12-28	PNM620520	2330-541720	2330-540812
0116-011867	2021-12-28	PNM620520	2330-541720	2330-540812
0116-011868	2021-12-28	PNM620520	2330-541720	2330-540812
0116-011869	2021-12-28	PNM620520	2330-541720	2330-540812
0116-011872	2021-12-28	PNM620520	2330-541720	2330-540812
0116-011874	2021-12-28	PNM620520	2330-540938	2330-540544
0116-011875	2021-12-28	PNM620520	2330-540938	2330-540544
0116-011876	2021-12-28	PNM620520	2330-540938	2330-540544

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PROJECT NUMBER: 856

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PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011877	2021-12-28	PNM620520	2330-540938	2330-540544
0116-011878	2021-12-28	PNM620520	2330-540938	2330-540544
0116-011879	2021-12-28	PNM620520	2330-541712	2330-541968
0116-011880	2021-12-28	PNM620520	2330-541712	2330-541968
0116-011881	2021-12-28	PNM620520	2330-541712	2330-541968
0116-011882	2021-12-28	PNM620520	2330-541712	2330-541968
0116-011883	2021-12-28	PNM620520	2330-541712	2330-541968
0116-011884	2021-12-28	PNM620520	2330-541712	2330-541968
0116-011885	2021-12-28	PNM620520	2330-540939	2330-540819
0116-011886	2021-12-28	PNM620520	2330-540939	2330-540819
0116-011887	2021-12-28	PNM620520	2330-540939	2330-540819
0116-011888	2021-12-28	PNM620520	2330-540939	2330-540819
0116-011889	2021-12-28	PNM620520	2330-540939	2330-540819
0116-011890	2021-12-28	PNM620520	2330-540821	2330-541719
0116-011891	2021-12-28	PNM620520	2330-540821	2330-541719
0116-011892	2021-12-28	PNM620520	2330-540821	2330-541719
0116-011893	2021-12-28	PNM620520	2330-540821	2330-541719
0116-011894	2021-12-28	PNM620520	2330-540821	2330-541719
0116-011895	2021-12-28	PNM620520	2330-540821	2330-541719
0116-011896	2021-12-28	PNM620520	2330-541681	2330-537694
0116-011897	2021-12-28	PNM620520	2330-541681	2330-537694
0116-011898	2021-12-28	PNM620520	2330-541681	2330-537694
0116-011899	2021-12-28	PNM620520	2330-541681	2330-537694
0116-011900	2021-12-29	PNM620520	2330-541681	2330-537694
0116-011901	2021-12-29	PNM620520	2330-540922	2330-541456
0116-011902	2021-12-29	PNM620510	2330-540922	2330-541456
0116-011903	2021-12-29	PNM620510	2330-540922	2330-541456
0116-011904	2021-12-29	PNM620510	2330-540922	2330-541456
0116-011905	2021-12-29	PNM620510	2330-540991	2330-540537

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011909	2021-12-29	PNM620510	2330-540991	2330-540537
0116-011910	2021-12-29	PNM620510	2330-540991	2330-540948
0116-011911	2021-12-29	PNM620510	2330-540991	2330-540948
0116-011912	2021-12-29	PNM620510	2330-540991	2330-540948
0116-011913	2021-12-29	PNM620510	2330-540820	2330-540948
0116-011914	2021-12-29	PNM620510	2330-540820	2330-540948
0116-011915	2021-12-29	PNM620510	2330-540820	2330-540948
0116-011916	2021-12-29	PNM620510	2330-540820	2330-540948
0116-011917	2021-12-29	PNM620510	2026957916	2026957908
0116-011918	2021-12-29	PNM620510	2026997271	2026997265
0116-011919	2021-12-29	PNM620510	2026997271	2026997265
0116-011920	2021-12-29	PNM620510	2026997271	2026997265
0116-011921	2021-12-29	PNM620510	2026997271	2026997265
0116-011922	2021-12-29	PNM620510	2026997271	2026997216
0116-011923	2021-12-29	PNM620510	2026997271	2026997216
0116-011924	2021-12-29	PNM620510	2026997205	2026997216
0116-011925	2021-12-29	PNM620510	2026997205	2026997216
0116-011926	2021-12-29	PNM620510	2026997205	2026997216
0116-011927	2021-12-29	PNM620510	2026997205	2026997262
0116-011928	2021-12-29	PNM620510	2026997205	2026997262
0116-011932	2021-12-29	PNM620510	2026997217	2026997262
0116-011933	2021-12-29	PNM620510	2026997217	2026997266
0116-011934	2021-12-29	PNM620510	2026997217	2026997266
0116-011935	2021-12-29	PNM620510	2026997211	2026997266
0116-011936	2021-12-29	PNM620510	2026997211	2026997266
0116-011937	2021-12-29	PNM620510	2026997211	2026997266
0116-011938	2021-12-29	PNM620510	2026997211	2026997272
0116-011939	2021-12-29	PNM620510	2026997256	2026997272
0116-011940	2021-12-29	PNM620510	2026997256	2026997272

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-011941	2021-12-29	PNM620510	2026997256	2026997272
0116-011942	2021-12-29	PNM620510	2026997256	2026997272
0116-011943	2021-12-29	PNM620510	2026997256	2026997272
0116-011944	2021-12-29	PNM620510	2026997256	2026997201
0116-011954	2021-12-30	PNM620510	2026997144	2026997201
0116-011955	2021-12-30	PNM620510	2026997144	2026997201
0116-011956	2021-12-30	PNM620510	2026997144	2026997201
0116-011957	2021-12-30	PNM620510	2026997141	2026997148
0116-011958	2021-12-30	PNM620510	2026997141	2026997148
0116-011959	2021-12-30	PNM620510	2026997141	2026997148
0116-011960	2021-12-30	PNM620510	2026997141	2026997148
0116-011961	2021-12-30	PNM620510	2026997141	2026997148
0116-011962	2021-12-30	PNM620510	2026997141	2026997148
0116-011972	2021-12-31	PNM620510	2026997269	2026997202
0116-011973	2021-12-31	PNM620510	2026997269	2026997202
0116-011974	2021-12-31	PNM620510	2026997269	2026997202
0116-011975	2021-12-31	PNM620510	2026997269	2026997202
0116-011976	2021-12-31	PNM620510	2026997269	2026997202
0116-011977	2021-12-31	PNM620510	2026997219	2026997215
0116-011978	2021-12-31	PNM620510	2026997219	2026997215
0116-011979	2021-12-31	PNM620510	2026997219	2026997215
0116-011980	2021-12-31	PNM620510	2026997219	2026997215
0116-011981	2021-12-31	PNM620510	2026997219	2026997215
0116-011982	2021-12-31	PNM620510	2026997219	2026997215
0116-011983	2021-12-31	PNM620510	2026997213	2026997251
0116-011984	2021-12-31	PNM620510	2026997213	2026997251
0116-011985	2021-12-31	PNM620510	2026997213	2026997251
0116-011986	2021-12-31	PNM620510	2026997213	2026997251
0116-011987	2021-12-31	PNM620510	2026997213	2026997251

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-011988	2021-12-31	PNM620510	2026997213	2026997251
0116-011989	2021-12-31	PNM620510	2026997213	2026997206
0116-011990	2021-12-31	PNM620510	2026997213	2026997206
0116-011991	2021-12-31	PNM620510	2026997213	2026997206
0116-011992	2021-12-31	PNM620510	2026997248	2026997206
0116-011994	2021-12-31	PNM620510	2026997248	2026997206
0116-011995	2021-12-31	PNM620510	2026997248	2026997140
0116-011996	2021-12-31	PNM620510	2026997248	2026997140
0116-011997	2021-12-31	PNM620510	2026997248	2026997140
0116-011998	2021-12-31	PNM620510	2026997248	2026997140
0116-011999	2021-12-31	PNM620510	2026997243	2026997249
0116-012000	2021-12-31	PNM620510	2026997243	2026997249
0116-012001	2021-12-31	PNM620510	2026997243	2026997249
0116-012002	2021-12-31	PNM620510	2026997243	2026997249
0116-012013	2021-12-31	PNM620510	2026997243	2026997249
0116-012014	2021-12-31	PNM620510	2026997243	2026997249
0116-012015	2021-12-31	PNM620510	2026997243	2026997249
0116-012016	2022-01-01	PNM620510	2026997131	2026997135
0116-012017	2022-01-01	PNM620510	2026997131	2026997135
0116-012018	2022-01-01	PNM620510	2026997131	2026997135
0116-012019	2022-01-01	PNM620510	2026997131	2026997135
0116-012020	2022-01-01	PNM620510	2026997131	2026997135
0116-012021	2022-01-01	PNM620510	2026997130	2026997244
0116-012022	2022-01-01	PNM620510	2026997130	2026997244
0116-012023	2022-01-01	PNM620510	2026997130	2026997244
0116-012024	2022-01-01	PNM620510	2026997130	2026997244
0116-012025	2022-01-01	PNM620510	2026997130	2026997244
0116-012030	2022-01-01	PNM620510	2026997130	2026997244
0116-012031	2022-01-01	PNM620510	2026997130	2026997244

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-012048	2022-01-02	DNN610011	2026997241	2026997247
0116-012049	2022-01-02	DNN610011	2026997241	2026997247
0116-012050	2022-01-02	DNN610011	2026997241	2026997247
0116-012051	2022-01-02	DNN610011	2026997127	2026997132
0116-012052	2022-01-02	DNN610011	2026997127	2026997132
0116-012053	2022-01-02	DNN610011	2026997127	2026997132
0116-012054	2022-01-02	DNN610011	2026997127	2026997132
0116-012055	2022-01-02	DNN610011	2026997127	2026997132
0116-012056	2022-01-02	DNN610011	2026997127	2026997132
0116-012057	2022-01-02	DNN610011	2026997234	2026997237
0116-012058	2022-01-02	DNN610011	2026997234	2026997237
0116-012071	2022-01-03	DNN610011	2026997129	2026997128
0116-012072	2022-01-03	DNN610011	2026997129	2026997128
0116-012073	2022-01-03	DNN610011	2026997129	2026997128
0116-012074	2022-01-03	DNN610011	2026997134	2026997128
0116-012075	2022-01-03	DNN610011	2026997134	2026997233
0116-012076	2022-01-03	DNN610011	2026997134	2026997233
0116-012077	2022-01-03	DNN610011	2026997134	2026997233
0116-012078	2022-01-03	DNN610011	2026997134	2026997233
0116-012079	2022-01-03	DNN610011	2026997145	2026997233
0116-012080	2022-01-03	DNN610011	2026997145	2026997252
0116-012081	2022-01-03	DNN610011	2026997145	2026997252
0116-012082	2022-01-03	DNN610011	2026997145	2026997252
0116-012083	2022-01-03	DNN610011	2026997145	2026997252
0116-012084	2022-01-03	DNN610011	2026997145	2026997252
0116-012085	2022-01-03	DNN610011	2026997136	2026997245
0116-012086	2022-01-03	DNN610011	2026997136	2026997245
0116-012087	2022-01-03	DNN610011	2026997136	2026997245
0116-012088	2022-01-03	DNN610011	2026997136	2026997245

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012089	2022-01-03	DNN610011	2026997136	2026997245
0116-012090	2022-01-03	DNN610011	2026997136	2026997245
0116-012101	2022-01-03	DNN610011	2026997133	2026997240
0116-012102	2022-01-03	DNN610011	2026997235	2026997250
0116-012103	2022-01-03	DNN610011	2026997235	2026997250
0116-012104	2022-01-03	DNN610011	2026997235	2026997250
0116-012105	2022-01-03	DNN610011	2026997235	2026997250
0116-012106	2022-01-03	DNN610011	2026997235	2026997250
0116-012107	2022-01-03	DNN610011	2026997235	2026997250
0116-012108	2022-01-04	DNN610011	2026997207	2026997139
0116-012109	2022-01-04	DNN610011	2026997207	2026997139
0116-012110	2022-01-04	DNN610011	2026997207	2026997139
0116-012111	2022-01-04	DNN610011	2026997207	2026997139
0116-012112	2022-01-04	DNN610011	2026997207	2026997139
0116-012120	2022-01-04	DNN610011	2026997138	2026997146
0116-012121	2022-01-04	DNN610011	2026997138	2026997146
0116-012122	2022-01-04	DNN610011	2026997138	2026997146
0116-012123	2022-01-04	DNN610011	2026997147	2026997146
0116-012124	2022-01-04	DNN610011	2026997147	2026997146
0116-012125	2022-01-04	DNN610011	2026997147	2026997239
0116-012126	2022-01-04	DNN610011	2026997147	2026997239
0116-012127	2022-01-04	DNN610011	2026997147	2026997239
0116-012129	2022-01-04	DNN610011	2026997253	2026997231
0116-012130	2022-01-04	DNN610011	2026997253	2026997231
0116-012131	2022-01-04	DNN610011	2026997253	2026997231
0116-012138	2022-01-05	DNN610011	2026997126	2026997231
0116-012139	2022-01-05	DNN610011	2026997126	2026997231
0116-012140	2022-01-05	DNN610011	2026997126	2026997254
0116-012141	2022-01-05	DNN610011	2026997126	2026997254

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012142	2022-01-05	DNN610011	2026997126	2026997254
0116-012143	2022-01-05	DNN610011	2026997126	2026997254
0116-012144	2022-01-05	DNN610011	2026997125	2026997254
0116-012145	2022-01-05	DNN610011	2026997125	2026997254
0116-012146	2022-01-05	DNN610011	2026997125	2026997254
0116-012147	2022-01-05	DNN610011	2026997125	2026997254
0116-012150	2022-01-05	DNN610011	2026997125	2026997254
0116-012151	2022-01-05	DNN610011	2026997125	2026997254
0116-012152	2022-01-05	DNN610011	2026997125	2026997254
0116-012153	2022-01-05	DNN610011	2026997125	2026997254
0116-012154	2022-01-05	DNN610011	2026997125	2026997254
0116-012155	2022-01-05	DNN610011	2026997125	2026997254
0116-012156	2022-01-05	DNN610011	2026997125	2026997254
0116-012157	2022-01-05	DNN610011	2026997125	2026997254
0116-012158	2022-01-05	DNN610011	2026997208	2026997137
0116-012159	2022-01-06	DNN610011	2026997208	2026997137
0116-012160	2022-01-06	DNN610011	2026997208	2026997137
0116-012161	2022-01-06	DNN610011	2026997208	2026997137
0116-012162	2022-01-06	DNN610011	2026997208	2026997137
0116-012163	2022-01-06	DNN610011	2026997236	2026997232
0116-012164	2022-01-06	DNN610011	2026997236	2026997232
0116-012165	2022-01-06	DNN610011	2026997236	2026997232
0116-012166	2022-01-06	DNN610011	2026997236	2026997232
0116-012167	2022-01-06	DNN610011	2026997236	2026997232
0116-012168	2022-01-06	DNN610011	2026997236	2026997232
0116-012169	2022-01-06	DNN610011	2026997236	2026997242
0116-012170	2022-01-06	DNN610011	2026997236	2026997242
0116-012171	2022-01-06	DNN610011	2026997236	2026997242
0116-012172	2022-01-06	DNN610011	2026997236	2026997242

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012173	2022-01-06	DNN610011	2026997200	2026997242
0116-012174	2022-01-06	DNN610011	2026997200	2026997242
0116-012175	2022-01-06	DNN610011	2026997200	2026997242
0116-012176	2022-01-06	DNN610011	2026997200	2026997242
0116-012177	2022-01-06	DNN610011	2026997200	2026997242
0116-012178	2022-01-06	DNN610011	2026997200	2026997242
0116-012179	2022-01-06	DNN610011	2026997200	2026997242
0116-012180	2022-01-06	DNN610011	2026997200	2026997242
0116-012181	2022-01-06	DNN610011	2026997200	2026997242
0116-012182	2022-01-06	DNN610011	2330-540767	2330-540981
0116-012183	2022-01-06	DNN610011	2330-540767	2330-540981
0116-012184	2022-01-06	DNN610011	2330-540767	2330-540981

QUANTITY (ROLLS): 352

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-011228	231.00	2.32	0.952	73	3	4
0116-011229	231.00	2.32	0.952	73	3	4
0116-011236	233.00	2.27	0.953	75	5	5
0116-011237	233.00	2.27	0.953	75	5	5
0116-011238	233.00	2.27	0.953	75	5	5
0116-011240	233.00	2.27	0.953	75	5	5
0116-011241	233.00	2.27	0.953	75	5	5
0116-011242	219.00	2.36	0.953	75	5	5
0116-011243	219.00	2.36	0.953	75	5	5
0116-011244	219.00	2.36	0.953	75	5	5
0116-011245	219.00	2.36	0.953	75	5	5
0116-011246	219.00	2.36	0.953	75	5	5
0116-011247	220.30	2.25	0.954	70	5	4
0116-011248	220.30	2.25	0.954	70	5	4
0116-011708	222.60	2.72	0.955	78	6	6
0116-011709	222.60	2.72	0.955	78	6	6
0116-011711	222.60	2.72	0.955	78	6	6
0116-011712	222.60	2.72	0.955	78	6	6
0116-011713	222.60	2.72	0.955	78	6	6
0116-011714	236.00	2.74	0.955	78	6	6
0116-011715	236.00	2.74	0.955	78	6	6
0116-011716	236.00	2.74	0.955	78	6	6
0116-011717	236.00	2.74	0.955	78	6	6
0116-011718	236.00	2.74	0.955	78	6	6

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011719	239.00	2.72	0.955	81	4	5
0116-011720	239.00	2.72	0.955	81	4	5
0116-011721	239.00	2.72	0.955	81	4	5
0116-011722	239.00	2.72	0.955	81	4	5
0116-011723	239.00	2.72	0.955	81	4	5
0116-011724	235.00	2.67	0.955	81	4	5
0116-011725	235.00	2.67	0.955	81	4	5
0116-011726	235.00	2.67	0.955	81	4	5
0116-011727	235.00	2.67	0.955	81	4	5
0116-011728	235.00	2.67	0.955	81	4	5
0116-011729	230.00	2.76	0.955	77	2	3
0116-011730	230.00	2.76	0.955	77	2	3
0116-011731	230.00	2.76	0.955	77	2	3
0116-011732	230.00	2.76	0.955	77	2	3
0116-011733	230.00	2.76	0.955	77	2	3
0116-011734	229.00	2.54	0.955	77	2	3
0116-011735	229.00	2.54	0.955	77	2	3
0116-011736	229.00	2.54	0.955	77	2	3
0116-011737	229.00	2.54	0.955	77	2	3
0116-011738	229.00	2.54	0.955	77	2	3
0116-011739	229.00	2.58	0.956	80	3	4
0116-011740	229.00	2.58	0.956	80	3	4
0116-011741	229.00	2.58	0.956	80	3	4
0116-011744	210.00	2.64	0.956	80	3	4
0116-011745	210.00	2.64	0.956	80	3	4
0116-011746	210.00	2.64	0.956	80	3	4
0116-011747	210.00	2.64	0.956	80	3	4
0116-011748	210.00	2.64	0.956	80	3	4
0116-011749	227.00	2.58	0.953	70	3	6
0116-011750	227.00	2.58	0.953	70	3	6
0116-011751	227.00	2.58	0.953	70	3	6
0116-011753	227.00	2.58	0.953	70	3	6
0116-011754	227.00	2.58	0.953	70	3	6
0116-011759	229.00	2.62	0.955	71	3	4
0116-011760	229.00	2.62	0.955	71	3	4
0116-011761	229.00	2.62	0.955	71	3	4

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011768	242.00	2.59	0.957	73	5	4
0116-011769	242.00	2.59	0.957	73	5	4
0116-011770	242.00	2.59	0.957	73	5	4
0116-011771	242.00	2.59	0.957	73	5	4
0116-011772	242.00	2.59	0.957	73	5	4
0116-011773	235.00	2.54	0.957	73	5	4
0116-011778	235.00	2.54	0.957	73	5	4
0116-011779	235.00	2.54	0.957	73	5	4
0116-011780	235.00	2.54	0.957	73	5	4
0116-011781	235.00	2.54	0.957	73	5	4
0116-011782	233.00	2.42	0.954	78	4	2
0116-011788	249.00	2.64	0.956	79	5	6
0116-011789	249.00	2.64	0.956	79	5	6
0116-011790	249.00	2.64	0.956	79	5	6
0116-011791	249.00	2.64	0.956	79	5	6
0116-011792	249.00	2.64	0.956	79	5	6
0116-011793	237.00	2.65	0.956	79	5	6
0116-011794	237.00	2.65	0.956	79	5	6
0116-011795	237.00	2.65	0.956	79	5	6
0116-011796	237.00	2.65	0.956	79	5	6
0116-011797	237.00	2.65	0.956	79	5	6
0116-011798	238.00	2.56	0.957	78	6	5
0116-011799	238.00	2.56	0.957	78	6	5
0116-011800	238.00	2.56	0.957	78	6	5
0116-011802	238.00	2.56	0.957	78	6	5
0116-011803	235.00	2.58	0.957	78	6	5
0116-011804	235.00	2.58	0.957	78	6	5
0116-011805	235.00	2.58	0.957	78	6	5
0116-011806	235.00	2.58	0.957	78	6	5
0116-011807	235.00	2.58	0.957	78	6	5
0116-011808	239.30	2.66	0.955	80	5	4
0116-011809	239.30	2.66	0.955	80	5	4
0116-011810	239.30	2.66	0.955	80	5	4
0116-011814	237.30	2.65	0.956	80	5	6
0116-011815	237.30	2.65	0.956	80	5	6
0116-011816	237.30	2.65	0.956	80	5	6

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011817	237.30	2.65	0.956	80	5	6
0116-011818	237.30	2.65	0.956	80	5	6
0116-011819	239.60	2.66	0.956	80	5	6
0116-011820	239.60	2.66	0.956	80	5	6
0116-011821	239.60	2.66	0.956	80	5	6
0116-011822	239.60	2.66	0.956	80	5	6
0116-011823	239.60	2.66	0.956	80	5	6
0116-011824	257.00	2.44	0.957	78	3	5
0116-011825	257.00	2.44	0.957	78	3	5
0116-011826	257.00	2.44	0.957	78	3	5
0116-011827	257.00	2.44	0.957	78	3	5
0116-011828	257.00	2.44	0.957	78	3	5
0116-011829	234.00	2.46	0.957	78	3	5
0116-011830	234.00	2.46	0.957	78	3	5
0116-011831	234.00	2.46	0.957	78	3	5
0116-011832	234.00	2.46	0.957	78	3	5
0116-011833	234.00	2.46	0.957	78	3	5
0116-011834	233.00	2.68	0.957	77	4	6
0116-011835	233.00	2.68	0.957	77	4	6
0116-011836	233.00	2.68	0.957	77	4	6
0116-011837	233.00	2.68	0.957	77	4	6
0116-011838	233.00	2.68	0.957	77	4	6
0116-011839	232.00	2.61	0.957	77	4	6
0116-011840	232.00	2.61	0.957	77	4	6
0116-011841	232.00	2.61	0.957	77	4	6
0116-011845	247.00	2.87	0.955	81	5	5
0116-011846	247.00	2.87	0.955	81	5	5
0116-011847	247.00	2.87	0.955	81	5	5
0116-011860	244.30	2.79	0.956	85	4	4
0116-011861	244.30	2.79	0.956	85	4	4
0116-011862	244.30	2.79	0.956	85	4	4
0116-011863	244.30	2.79	0.956	85	4	4
0116-011864	232.60	2.73	0.956	85	4	4
0116-011866	232.60	2.73	0.956	85	4	4
0116-011867	232.60	2.73	0.956	85	4	4
0116-011868	232.60	2.73	0.956	85	4	4

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011869	232.60	2.73	0.956	85	4	4
0116-011872	229.00	2.74	0.954	77	5	7
0116-011874	229.00	2.74	0.954	77	5	7
0116-011875	229.00	2.74	0.954	77	5	7
0116-011876	229.00	2.74	0.954	77	5	7
0116-011877	229.00	2.74	0.954	77	5	7
0116-011878	234.00	2.74	0.954	77	5	7
0116-011879	234.00	2.66	0.954	77	5	7
0116-011880	234.00	2.66	0.954	77	5	7
0116-011881	234.00	2.66	0.954	77	5	7
0116-011882	234.00	2.66	0.954	77	5	7
0116-011883	234.00	2.66	0.954	77	5	7
0116-011884	235.00	2.55	0.955	73	4	4
0116-011885	235.00	2.55	0.955	73	4	4
0116-011886	235.00	2.55	0.955	73	4	4
0116-011887	235.00	2.55	0.955	73	4	4
0116-011888	235.00	2.55	0.955	73	4	4
0116-011889	235.00	2.55	0.955	73	4	4
0116-011890	234.00	2.66	0.955	73	4	4
0116-011891	234.00	2.66	0.955	73	4	4
0116-011892	234.00	2.66	0.955	73	4	4
0116-011893	234.00	2.66	0.955	73	4	4
0116-011894	234.00	2.66	0.955	73	4	4
0116-011895	236.00	2.53	0.954	88	4	4
0116-011896	236.00	2.53	0.954	88	4	4
0116-011897	236.00	2.53	0.954	88	4	4
0116-011898	236.00	2.53	0.954	88	4	4
0116-011899	236.00	2.53	0.954	88	4	4
0116-011900	236.00	2.63	0.954	88	4	4
0116-011901	236.00	2.63	0.954	88	4	4
0116-011902	236.00	2.63	0.954	88	4	4
0116-011903	236.00	2.63	0.954	88	4	4
0116-011904	236.00	2.63	0.954	88	4	4
0116-011905	234.00	2.76	0.956	73	5	3
0116-011909	251.00	2.76	0.956	73	5	3
0116-011910	251.00	2.76	0.956	73	5	3

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011911	251.00	2.76	0.956	73	5	3
0116-011912	251.00	2.76	0.956	73	5	3
0116-011913	232.00	2.66	0.956	73	5	3
0116-011914	232.00	2.66	0.956	73	5	3
0116-011915	232.00	2.66	0.956	73	5	3
0116-011916	232.00	2.66	0.956	73	5	3
0116-011917	232.00	2.66	0.956	73	5	3
0116-011918	243.00	2.67	0.955	83	4	3
0116-011919	243.00	2.67	0.955	83	4	3
0116-011920	243.00	2.67	0.955	83	4	3
0116-011921	243.00	2.67	0.955	83	4	3
0116-011922	243.00	2.67	0.955	83	4	3
0116-011923	232.60	2.78	0.955	83	4	3
0116-011924	232.60	2.78	0.955	83	4	3
0116-011925	232.60	2.78	0.955	83	4	3
0116-011926	232.60	2.78	0.955	83	4	3
0116-011927	232.60	2.78	0.955	83	4	3
0116-011928	232.00	2.61	0.953	71	3	3
0116-011932	232.00	2.61	0.953	71	3	3
0116-011933	232.00	2.61	0.953	71	3	3
0116-011934	232.00	2.61	0.953	71	3	3
0116-011935	232.00	2.61	0.953	71	3	3
0116-011936	239.00	2.55	0.953	71	3	3
0116-011937	239.00	2.55	0.953	71	3	3
0116-011938	239.00	2.55	0.953	71	3	3
0116-011939	239.00	2.55	0.953	71	3	3
0116-011940	239.00	2.55	0.953	71	3	3
0116-011941	236.00	2.56	0.955	70	2	4
0116-011942	236.00	2.56	0.955	70	2	4
0116-011943	236.00	2.56	0.955	70	2	4
0116-011944	236.00	2.56	0.955	70	2	4
0116-011954	233.00	2.57	0.955	75	4	6
0116-011955	233.00	2.57	0.955	75	4	6
0116-011956	233.00	2.57	0.955	75	4	6
0116-011957	233.00	2.57	0.955	75	4	6
0116-011958	242.30	2.59	0.955	75	4	6

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-011959	242.30	2.59	0.955	75	4	6
0116-011960	242.30	2.59	0.955	75	4	6
0116-011961	242.30	2.59	0.955	75	4	6
0116-011962	242.30	2.59	0.955	75	4	6
0116-011972	233.30	2.59	0.955	75	4	4
0116-011973	233.30	2.59	0.955	75	4	4
0116-011974	233.30	2.59	0.955	75	4	4
0116-011975	233.30	2.59	0.955	75	4	4
0116-011976	224.00	2.58	0.955	75	4	4
0116-011977	224.00	2.58	0.955	75	4	4
0116-011978	224.00	2.58	0.955	75	4	4
0116-011979	224.00	2.58	0.955	75	4	4
0116-011980	224.00	2.58	0.955	75	4	4
0116-011981	224.00	2.58	0.955	75	4	4
0116-011982	222.60	2.63	0.954	79	4	5
0116-011983	222.60	2.63	0.954	79	4	5
0116-011984	222.60	2.63	0.954	79	4	5
0116-011985	222.60	2.63	0.954	79	4	5
0116-011986	222.60	2.63	0.954	79	4	5
0116-011987	226.60	2.56	0.954	79	4	5
0116-011988	226.60	2.56	0.954	79	4	5
0116-011989	226.60	2.56	0.954	79	4	5
0116-011990	226.60	2.56	0.954	79	4	5
0116-011991	226.60	2.56	0.954	79	4	5
0116-011992	225.00	2.63	0.955	74	2	3
0116-011994	229.00	2.47	0.951	67	4	4
0116-011995	229.00	2.47	0.951	67	4	4
0116-011996	229.00	2.47	0.951	67	4	4
0116-011997	229.00	2.47	0.951	67	4	4
0116-011998	229.00	2.47	0.951	67	4	4
0116-011999	237.00	2.53	0.951	67	4	4
0116-012000	237.00	2.53	0.951	67	4	4
0116-012001	237.00	2.53	0.951	67	4	4
0116-012002	237.00	2.53	0.951	67	4	4
0116-012013	235.00	2.27	0.959	77	5	3
0116-012014	235.00	2.27	0.959	77	5	3

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012015	235.00	2.27	0.959	77	5	3
0116-012016	235.00	2.27	0.959	77	5	3
0116-012017	235.00	2.27	0.959	77	5	3
0116-012018	233.30	2.72	0.959	77	5	3
0116-012019	233.30	2.72	0.959	77	5	3
0116-012020	233.30	2.72	0.959	77	5	3
0116-012021	233.30	2.72	0.959	77	5	3
0116-012022	233.30	2.72	0.959	77	5	3
0116-012023	238.00	2.61	0.956	79	4	3
0116-012024	238.00	2.61	0.956	79	4	3
0116-012025	238.00	2.61	0.956	79	4	3
0116-012030	238.00	2.61	0.956	79	4	3
0116-012031	238.00	2.61	0.956	79	4	3
0116-012048	231.00	2.58	0.953	77	3	4
0116-012049	231.00	2.58	0.953	77	3	4
0116-012050	231.00	2.58	0.953	77	3	4
0116-012051	231.00	2.58	0.953	77	3	4
0116-012052	231.00	2.58	0.953	77	3	4
0116-012053	230.00	2.58	0.953	77	3	4
0116-012054	230.00	2.58	0.953	77	3	4
0116-012055	230.00	2.58	0.953	77	3	4
0116-012056	230.00	2.58	0.953	77	3	4
0116-012057	230.00	2.58	0.953	77	3	4
0116-012058	233.00	2.58	0.953	78	3	4
0116-012071	222.00	2.71	0.954	82	1	1
0116-012072	222.00	2.71	0.954	82	1	1
0116-012073	222.00	2.71	0.954	82	1	1
0116-012074	222.00	2.71	0.954	82	1	1
0116-012075	222.00	2.71	0.954	82	1	1
0116-012076	224.00	2.62	0.954	82	1	1
0116-012077	224.00	2.62	0.954	82	1	1
0116-012078	224.00	2.62	0.954	82	1	1
0116-012079	224.00	2.62	0.954	82	1	1
0116-012080	224.00	2.62	0.954	82	1	1
0116-012081	219.00	2.60	0.953	78	1	1
0116-012082	219.00	2.60	0.953	78	1	1

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012083	219.00	2.60	0.953	78	1	1
0116-012084	219.00	2.60	0.953	78	1	1
0116-012085	219.00	2.60	0.953	78	1	1
0116-012086	228.00	2.70	0.953	78	1	1
0116-012087	228.00	2.70	0.953	78	1	1
0116-012088	228.00	2.70	0.953	78	1	1
0116-012089	228.00	2.70	0.953	78	1	1
0116-012090	228.00	2.70	0.953	78	1	1
0116-012101	226.00	2.69	0.951	74	2	3
0116-012102	226.00	2.69	0.951	74	2	3
0116-012103	226.00	2.69	0.951	74	2	3
0116-012104	226.00	2.69	0.951	74	2	3
0116-012105	226.00	2.69	0.951	74	2	3
0116-012106	222.00	2.69	0.951	74	2	3
0116-012107	222.00	2.69	0.951	74	2	3
0116-012108	222.00	2.69	0.951	74	2	3
0116-012109	222.00	2.69	0.951	74	2	3
0116-012110	222.00	2.69	0.951	74	2	3
0116-012111	223.00	2.65	0.953	79	3	3
0116-012112	223.00	2.65	0.953	79	3	3
0116-012120	224.00	2.68	0.953	76	4	5
0116-012121	224.00	2.68	0.953	76	4	5
0116-012122	224.00	2.68	0.953	76	4	5
0116-012123	224.00	2.68	0.953	76	4	5
0116-012124	224.00	2.68	0.953	76	4	5
0116-012125	224.00	2.66	0.953	76	4	5
0116-012126	224.00	2.66	0.953	76	4	5
0116-012127	224.00	2.66	0.953	76	4	5
0116-012129	224.00	2.66	0.953	76	4	5
0116-012130	224.00	2.66	0.953	76	4	5
0116-012131	224.00	2.66	0.953	76	4	5
0116-012138	222.40	2.71	0.954	69	3	1
0116-012139	222.40	2.71	0.954	69	3	1
0116-012140	222.40	2.71	0.954	69	3	1
0116-012141	222.40	2.71	0.954	69	3	1
0116-012142	222.40	2.71	0.954	69	3	1

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012143	229.00	2.65	0.954	69	3	1
0116-012144	229.00	2.65	0.954	69	3	1
0116-012145	229.00	2.65	0.954	69	3	1
0116-012146	229.00	2.65	0.954	69	3	1
0116-012147	229.00	2.65	0.954	69	3	1
0116-012150	235.00	2.38	0.952	72	2	2
0116-012151	235.00	2.38	0.952	72	2	2
0116-012152	235.00	2.38	0.952	72	2	2
0116-012153	235.00	2.38	0.952	72	2	2
0116-012154	235.00	2.38	0.952	72	2	2
0116-012155	235.00	2.36	0.952	72	2	2
0116-012156	235.00	2.36	0.952	72	2	2
0116-012157	235.00	2.36	0.952	72	2	2
0116-012158	235.00	2.36	0.952	72	2	2
0116-012159	235.00	2.36	0.952	72	2	2
0116-012160	240.30	2.74	0.953	78	3	3
0116-012161	240.30	2.74	0.953	78	3	3
0116-012162	240.30	2.74	0.953	78	3	3
0116-012163	240.30	2.74	0.953	78	3	3
0116-012164	240.30	2.74	0.953	78	3	3
0116-012165	234.00	2.73	0.953	78	3	3
0116-012166	234.00	2.73	0.953	78	3	3
0116-012167	234.00	2.73	0.953	78	3	3
0116-012168	234.00	2.73	0.953	78	3	3
0116-012169	234.00	2.73	0.953	78	3	3
0116-012170	231.00	2.69	0.955	76	5	4
0116-012171	231.00	2.69	0.955	76	5	4
0116-012172	231.00	2.69	0.955	76	5	4
0116-012173	231.00	2.69	0.955	76	5	4
0116-012174	231.00	2.69	0.955	76	5	4
0116-012175	236.60	2.68	0.955	76	5	4
0116-012176	236.60	2.68	0.955	76	5	4
0116-012177	236.60	2.68	0.955	76	5	4
0116-012178	236.60	2.68	0.955	76	5	4
0116-012179	236.60	2.68	0.955	76	5	4
0116-012180	233.30	2.71	0.955	79	3	5

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012181	233.30	2.71	0.955	79	3	5
0116-012182	233.30	2.71	0.955	79	3	5
0116-012183	233.30	2.71	0.955	79	3	5
0116-012184	233.30	2.71	0.955	79	3	5

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MANUFACTURING QUALITY CONTROL

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PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-540549	8.8	252	282	74	104	131	158	149	676	0.180	1.9
2330-540554	8.8	259	288	81	103	128	168	162	726	0.180	2.0
2330-540742	9.0	251	297	86	125	139	165	178	830	0.180	2.2
2330-540767	8.7	248	281	81	129	125	152	147	758	0.180	1.8
2330-540807	8.3	229	269	74	115	122	172	150	724	0.180	2.3
2330-540820	8.4	254	264	90	122	128	156	156	738	0.180	2.4
2330-540821	8.4	254	264	90	122	128	156	156	738	0.180	2.4
2330-540918	8.6	247	271	107	116	127	166	152	760	0.180	1.9
2330-540919	8.6	247	271	107	116	127	166	152	760	0.180	1.9
2330-540921	8.6	247	271	107	116	127	166	152	760	0.180	1.9
2330-540922	8.6	244	295	83	115	125	163	154	684	0.180	1.9
2330-540938	8.7	244	293	82	115	115	153	178	754	0.180	1.8
2330-540939	8.7	244	293	82	115	115	153	178	754	0.180	1.8
2330-540941	8.7	244	293	82	115	115	153	178	754	0.180	1.8
2330-540991	8.4	253	279	78	107	123	143	145	706	0.180	1.8
2330-541392	8.5	252	288	91	126	119	152	159	756	0.180	2.4

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2330-541399	8.6	241	259	95	108	115	157	158	753	0.180	2.1
2330-541410	8.6	255	275	88	159	126	128	181	817	0.180	1.8
2330-541411	8.6	255	275	88	159	126	128	181	817	0.180	1.8
2330-541681	8.5	269	279	79	153	129	166	181	805	0.180	2.2
2330-541684	10.0	300	340	78	97	144	142	184	905	0.180	1.6
2330-541712	9.0	253	296	75	101	124	170	165	790	0.180	1.7
2330-541720	8.6	243	278	76	110	118	153	186	778	0.180	1.7
2330-541921	9.1	243	287	79	107	118	161	149	715	0.180	1.7
2330-541926	9.1	243	287	79	107	243	287	149	715	0.180	1.7
2330-541928	9.1	243	287	79	107	243	287	149	715	0.180	1.7
2330-541929	8.7	245	274	81	118	125	137	150	687	0.180	1.9
2330-541933	8.8	239	260	114	160	119	148	163	683	0.180	1.9
2330-541934	8.8	239	260	114	160	119	148	163	683	0.180	1.9
2330-541944	8.7	237	233	117	146	103	141	148	669	0.180	1.9
2330-541945	8.9	250	253	99	160	111	160	160	681	0.180	1.7
2330-541959	9.1	250	261	101	142	103	134	168	719	0.180	1.8
2330-541963	8.9	240	278	113	163	127	130	167	680	0.180	1.9
2330-541967	8.7	234	257	95	161	116	138	145	628	0.180	2.0
2330-541979	9.2	249	250	121	163	109	147	126	615	0.180	1.8
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-537694	8.7	231	270	70	111	142	210	149	681	0.180	1.6
2330-538825	9.2	267	320	96	94	139	242	160	696	0.180	1.5
2330-540457	10.7	263	390	117	156	126	189	193	874	0.150	1.5
2330-540460	10.9	269	328	116	147	128	211	195	896	0.150	1.5
2330-540537	8.5	242	299	91	110	120	152	163	788	0.180	2.5
2330-540544	8.8	255	289	81	97	126	173	134	682	0.180	1.9
2330-540548	8.8	252	282	74	104	131	158	149	676	0.180	1.9
2330-540551	8.9	254	278	81	105	136	169	154	677	0.180	2.0
2330-540808	8.3	229	269	74	115	122	172	150	724	0.180	2.3
2330-540810	8.3	229	269	74	115	122	172	150	724	0.180	2.3
2330-540812	9.0	265	280	83	132	136	157	164	811	0.180	2.2
2330-540813	9.0	265	280	83	132	136	157	164	811	0.180	2.2
2330-540814	9.0	265	280	83	132	136	157	164	811	0.180	2.2
2330-540816	8.3	250	300	86	110	118	156	165	793	0.180	2.4
2330-540819	8.4	254	264	90	122	128	156	156	738	0.180	2.4

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2330-540915	8.8	246	320	103	113	120	155	154	760	0.180	1.8
2330-540940	8.7	244	293	82	115	115	153	178	754	0.180	1.8
2330-540948	8.8	235	298	80	109	132	157	175	733	0.180	1.7
2330-540949	8.8	235	298	80	109	132	157	175	733	0.180	1.7
2330-540981	8.6	240	280	73	126	113	144	173	746	0.180	1.8
2330-541398	8.6	241	259	95	108	115	157	158	753	0.180	2.1
2330-541456	8.8	249	278	89	125	130	154	183	751	0.180	2.0
2330-541711	9.0	253	296	75	101	124	170	165	790	0.180	1.7
2330-541718	8.6	243	278	76	110	118	153	186	778	0.180	1.7
2330-541719	8.6	243	278	76	110	118	153	186	778	0.180	1.7
2330-541922	9.1	243	287	79	107	118	161	149	715	0.180	1.7
2330-541924	9.1	243	287	79	107	118	161	149	715	0.180	1.7
2330-541925	9.1	243	287	79	107	243	287	149	715	0.180	1.7
2330-541931	8.7	245	274	81	118	125	137	150	687	0.180	1.9
2330-541932	8.7	245	274	81	118	125	137	150	687	0.180	1.9
2330-541943	8.7	237	233	117	146	103	141	148	669	0.180	1.9
2330-541946	8.9	250	253	99	160	111	160	160	681	0.180	1.7
2330-541960	9.1	250	261	101	142	103	134	168	719	0.180	1.8
2330-541964	8.9	240	278	113	163	127	130	167	680	0.180	1.9
2330-541968	8.7	234	257	95	161	116	138	145	628	0.180	2.0
2330-541980	9.2	249	250	121	163	109	147	126	615	0.180	1.8

Test	12
Specification	**95**
2330-540549	161
2330-540554	164
2330-540742	165
2330-540767	137
2330-540807	172
2330-540820	178
2330-540821	178
2330-540918	145
2330-540919	145
2330-540921	145
2330-540922	142
2330-540938	135

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2330-540939	135
2330-540941	135
2330-540991	137
2330-541392	179
2330-541399	158
2330-541410	138
2330-541411	138
2330-541681	162
2330-541684	117
2330-541712	124
2330-541720	130
2330-541921	130
2330-541926	130
2330-541928	130
2330-541929	142
2330-541933	141
2330-541934	141
2330-541944	144
2330-541945	130
2330-541959	138
2330-541963	145
2330-541967	147
2330-541979	135
Specification	**95**
2330-537694	117
2330-538825	114
2330-540457	110
2330-540460	114
2330-540537	184
2330-540544	159
2330-540548	161
2330-540551	163
2330-540808	172
2330-540810	172
2330-540812	167

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2330-540813	167
2330-540814	167
2330-540816	179
2330-540819	178
2330-540915	132
2330-540940	135
2330-540948	112
2330-540949	112
2330-540981	135
2330-541398	158
2330-541456	151
2330-541711	124
2330-541718	130
2330-541719	130
2330-541922	130
2330-541924	130
2330-541925	130
2330-541931	142
2330-541932	142
2330-541943	144
2330-541946	130
2330-541960	138
2330-541964	145
2330-541968	147
2330-541980	135

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2026957916	8.4	273	363	81	70	96	136	137	704	0.180	2.0
2026997125	9.2	261	305	77	75	119	150	159	850	0.180	2.0
2026997126	9.2	261	305	77	75	119	150	159	850	0.180	2.0
2026997127	9.2	261	305	77	75	119	150	159	850	0.180	2.0
2026997129	9.6	291	352	88	76	115	168	148	781	0.180	1.8
2026997130	9.6	291	352	88	76	115	168	148	781	0.180	1.8
2026997131	9.6	291	352	88	76	115	168	148	781	0.180	1.8
2026997133	8.6	269	350	76	72	119	152	168	821	0.180	2.4
2026997134	8.6	269	350	76	72	119	152	168	821	0.180	2.4
2026997136	8.8	255	277	102	91	118	149	136	576	0.180	2.6
2026997138	8.8	255	277	102	91	118	149	136	576	0.180	2.6
2026997141	9.8	288	375	92	81	143	181	151	761	0.180	1.6
2026997144	9.3	268	358	80	78	130	179	153	770	0.180	1.7
2026997145	9.3	268	358	80	78	130	179	153	770	0.180	1.7
2026997147	9.3	268	358	80	78	130	179	153	770	0.180	1.7
2026997200	9.7	297	387	78	75	120	155	165	823	0.180	1.5
2026997205	8.6	261	321	99	91	107	145	136	584	0.180	1.6
2026997207	9.2	264	317	98	88	110	155	136	601	0.180	2.8
2026997208	9.2	264	317	98	88	110	155	136	601	0.180	2.8
2026997211	9.5	315	364	78	73	138	195	195	851	0.180	2.4

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2026997213	9.5	315	364	78	73	138	195	195	851	0.180	2.4
2026997217	8.8	263	321	82	79	127	174	161	777	0.180	2.4
2026997219	9.9	299	371	79	75	144	173	172	807	0.150	2.5
2026997234	8.7	271	312	85	88	119	156	139	607	0.180	1.8
2026997235	8.7	271	312	85	88	119	156	139	607	0.180	1.8
2026997236	8.7	271	312	85	88	119	156	139	607	0.180	1.8
2026997241	9.5	284	327	74	78	126	160	160	774	0.180	1.9
2026997243	9.6	297	323	75	77	144	155	142	744	0.180	2.2
2026997248	9.5	306	327	75	77	134	176	145	755	0.180	1.6
2026997253	8.6	280	313	71	78	136	162	157	695	0.180	1.8
2026997256	8.9	273	359	70	79	140	162	182	826	0.180	1.8
2026997269	9.4	294	343	72	78	143	173	169	798	0.180	2.3
2026997271	8.6	291	343	74	81	140	174	161	833	0.150	2.2
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2026957908	8.3	235	317	85	76	99	128	136	640	0.150	2.3
2026997128	9.6	291	352	88	76	115	168	148	781	0.180	1.8
2026997132	8.6	269	350	76	72	119	152	168	821	0.180	2.4
2026997135	8.6	269	350	76	72	119	152	168	821	0.180	2.4
2026997137	8.8	255	277	102	91	118	149	136	576	0.180	2.6
2026997139	8.8	255	277	102	91	118	149	136	576	0.180	2.6
2026997140	9.8	288	375	92	81	143	181	151	761	0.180	1.6
2026997146	9.3	268	358	80	78	130	179	153	770	0.180	1.7
2026997148	9.7	297	387	78	75	120	155	165	823	0.180	1.5
2026997201	9.7	297	387	78	75	120	155	165	823	0.180	1.5
2026997202	8.6	261	321	99	91	107	145	136	584	0.180	1.6
2026997206	9.2	264	317	98	88	110	155	136	601	0.180	2.8
2026997215	8.8	263	321	82	79	127	174	161	777	0.180	2.4
2026997216	8.8	263	321	82	79	127	174	161	777	0.180	2.4
2026997231	8.9	288	309	81	81	127	152	141	690	0.180	2.0
2026997232	8.9	288	309	81	81	127	152	141	690	0.180	2.0
2026997233	8.9	288	309	81	81	127	152	141	690	0.180	2.0
2026997237	8.7	271	312	85	88	119	156	139	607	0.180	1.8
2026997239	9.5	284	327	74	78	126	160	160	774	0.180	1.9
2026997240	9.5	284	327	74	78	126	160	160	774	0.180	1.9
2026997242	9.6	297	323	75	77	144	155	142	744	0.180	2.2

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2026997244	9.6	297	323	75	77	144	155	142	744	0.180	2.2
2026997245	9.6	297	323	75	77	144	155	142	744	0.180	2.2
2026997247	9.5	306	327	75	77	134	176	145	755	0.180	1.6
2026997249	9.5	306	327	75	77	134	176	145	755	0.180	1.6
2026997250	8.6	280	313	71	78	136	162	157	695	0.180	1.8
2026997251	8.6	280	313	71	78	136	162	157	695	0.180	1.8
2026997252	8.6	280	313	71	78	136	162	157	695	0.180	1.8
2026997254	8.9	273	359	70	79	140	162	182	826	0.180	1.8
2026997262	9.1	274	317	67	75	144	176	151	932	0.180	2.5
2026997265	9.1	274	317	67	75	144	176	151	932	0.180	2.5
2026997266	9.4	294	343	72	78	143	173	169	798	0.180	2.3
2026997272	8.6	291	343	74	81	140	174	161	833	0.150	2.2

Test	12
Specification	**95**
2026957916	149
2026997125	151
2026997126	151
2026997127	151
2026997129	130
2026997130	130
2026997131	130
2026997133	180
2026997134	180
2026997136	193
2026997138	193
2026997141	117
2026997144	126
2026997145	126
2026997147	126
2026997200	114
2026997205	116
2026997207	209
2026997208	209
2026997211	178
2026997213	178

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2026997217	177
2026997219	183
2026997234	135
2026997235	135
2026997236	135
2026997241	138
2026997243	165
2026997248	119
2026997253	132
2026997256	130
2026997269	167
2026997271	166
Specification	**95**
2026957908	169
2026997128	130
2026997132	180
2026997135	180
2026997137	193
2026997139	193
2026997140	117
2026997146	126
2026997148	114
2026997201	114
2026997202	116
2026997206	209
2026997215	177
2026997216	177
2026997231	144
2026997232	144
2026997233	144
2026997237	135
2026997239	138
2026997240	138
2026997242	165
2026997244	165

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-13

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2026997245	165
2026997247	119
2026997249	119
2026997250	132
2026997251	132
2026997252	132
2026997254	130
2026997262	183
2026997265	183
2026997266	167
2026997272	166

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 11/15/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80554909
PO #: PO-603923
Weight: 186000.000 LB
Ship Date: 11/15/2021
Package: BULK
Mode: Hopper Car
Car #: SHPX463721
Seal No: 270836

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PNM620530

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.350	g/10min
Density	D1505 or D4883	0.9550	g/cm3
Production Date		11/09/2021	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

Erin Xiao
Quality Systems Coordinator

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 11/15/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80554912
PO #: PO-603923
Weight: 181600.000 LB
Ship Date: 11/15/2021
Package: BULK
Mode: Hopper Car
Car #: CPCX814852
Seal No: 270974

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PNM620520

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.370	g/10min
Density	D1505 or D4883	0.9550	g/cm3
Production Date		11/08/2021	

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Erin Xiao
Quality Systems Coordinator

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 11/15/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80554911
PO #: PO-603923
Weight: 190700.000 LB
Ship Date: 11/15/2021
Package: BULK
Mode: Hopper Car
Car #: CPCX815441
Seal No: 270975

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PNM620510

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.390	g/10min
Density	D1505 or D4883	0.9550	g/cm3
Production Date		11/08/2021	

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Erin Xiao
Quality Systems Coordinator

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 12/09/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80571500
PO #: PO-604231
Weight: 205200.000 LB
Ship Date: 12/09/2021
Package: BULK
Mode: Hopper Car
Car #: HLTX007287
Seal No: 257529

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DNN610011

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9544	g/cm3
Production date		20211201	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-012203	2022-01-07	DNN610011	2330-531564	2330-540802
0116-012204	2022-01-07	DNN610011	2330-531564	2330-540802
0116-012207	2022-01-07	DNN610011	2330-540982	2330-531600
0116-012208	2022-01-07	DNN610011	2330-540982	2330-531600
0116-012209	2022-01-07	DNN610011	2330-540982	2330-531600
0116-012210	2022-01-07	DNN610011	2330-540982	2330-537586
0116-012211	2022-01-07	DNN610011	2330-540982	2330-537586
0116-012212	2022-01-07	DNN610011	2330-542077	2330-537586
0116-012213	2022-01-07	DNN610011	2330-542077	2330-537586
0116-012227	2022-01-08	DNN610011	2330-542077	2330-542082
0116-012230	2022-01-08	DNN610011	2330-542079	2330-542082
0116-012231	2022-01-08	DNN610011	2330-542079	2330-542082
0116-012232	2022-01-08	DNN610011	2330-542079	2330-542066
0116-012233	2022-01-08	DNN610011	2330-542070	2330-542066
0116-012234	2022-01-08	DNN610011	2330-542070	2330-542066
0116-012235	2022-01-08	DNN610011	2330-542070	2330-542066
0116-012236	2022-01-08	DNN610011	2330-542070	2330-542037
0116-012237	2022-01-08	DNN610011	2330-542070	2330-542037
0116-012238	2022-01-08	DNN610011	2330-542070	2330-542037
0116-012239	2022-01-08	DNN610011	2330-542084	2330-542037
0116-012240	2022-01-08	DNN610011	2330-542084	2330-542037

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012241	2022-01-08	DNN610011	2330-542084	2330-542037
0116-012242	2022-01-08	DNN610011	2026997200	2026997281
0116-012243	2022-01-08	DNN610011	2026997200	2026997281
0116-012244	2022-01-08	DNN610011	2026997283	2026997281
0116-012245	2022-01-08	DNN610011	2026997283	2026997281
0116-012246	2022-01-08	DNN610011	2026997283	2026997281
0116-012247	2022-01-08	DNN610011	2026997283	2026997280
0116-012248	2022-01-08	DNN610011	2026997283	2026997280
0116-012249	2022-01-08	DNN610011	2026997283	2026997280
0116-012250	2022-01-08	DNN610011	2026997228	2026997280
0116-012251	2022-01-08	DNN610011	2026997228	2026997280
0116-012252	2022-01-08	DNN610011	2026997228	2026997280
0116-012253	2022-01-08	DNN610011	2026997228	2026997280
0116-012254	2022-01-08	DNN610011	2026997228	2026997277
0116-012255	2022-01-08	DNN610011	2026997228	2026997277
0116-012256	2022-01-09	DNN610011	2026997230	2026997277
0116-012257	2022-01-09	DNN610011	2026997230	2026997277
0116-012258	2022-01-09	DNN610011	2026997230	2026997277
0116-012259	2022-01-09	DNN610011	2026997230	2026997277
0116-012260	2022-01-09	DNN610011	2026997230	2026997965
0116-012261	2022-01-09	DNN610011	2026997227	2026997965
0116-012262	2022-01-09	DNN610011	2026997227	2026997965
0116-012263	2022-01-09	DNN610011	2026997227	2026997965
0116-012264	2022-01-09	DNN610011	2026997227	2026997965
0116-012272	2022-01-09	DNN610011	2026997229	2026997279
0116-012273	2022-01-09	DNN610011	2026997229	2026997279
0116-012274	2022-01-09	DNN610011	2026997229	2026997225
0116-012275	2022-01-09	DNN610011	2026997229	2026997225
0116-012276	2022-01-09	DNN610011	2026997222	2026997225

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012277	2022-01-09	DNN610011	2026997222	2026997225
0116-012278	2022-01-09	DNN610011	2026997222	2026997225
0116-012279	2022-01-09	DNN610011	2026997222	2026997274
0116-012280	2022-01-09	DNN610011	2026997222	2026997274
0116-012281	2022-01-09	DNN610011	2026997222	2026997274
0116-012282	2022-01-09	DNN610011	2026997224	2026997274
0116-012283	2022-01-09	DNN610011	2026997224	2026997274
0116-012284	2022-01-09	DNN610011	2026997224	2026997274
0116-012285	2022-01-09	DNN610011	2026997224	2026997221
0116-012286	2022-01-09	DNN610011	2026997224	2026997221
0116-012287	2022-01-09	DNN610011	2026997268	2026997221
0116-012288	2022-01-09	DNN610011	2026997268	2026997221
0116-012289	2022-01-09	DNN610011	2026997268	2026997221
0116-012290	2022-01-09	DNN610011	2026997268	2026997212
0116-012291	2022-01-09	DNN610011	2026997268	2026997212
0116-012292	2022-01-09	DNN610011	2026997264	2026997212
0116-012293	2022-01-09	DNN610011	2026997264	2026997212
0116-012294	2022-01-09	DNN610011	2026997264	2026997212
0116-012295	2022-01-09	DNN610011	2026997264	2026997226
0116-012296	2022-01-10	DNN610011	2026997264	2026997226
0116-012297	2022-01-10	DNN610011	2026997264	2026997226
0116-012298	2022-01-10	DNN610011	2026997264	2026997226
0116-012299	2022-01-10	DNN610011	2026997264	2026997226
0116-012303	2022-01-10	DNN610011	2026997260	2026997259
0116-012304	2022-01-10	DNN610011	2026997260	2026997259
0116-012305	2022-01-10	DNN610011	2026997260	2026997259
0116-012306	2022-01-10	DNN610011	2026997260	2026997259
0116-012307	2022-01-10	DNN610011	2026997260	2026997259
0116-012308	2022-01-10	DNN610011	2026997261	2026997209

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012309	2022-01-10	DNN610011	2026997261	2026997209
0116-012310	2022-01-10	DNN610011	2026997261	2026997209
0116-012311	2022-01-10	DNN610011	2026997261	2026997209
0116-012312	2022-01-10	DNN610011	2026997261	2026997209
0116-012313	2022-01-10	DNN610011	2026997223	2026997209
0116-012314	2022-01-10	DNN610011	2026997223	2026997285
0116-012315	2022-01-10	DNN610011	2026997223	2026997285
0116-012325	2022-01-10	DNN610011	2026997223	2026997285
0116-012326	2022-01-10	DNN610011	2026997223	2026997203
0116-012327	2022-01-10	DNN610011	2026997223	2026997203
0116-012328	2022-01-10	DNN610011	2026997223	2026997203
0116-012330	2022-01-10	DNN610011	2026997223	2026997203
0116-012331	2022-01-10	DNN610011	2026997255	2026997203
0116-012332	2022-01-10	DNN610011	2026997255	2026997257
0116-012333	2022-01-11	DNN610011	2026997284	2026997257
0116-012339	2022-01-11	DNN610171	2026997284	2026997257
0116-012340	2022-01-11	DNN610171	2026997284	2026997257
0116-012341	2022-01-11	DNN610171	2026997284	2026997270
0116-012342	2022-01-11	DNN610171	2026997282	2026997270
0116-012343	2022-01-11	DNN610171	2026997282	2026997270
0116-012344	2022-01-11	DNN610171	2026997282	2026997270
0116-012345	2022-01-11	DNN610171	2026997282	2026997270
0116-012346	2022-01-11	DNN610171	2026997282	2026997270
0116-012347	2022-01-11	DNN610171	2026997282	2026997267
0116-012348	2022-01-11	DNN610171	2026997210	2026997267
0116-012349	2022-01-11	DNN610171	2026997210	2026997267
0116-012350	2022-01-11	DNN610171	2026997210	2026997267
0116-012351	2022-01-11	DNN610171	2026997210	2026997267
0116-012356	2022-01-12	DNN610171	2026997210	2330-542102

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012357	2022-01-12	DNN610171	2026997210	2330-542102
0116-012358	2022-01-12	DNN610171	2026997210	2330-542102
0116-012359	2022-01-12	DNN610171	2026997210	2330-542102
0116-012360	2022-01-12	DNN610171	2330-542062	2330-542102
0116-012361	2022-01-12	DNN610171	2330-542062	2330-542120
0116-012362	2022-01-12	DNN610171	2330-542062	2330-542120
0116-012363	2022-01-12	DNN610171	2330-542123	2330-542120
0116-012364	2022-01-12	DNN610171	2330-542123	2330-542120
0116-012365	2022-01-12	DNN610171	2330-542123	2330-542120
0116-012366	2022-01-12	DNN610171	2330-542123	2330-542120
0116-012367	2022-01-12	DNN610171	2330-542123	2330-542154
0116-012368	2022-01-12	DNN610171	2330-542101	2330-542154
0116-012369	2022-01-12	DNN610171	2330-542101	2330-542154
0116-012370	2022-01-12	DNN610171	2330-542101	2330-542154
0116-012371	2022-01-12	DNN610171	2330-542101	2330-542058
0116-012372	2022-01-12	DNN610171	2330-542101	2330-542058
0116-012373	2022-01-12	DNN610171	2330-542101	2330-542058
0116-012374	2022-01-12	DNN610171	2330-542112	2330-542058
0116-012375	2022-01-12	DNN610171	2330-542112	2330-542058
0116-012376	2022-01-12	DNN610171	2330-542112	2330-542058
0116-012377	2022-01-12	DNN610171	2330-542112	2330-542097
0116-012378	2022-01-12	DNN610171	2330-542112	2330-542097
0116-012379	2022-01-12	DNN610171	2330-542064	2330-542097
0116-012380	2022-01-12	DNN610171	2330-542064	2330-542097
0116-012387	2022-01-12	DNN610171	2330-542064	2330-542085
0116-012388	2022-01-12	DNN610171	2330-542064	2330-542085
0116-012389	2022-01-12	DNN610171	2330-542064	2330-542085
0116-012390	2022-01-12	DNN610171	2330-542064	2330-542085
0116-012396	2022-01-13	DNN610171	2330-542138	2330-542142

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012397	2022-01-13	DNN610171	2330-542138	2330-542142
0116-012398	2022-01-13	DNN610171	2330-542138	2330-542142
0116-012399	2022-01-13	DNN610171	2330-542138	2330-542142
0116-012400	2022-01-13	DNN610171	2330-542083	2330-542119
0116-012402	2022-01-13	DNN610171	2330-542083	2330-542119
0116-012403	2022-01-13	DNN610171	2330-542083	2330-542119
0116-012404	2022-01-13	DNN610171	2330-542083	2330-542119
0116-012405	2022-01-13	DNN610171	2330-542083	2330-542119
0116-012406	2022-01-13	DNN610171	2330-542132	2330-542098
0116-012407	2022-01-13	DNN610171	2330-542132	2330-542098
0116-012408	2022-01-13	DNN610171	2330-542132	2330-542098
0116-012409	2022-01-13	DNN610171	2330-542132	2330-542098
0116-012410	2022-01-13	DNN610171	2330-542132	2330-542098
0116-012411	2022-01-13	DNN610171	2330-542014	2330-542136
0116-012412	2022-01-13	DNN610171	2330-542014	2330-542136
0116-012413	2022-01-13	DNN610171	2330-542014	2330-542136
0116-012414	2022-01-13	DNN610171	2330-542014	2330-542136
0116-012415	2022-01-13	DNN610171	2330-542014	2330-542136
0116-012416	2022-01-13	DNN610171	2330-542014	2330-542136
0116-012417	2022-01-13	DNN610171	2330-542072	2330-542080
0116-012418	2022-01-13	DNN610171	2330-542072	2330-542080
0116-012425	2022-01-13	DNN610171	2330-542072	2330-542080
0116-012426	2022-01-13	DNN610171	2330-542073	2330-542078
0116-012427	2022-01-13	DNN610171	2330-542073	2330-542078
0116-012428	2022-01-13	DNN610171	2330-542073	2330-542078
0116-012429	2022-01-13	DNN610171	2330-542073	2330-542078
0116-012430	2022-01-13	DNN610171	2330-542073	2330-542078
0116-012431	2022-01-13	DNN610171	2330-542075	2330-542078
0116-012432	2022-01-13	DNN610171	2330-542075	2330-542076

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012433	2022-01-13	DNN610171	2330-542075	2330-542076
0116-012434	2022-01-13	DNN610171	2330-542075	2330-542076
0116-012435	2022-01-13	DNN610171	2330-542075	2330-542076
0116-012436	2022-01-13	DNN610171	2330-542075	2330-542076
0116-012437	2022-01-13	DNN610171	2330-542074	2330-542126
0116-012438	2022-01-13	DNN610171	2330-542074	2330-542126
0116-012439	2022-01-13	DNN610171	2330-542074	2330-542126
0116-012440	2022-01-13	DNN610171	2330-542074	2330-542126
0116-012441	2022-01-14	DNN610171	2330-542074	2330-542126
0116-012442	2022-01-14	DNN610171	2330-542074	2330-542126
0116-012443	2022-01-14	DNN610171	2330-540800	2330-542081
0116-012444	2022-01-14	DNN610171	2330-540800	2330-542081
0116-012445	2022-01-14	DNN610171	2330-540800	2330-542081
0116-012446	2022-01-14	DNN610171	2330-540800	2330-542081
0116-012447	2022-01-14	DNN610171	2330-540800	2330-542081
0116-012448	2022-01-14	DNN610171	2330-540800	2330-542081
0116-012449	2022-01-14	DNN610171	2330-540806	2330-542087
0116-012450	2022-01-14	DNN610171	2330-540806	2330-542087
0116-012451	2022-01-14	DNN610171	2330-540806	2330-542087
0116-012452	2022-01-14	DNN610171	2330-540806	2330-542087
0116-012453	2022-01-14	DNN610171	2330-540806	2330-542087
0116-012454	2022-01-14	DNN610171	2330-542055	2330-542131
0116-012455	2022-01-14	DNN610171	2330-542055	2330-542131
0116-012456	2022-01-14	DNN610171	2330-542055	2330-542131
0116-012457	2022-01-14	DNN610171	2330-542055	2330-542131
0116-012458	2022-01-14	DNN610171	2330-542055	2330-542131
0116-012459	2022-01-14	DNN610171	2330-542055	2330-542131
0116-012460	2022-01-14	DNN610171	2330-542061	2330-542057
0116-012461	2022-01-14	DNN610171	2330-542061	2330-542057

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-012462	2022-01-14	DNN610171	2330-542061	2330-542057
0116-012463	2022-01-14	DNN610171	2330-542061	2330-542057
0116-012464	2022-01-14	DNN610171	2330-542061	2330-542057
0116-012465	2022-01-14	DNN610171	2330-542053	2330-542057
0116-012471	2022-01-14	DNN610171	2330-542053	2330-542124
0116-012472	2022-01-14	DNN610171	2330-542053	2330-542124
0116-012474	2022-01-14	DNN610171	2330-542035	2330-542124
0116-012475	2022-01-14	DNN610171	2330-542035	2330-542124
0116-012476	2022-01-14	DNN610171	2330-542035	2330-542111
0116-012477	2022-01-14	DNN610171	2330-542035	2330-542111
0116-012478	2022-01-14	DNN610171	2330-542035	2330-542111
0116-012479	2022-01-15	DNN610171	2330-542035	2330-542111
0116-012480	2022-01-15	DNN610171	2330-542049	2330-542111
0116-012481	2022-01-15	DNN610171	2330-542049	2330-542111
0116-012482	2022-01-15	DNN610171	2330-542049	2330-542111
0116-012483	2022-01-15	DNN610171	2330-542049	2330-542111
0116-012484	2022-01-15	DNN610171	2330-542049	2330-542111
0116-012485	2022-01-15	DNN610171	2330-542025	2330-542144
0116-012486	2022-01-15	DNN610171	2330-542025	2330-542144
0116-012487	2022-01-15	DNN610171	2330-542025	2330-542144
0116-012488	2022-01-15	DNN610171	2330-542025	2330-542144
0116-012492	2022-01-15	DNN610171	2330-542145	2330-542052
0116-012493	2022-01-15	DNN610171	2330-542145	2330-542052
0116-012529	2022-01-16	DNN610171	2330-542145	2330-542052
0116-012530	2022-01-16	DNN610171	2330-542145	2330-542052
0116-012531	2022-01-16	DNN610171	2330-542145	2330-542052
0116-012532	2022-01-16	DNN610171	2330-542145	2330-542052
0116-012533	2022-01-16	DNN610171	2330-542044	2330-542052
0116-012534	2022-01-16	DNN610171	2330-542044	2330-542106

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0116-012535	2022-01-17	DNN610171	2330-542044	2330-542106
0116-012536	2022-01-17	DNN610171	2330-542044	2330-542106
0116-012537	2022-01-17	DNN610171	2330-542044	2330-542106
0116-012538	2022-01-17	DNN610171	2330-542110	2330-542106
0116-012539	2022-01-17	DNN610171	2330-542110	2330-542108
0116-012540	2022-01-17	DNN610171	2330-542110	2330-542108
0116-012541	2022-01-17	DNN610171	2330-542110	2330-542108
0116-012542	2022-01-17	DNN610171	2330-542110	2330-542108
0116-012543	2022-01-17	DNN610171	2330-542110	2330-542108
0116-012549	2022-01-17	DNN610171	2330-542143	2330-542108
0116-012550	2022-01-17	DNN610171	2330-542143	2330-542134
0116-012551	2022-01-17	DNN610171	2330-542143	2330-542134
0116-012552	2022-01-17	DNN610171	2330-542143	2330-542134
0116-012553	2022-01-17	DNN610171	2330-542143	2330-542134
0116-012559	2022-01-17	DNN610171	2330-542104	2330-542134
0116-012560	2022-01-17	DNN610171	2330-542104	2330-542134
0116-012561	2022-01-17	DNN610171	2330-542104	2330-542133
0116-012562	2022-01-17	DNN610171	2330-542104	2330-542133
0116-012563	2022-01-17	DNN610171	2330-542104	2330-542133
0116-012564	2022-01-17	DNN610171	2330-542140	2330-542133
0116-012565	2022-01-17	DNN610171	2330-542140	2330-542133
0116-012566	2022-01-17	DNN610171	2330-542140	2330-542099
0116-012567	2022-01-17	DNN610171	2330-542140	2330-542099
0116-012568	2022-01-17	DNN610171	2330-542140	2330-542099
0116-012577	2022-01-18	DNN610171	2330-542139	2330-542095
0116-012578	2022-01-18	DNN610171	2330-542139	2330-542095
0116-012579	2022-01-18	DNN610171	2330-542139	2330-542095
0116-012580	2022-01-18	DNN610171	2330-542139	2330-542095
0116-012581	2022-01-18	DNN610171	2330-542139	2330-542095

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-012582	2022-01-18	DNN610171	2330-542063	2330-542095
0116-012583	2022-01-18	DNN610171	2330-542063	2330-542091
0116-012584	2022-01-18	DNN610171	2330-542063	2330-542091
0116-012585	2022-01-18	DNN610171	2330-542063	2330-542091
0116-012586	2022-01-18	DNN610171	2330-542063	2330-542091
0116-012587	2022-01-18	DNN610171	2330-542063	2330-542091
0116-012588	2022-01-18	DNN610171	2330-542090	2330-542088
0116-012589	2022-01-18	DNN610171	2330-542090	2330-542088
0116-012590	2022-01-18	DNN610171	2330-542090	2330-542088
0116-012591	2022-01-18	DNN610171	2330-542090	2330-542088
0116-012592	2022-01-18	DNN610171	2330-542090	2330-542088
0116-012593	2022-01-18	DNN610171	2330-542096	2330-542088
0116-012594	2022-01-18	DNN610171	2330-542096	2330-542088
0116-012595	2022-01-18	DNN610171	2330-542096	2330-542089
0116-012596	2022-01-18	DNN610171	2330-542096	2330-542089
0116-012597	2022-01-18	DNN610171	2330-542096	2330-542089
0116-012598	2022-01-18	DNN610171	2330-542096	2330-542089
0116-012599	2022-01-18	DNN610171	2330-542086	2330-542089

QUANTITY (ROLLS): 271

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-012203	225.00	2.69	0.953	70	6	9
0116-012204	249.00	2.75	0.953	83	6	6
0116-012207	249.00	2.75	0.953	83	6	6
0116-012208	249.00	2.75	0.953	83	6	6
0116-012209	249.00	2.75	0.953	83	6	6
0116-012210	249.00	2.75	0.953	83	6	6
0116-012211	244.00	2.64	0.953	83	6	6
0116-012212	244.00	2.64	0.953	83	6	6
0116-012213	244.00	2.64	0.953	83	6	6
0116-012227	230.00	2.55	0.952	82	7	8
0116-012230	230.00	2.55	0.952	82	7	8
0116-012231	230.00	2.55	0.952	82	7	8
0116-012232	230.00	2.55	0.952	82	7	8
0116-012233	230.00	2.55	0.952	82	7	8
0116-012234	239.00	2.56	0.952	82	7	8
0116-012235	239.00	2.56	0.952	82	7	8
0116-012236	239.00	2.56	0.952	82	7	8
0116-012237	239.00	2.56	0.952	82	7	8
0116-012238	239.00	2.56	0.952	82	7	8
0116-012239	237.66	2.56	0.952	79	3	3
0116-012240	237.66	2.56	0.952	79	3	3
0116-012241	237.66	2.56	0.952	79	3	3
0116-012242	237.66	2.56	0.952	79	3	3
0116-012243	237.66	2.56	0.952	79	3	3

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012244	240.00	2.46	0.952	79	3	3
0116-012245	240.00	2.46	0.952	79	3	3
0116-012246	240.00	2.46	0.952	79	3	3
0116-012247	240.00	2.46	0.952	79	3	3
0116-012248	240.00	2.46	0.952	79	3	3
0116-012249	239.00	2.67	0.952	75	1	2
0116-012250	239.00	2.67	0.952	75	1	2
0116-012251	239.00	2.67	0.952	75	1	2
0116-012252	239.00	2.67	0.952	75	1	2
0116-012253	239.00	2.67	0.952	75	1	2
0116-012254	239.00	2.67	0.952	75	1	2
0116-012255	233.00	2.68	0.952	75	1	2
0116-012256	233.00	2.68	0.952	75	1	2
0116-012257	233.00	2.68	0.952	75	1	2
0116-012258	233.00	2.68	0.952	75	1	2
0116-012259	233.00	2.68	0.952	75	1	2
0116-012260	230.00	2.50	0.950	68	3	2
0116-012261	230.00	2.50	0.950	68	3	2
0116-012262	230.00	2.50	0.950	68	3	2
0116-012263	230.00	2.50	0.950	68	3	2
0116-012264	230.00	2.50	0.950	68	3	2
0116-012272	229.60	2.57	0.954	77	3	4
0116-012273	229.60	2.57	0.954	77	3	4
0116-012274	229.60	2.57	0.954	77	3	4
0116-012275	229.60	2.57	0.954	77	3	4
0116-012276	229.60	2.57	0.954	77	3	4
0116-012277	235.00	2.47	0.954	77	3	4
0116-012278	235.00	2.47	0.954	77	3	4
0116-012279	235.00	2.47	0.954	77	3	4
0116-012280	235.00	2.47	0.954	77	3	4
0116-012281	235.00	2.47	0.954	77	3	4
0116-012282	236.00	2.35	0.951	72	2	3
0116-012283	236.00	2.35	0.951	72	2	3
0116-012284	236.00	2.35	0.951	72	2	3
0116-012285	236.00	2.35	0.951	72	2	3
0116-012286	236.00	2.35	0.951	72	2	3

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012287	228.00	2.37	0.951	72	2	3
0116-012288	228.00	2.37	0.951	72	2	3
0116-012289	228.00	2.37	0.951	72	2	3
0116-012290	228.00	2.37	0.951	72	2	3
0116-012291	228.00	2.37	0.951	72	2	3
0116-012292	232.00	2.54	0.950	80	3	2
0116-012293	232.00	2.54	0.950	80	3	2
0116-012294	232.00	2.54	0.950	80	3	2
0116-012295	232.00	2.54	0.950	80	3	2
0116-012296	232.00	2.54	0.950	80	3	2
0116-012297	224.00	2.57	0.950	80	3	2
0116-012298	224.00	2.57	0.950	80	3	2
0116-012299	224.00	2.57	0.950	80	3	2
0116-012303	227.30	2.62	0.955	76	4	4
0116-012304	227.30	2.62	0.955	76	4	4
0116-012305	227.30	2.62	0.955	76	4	4
0116-012306	227.30	2.62	0.955	76	4	4
0116-012307	227.30	2.62	0.955	76	4	4
0116-012308	227.00	2.57	0.955	76	4	4
0116-012309	227.00	2.57	0.955	76	4	4
0116-012310	227.00	2.57	0.955	76	4	4
0116-012311	227.00	2.57	0.955	76	4	4
0116-012312	227.00	2.57	0.955	76	4	4
0116-012313	229.60	2.53	0.954	72	4	3
0116-012314	229.60	2.53	0.954	72	4	3
0116-012315	229.60	2.53	0.954	72	4	3
0116-012325	220.00	2.54	0.951	52	3	3
0116-012326	220.00	2.54	0.951	52	3	3
0116-012327	220.00	2.54	0.951	52	3	3
0116-012328	220.00	2.54	0.951	52	3	3
0116-012330	223.00	2.43	0.951	52	3	3
0116-012331	223.00	2.43	0.951	52	3	3
0116-012332	223.00	2.43	0.951	52	3	3
0116-012333	223.00	2.43	0.951	52	3	3
0116-012339	225.60	2.51	0.955	78	5	6
0116-012340	225.60	2.51	0.955	78	5	6

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012341	225.60	2.51	0.955	78	5	6
0116-012342	225.60	2.51	0.955	78	5	6
0116-012343	225.60	2.51	0.955	78	5	6
0116-012344	226.00	2.54	0.955	78	5	6
0116-012345	226.00	2.54	0.955	78	5	6
0116-012346	226.00	2.54	0.955	78	5	6
0116-012347	226.00	2.54	0.955	78	5	6
0116-012348	226.00	2.54	0.955	78	5	6
0116-012349	217.30	2.55	0.953	80	6	6
0116-012350	217.30	2.55	0.953	80	6	6
0116-012351	217.30	2.55	0.953	80	6	6
0116-012356	236.00	2.51	0.953	80	5	6
0116-012357	236.00	2.51	0.953	80	5	6
0116-012358	236.00	2.51	0.953	80	5	6
0116-012359	236.00	2.51	0.953	80	5	6
0116-012360	236.00	2.51	0.953	80	5	6
0116-012361	232.00	2.56	0.953	80	5	6
0116-012362	232.00	2.56	0.953	80	5	6
0116-012363	232.00	2.56	0.953	80	5	6
0116-012364	232.00	2.56	0.953	80	5	6
0116-012365	232.00	2.56	0.953	80	5	6
0116-012366	239.00	2.53	0.953	74	2	2
0116-012367	239.00	2.53	0.953	74	2	2
0116-012368	239.00	2.53	0.953	74	2	2
0116-012369	239.00	2.53	0.953	74	2	2
0116-012370	239.00	2.53	0.953	74	2	2
0116-012371	236.00	2.60	0.953	74	2	2
0116-012372	236.00	2.60	0.953	74	2	2
0116-012373	236.00	2.60	0.953	74	2	2
0116-012374	236.00	2.60	0.953	74	2	2
0116-012375	236.00	2.60	0.953	74	2	2
0116-012376	236.00	2.60	0.953	74	2	2
0116-012377	236.00	2.60	0.953	74	2	2
0116-012378	236.00	2.60	0.953	74	2	2
0116-012379	236.00	2.60	0.953	74	2	2
0116-012380	236.00	2.60	0.953	74	2	2

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012387	233.00	2.54	0.950	74	2	2
0116-012388	233.00	2.54	0.950	74	2	2
0116-012389	233.00	2.54	0.950	74	2	2
0116-012390	233.00	2.54	0.950	74	2	2
0116-012396	228.00	2.63	0.952	80	4	3
0116-012397	228.00	2.63	0.952	80	4	3
0116-012398	228.00	2.63	0.952	80	4	3
0116-012399	228.00	2.63	0.952	80	4	3
0116-012400	228.00	2.63	0.952	80	4	3
0116-012402	237.00	2.74	0.952	80	4	3
0116-012403	237.00	2.74	0.952	80	4	3
0116-012404	237.00	2.74	0.952	80	4	3
0116-012405	237.00	2.74	0.952	80	4	3
0116-012406	237.00	2.74	0.952	80	4	3
0116-012407	226.00	2.76	0.953	74	3	3
0116-012408	226.00	2.76	0.953	74	3	3
0116-012409	226.00	2.76	0.953	74	3	3
0116-012410	226.00	2.76	0.953	74	3	3
0116-012411	226.00	2.76	0.953	74	3	3
0116-012412	228.00	2.70	0.953	74	3	3
0116-012413	228.00	2.70	0.953	74	3	3
0116-012414	228.00	2.70	0.953	74	3	3
0116-012415	228.00	2.70	0.953	74	3	3
0116-012416	228.00	2.70	0.953	74	3	3
0116-012417	226.00	2.72	0.953	78	2	2
0116-012418	226.00	2.72	0.953	78	2	2
0116-012425	219.00	2.59	0.953	76	5	5
0116-012426	219.00	2.59	0.953	76	5	5
0116-012427	219.00	2.59	0.953	76	5	5
0116-012428	219.00	2.59	0.953	76	5	5
0116-012429	219.00	2.59	0.953	76	5	5
0116-012430	240.00	2.52	0.953	76	5	5
0116-012431	240.00	2.52	0.953	76	5	5
0116-012432	240.00	2.52	0.953	76	5	5
0116-012433	240.00	2.52	0.953	76	5	5
0116-012434	240.00	2.52	0.953	76	5	5

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012435	232.00	2.64	0.955	79	2	3
0116-012436	232.00	2.64	0.955	79	2	3
0116-012437	232.00	2.64	0.955	79	2	3
0116-012438	232.00	2.64	0.955	79	2	3
0116-012439	232.00	2.64	0.955	79	2	3
0116-012440	230.00	2.65	0.955	79	2	3
0116-012441	230.00	2.65	0.955	79	2	3
0116-012442	230.00	2.65	0.955	79	2	3
0116-012443	230.00	2.65	0.955	79	2	3
0116-012444	230.00	2.65	0.955	79	2	3
0116-012445	233.00	2.64	0.954	79	3	3
0116-012446	233.00	2.64	0.954	79	3	3
0116-012447	233.00	2.64	0.954	79	3	3
0116-012448	233.00	2.64	0.954	79	3	3
0116-012449	233.00	2.64	0.954	79	3	3
0116-012450	235.00	2.66	0.954	79	3	3
0116-012451	235.00	2.66	0.954	79	3	3
0116-012452	235.00	2.66	0.954	79	3	3
0116-012453	235.00	2.66	0.954	79	3	3
0116-012454	235.00	2.66	0.954	79	3	3
0116-012455	231.00	2.68	0.955	75	4	4
0116-012456	231.00	2.68	0.955	75	4	4
0116-012457	231.00	2.68	0.955	75	4	4
0116-012458	231.00	2.68	0.955	75	4	4
0116-012459	231.00	2.68	0.955	75	4	4
0116-012460	231.00	2.68	0.955	75	4	4
0116-012461	228.60	2.69	0.955	75	4	4
0116-012462	228.60	2.69	0.955	75	4	4
0116-012463	228.60	2.69	0.955	75	4	4
0116-012464	228.60	2.69	0.955	75	4	4
0116-012465	228.60	2.69	0.955	75	4	4
0116-012471	236.00	2.38	0.951	78	1	2
0116-012472	236.00	2.38	0.951	78	1	2
0116-012474	236.00	2.38	0.951	78	1	2
0116-012475	236.00	2.38	0.951	78	1	2
0116-012476	236.00	2.38	0.951	78	1	2

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

SOLMAX APPROVED QUALITY ASSURANCE

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012477	223.00	2.55	0.951	78	1	2
0116-012478	223.00	2.55	0.951	78	1	2
0116-012479	223.00	2.55	0.951	78	1	2
0116-012480	223.00	2.55	0.951	78	1	2
0116-012481	223.00	2.55	0.951	78	1	2
0116-012482	223.00	2.55	0.951	78	1	2
0116-012483	224.60	2.69	0.955	72	3	3
0116-012484	224.60	2.69	0.955	72	3	3
0116-012485	224.60	2.69	0.955	72	3	3
0116-012486	224.60	2.69	0.955	72	3	3
0116-012487	224.60	2.69	0.955	72	3	3
0116-012488	231.00	2.71	0.955	72	3	3
0116-012492	231.00	2.71	0.955	72	3	3
0116-012493	231.00	2.71	0.955	72	3	3
0116-012529	226.00	2.47	0.957	71	6	5
0116-012530	226.00	2.47	0.957	71	6	5
0116-012531	226.00	2.47	0.957	71	6	5
0116-012532	226.00	2.47	0.957	71	6	5
0116-012533	226.00	2.47	0.957	71	6	5
0116-012534	225.00	2.47	0.957	71	6	5
0116-012535	225.00	2.47	0.957	71	6	5
0116-012536	225.00	2.47	0.957	71	6	5
0116-012537	225.00	2.47	0.957	71	6	5
0116-012538	225.00	2.47	0.957	71	6	5
0116-012539	223.00	2.55	0.955	77	5	3
0116-012540	223.00	2.55	0.955	77	5	3
0116-012541	223.00	2.55	0.955	77	5	3
0116-012542	223.00	2.55	0.955	77	5	3
0116-012543	223.00	2.55	0.955	77	5	3
0116-012549	233.00	2.63	0.955	78	6	5
0116-012550	233.00	2.63	0.955	78	6	5
0116-012551	233.00	2.63	0.955	78	6	5
0116-012552	233.00	2.63	0.955	78	6	5
0116-012553	233.00	2.63	0.955	78	6	5
0116-012559	219.00	2.59	0.956	72	5	4
0116-012560	219.00	2.59	0.956	72	5	4

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

SOLMAX APPROVED QUALITY ASSURANCE

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-012561	219.00	2.59	0.956	72	5	4
0116-012562	219.00	2.59	0.956	72	5	4
0116-012563	219.00	2.59	0.956	72	5	4
0116-012564	220.00	2.86	0.956	72	5	4
0116-012565	220.00	2.86	0.956	72	5	4
0116-012566	220.00	2.86	0.956	72	5	4
0116-012567	220.00	2.86	0.956	72	5	4
0116-012568	220.00	2.86	0.956	72	5	4
0116-012577	222.00	2.59	0.955	72	6	6
0116-012578	222.00	2.59	0.955	72	6	6
0116-012579	222.00	2.59	0.955	72	6	6
0116-012580	222.00	2.59	0.955	72	6	6
0116-012581	222.00	2.59	0.955	72	6	6
0116-012582	230.40	2.56	0.955	72	6	6
0116-012583	230.40	2.56	0.955	72	6	6
0116-012584	230.40	2.56	0.955	72	6	6
0116-012585	230.40	2.56	0.955	72	6	6
0116-012586	230.40	2.56	0.955	72	6	6
0116-012587	226.00	2.63	0.952	76	2	4
0116-012588	226.00	2.63	0.952	76	2	4
0116-012589	226.00	2.63	0.952	76	2	4
0116-012590	226.00	2.63	0.952	76	2	4
0116-012591	226.00	2.63	0.952	76	2	4
0116-012592	233.30	2.40	0.952	76	2	4
0116-012593	233.30	2.40	0.952	76	2	4
0116-012594	233.30	2.40	0.952	76	2	4
0116-012595	233.30	2.40	0.952	76	2	4
0116-012596	233.30	2.40	0.952	76	2	4
0116-012597	232.00	2.42	0.955	75	2	2
0116-012598	232.00	2.42	0.955	75	2	2
0116-012599	232.00	2.42	0.955	75	2	2

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-531564	8.8	240	292	73	89	125	169	170	759	0.180	1.5
2330-540800	9.5	246	286	110	116	136	161	181	782	0.180	1.6
2330-540806	8.7	243	285	79	129	118	164	161	752	0.180	1.9
2330-540982	8.8	257	299	75	120	120	161	168	769	0.180	1.8
2330-542014	8.4	234	263	75	117	118	160	139	669	0.180	1.7
2330-542025	8.4	253	256	77	125	126	143	150	719	0.180	2.0
2330-542035	8.3	268	270	87	118	115	143	157	732	0.180	2.0
2330-542044	8.7	229	259	118	165	105	141	140	644	0.180	2.0
2330-542049	8.6	234	256	105	166	98	148	145	631	0.180	1.9
2330-542053	8.6	243	253	130	192	105	126	126	593	0.180	1.9
2330-542055	8.6	243	253	130	192	105	126	126	593	0.180	1.9
2330-542061	8.9	249	249	121	156	115	149	132	592	0.180	2.0
2330-542062	8.9	249	249	121	156	115	149	132	592	0.180	2.0
2330-542063	8.9	249	249	121	156	115	149	132	592	0.180	2.0
2330-542064	8.9	249	249	121	156	115	149	132	592	0.180	2.0
2330-542070	9.4	225	230	156	188	116	120	125	625	0.180	1.7

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2330-542072	8.9	243	235	122	179	99	128	132	595	0.180	1.7
2330-542073	8.9	243	235	122	179	99	128	132	595	0.180	1.7
2330-542074	8.9	243	235	122	179	99	128	132	595	0.180	1.7
2330-542075	8.9	243	235	122	179	99	128	132	595	0.180	1.7
2330-542077	8.6	229	255	110	159	105	151	136	581	0.180	1.8
2330-542079	8.6	229	255	110	159	105	151	136	581	0.180	1.8
2330-542083	8.7	244	253	156	167	119	147	129	618	0.180	1.9
2330-542084	8.9	243	299	106	100	102	142	155	737	0.180	1.9
2330-542086	8.9	243	299	106	100	102	142	155	737	0.180	1.9
2330-542090	8.3	240	256	75	112	103	124	150	746	0.180	2.0
2330-542096	8.9	241	271	87	104	120	159	145	718	0.180	2.0
2330-542101	8.7	245	265	93	129	103	142	158	661	0.180	1.7
2330-542104	8.6	241	247	84	113	101	146	139	681	0.180	1.8
2330-542110	8.5	237	264	73	111	114	155	190	679	0.180	1.9
2330-542112	8.9	255	245	79	104	112	139	151	675	0.180	1.7
2330-542123	8.6	246	243	75	135	115	118	127	618	0.180	1.9
2330-542132	8.5	234	240	80	107	111	133	145	700	0.180	2.0
2330-542138	9.1	240	250	93	125	98	153	146	694	0.180	1.9
2330-542139	9.1	240	250	93	125	98	153	146	694	0.180	1.9
2330-542140	9.1	240	250	93	125	98	153	146	694	0.180	1.9
2330-542143	8.5	241	255	89	110	112	151	140	657	0.180	2.0
2330-542145	9.1	254	254	88	128	127	136	155	725	0.180	1.9
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-531600	8.7	260	283	74	92	107	142	157	747	0.180	1.6
2330-537586	8.2	255	252	71	101	146	156	177	702	0.180	1.6
2330-540802	9.5	246	286	110	116	136	161	181	782	0.180	1.6
2330-542037	8.8	241	253	127	195	115	135	137	664	0.180	2.0
2330-542052	8.6	234	256	105	166	98	148	145	631	0.180	1.9
2330-542057	9.6	240	268	134	181	125	152	147	626	0.180	1.9
2330-542058	9.6	240	268	134	181	125	152	147	626	0.180	1.9
2330-542066	8.7	248	274	120	157	109	157	158	590	0.180	1.9
2330-542076	8.6	229	255	110	159	105	151	136	581	0.180	1.8
2330-542078	8.6	229	255	110	159	105	151	136	581	0.180	1.8
2330-542080	8.7	244	253	156	167	119	147	129	618	0.180	1.9
2330-542081	8.7	244	253	156	167	119	147	129	618	0.180	1.9

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2330-542082	8.7	244	253	156	167	119	147	129	618	0.180	1.9
2330-542085	8.9	243	299	106	100	102	142	155	737	0.180	1.9
2330-542087	8.9	243	299	106	100	102	142	155	737	0.180	1.9
2330-542088	8.3	240	256	75	112	103	124	150	746	0.180	2.0
2330-542089	8.3	240	256	75	112	103	124	150	746	0.180	2.0
2330-542091	8.3	240	256	75	112	103	124	150	746	0.180	2.0
2330-542095	8.7	250	279	77	113	110	130	164	740	0.180	2.0
2330-542097	8.9	241	271	87	104	120	159	145	718	0.180	2.0
2330-542098	8.9	241	271	87	104	120	159	145	718	0.180	2.0
2330-542099	8.9	241	271	87	104	120	159	145	718	0.180	2.0
2330-542102	8.7	245	265	93	129	103	142	158	661	0.180	1.7
2330-542106	8.6	241	247	84	113	101	146	139	681	0.180	1.8
2330-542108	8.5	237	264	73	111	114	155	190	679	0.180	1.9
2330-542111	8.5	237	264	73	111	114	155	190	679	0.180	1.9
2330-542119	8.7	253	260	81	127	110	115	133	672	0.180	1.9
2330-542120	8.7	253	260	81	127	110	115	133	672	0.180	1.9
2330-542124	8.6	246	243	75	135	115	118	127	618	0.180	1.9
2330-542126	8.9	268	245	76	115	123	138	155	678	0.180	1.8
2330-542131	8.5	234	240	80	107	111	133	145	700	0.180	2.0
2330-542133	9.1	254	244	89	128	123	138	168	673	0.180	1.9
2330-542134	9.1	254	244	89	128	123	138	168	673	0.180	1.9
2330-542136	9.1	254	244	89	128	123	138	168	673	0.180	1.9
2330-542142	8.5	241	255	89	110	112	151	140	657	0.180	2.0
2330-542144	8.5	241	255	89	110	112	151	140	657	0.180	2.0
2330-542154	9.3	251	252	89	123	123	129	140	679	0.180	1.9

Test	12
Specification	**95**
2330-531564	109
2330-540800	123
2330-540806	139
2330-540982	131
2330-542014	128
2330-542025	149
2330-542035	150
2330-542044	147

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2330-542049	146
2330-542053	141
2330-542055	141
2330-542061	149
2330-542062	149
2330-542063	149
2330-542064	149
2330-542070	131
2330-542072	128
2330-542073	128
2330-542074	128
2330-542075	128
2330-542077	132
2330-542079	132
2330-542083	143
2330-542084	146
2330-542086	146
2330-542090	149
2330-542096	146
2330-542101	128
2330-542104	136
2330-542110	143
2330-542112	128
2330-542123	143
2330-542132	152
2330-542138	143
2330-542139	143
2330-542140	143
2330-542143	151
2330-542145	146
Specification	**95**
2330-531600	120
2330-537586	122
2330-540802	123
2330-542037	147

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2330-542052	146
2330-542057	141
2330-542058	141
2330-542066	146
2330-542076	132
2330-542078	132
2330-542080	143
2330-542081	143
2330-542082	143
2330-542085	146
2330-542087	146
2330-542088	149
2330-542089	149
2330-542091	149
2330-542095	151
2330-542097	146
2330-542098	146
2330-542099	146
2330-542102	128
2330-542106	136
2330-542108	143
2330-542111	143
2330-542119	142
2330-542120	142
2330-542124	143
2330-542126	133
2330-542131	152
2330-542133	146
2330-542134	146
2330-542136	146
2330-542142	151
2330-542144	151
2330-542154	144

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2026997200	9.7	297	387	78	75	120	155	165	823	0.180	1.5
2026997210	9.5	315	364	78	73	138	195	195	851	0.180	2.4
2026997222	9.1	252	301	89	85	99	150	140	636	0.150	2.2
2026997223	9.1	252	301	89	85	99	150	140	636	0.150	2.2
2026997224	9.1	252	301	89	85	99	150	140	636	0.150	2.2
2026997227	8.6	239	312	93	82	101	142	137	577	0.150	2.7
2026997228	8.6	239	312	93	82	101	142	137	577	0.150	2.7
2026997229	8.6	239	312	93	82	101	142	137	577	0.150	2.7
2026997230	8.3	256	295	95	87	111	146	138	589	0.180	1.7
2026997255	8.9	273	359	70	79	140	162	182	826	0.180	1.8
2026997260	9.2	283	325	75	81	119	151	154	809	0.180	1.8
2026997261	9.2	283	325	75	81	119	151	154	809	0.180	1.8
2026997264	9.1	274	317	67	75	144	176	151	932	0.180	2.5
2026997268	9.4	294	343	72	78	143	173	169	798	0.180	2.3
2026997282	8.8	255	305	85	91	102	144	135	608	0.180	1.8
2026997283	8.8	255	305	85	91	102	144	135	608	0.180	1.8
2026997284	8.8	255	305	85	91	102	144	135	608	0.180	1.8
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2026997203	8.6	261	321	99	91	107	145	136	584	0.180	1.6
2026997209	9.2	264	317	98	88	110	155	136	601	0.180	2.8

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2026997212	9.5	315	364	78	73	138	195	195	851	0.180	2.4
2026997221	9.9	299	371	79	75	144	173	172	807	0.150	2.5
2026997225	9.1	252	301	89	85	99	150	140	636	0.150	2.2
2026997226	8.6	239	312	93	82	101	142	137	577	0.150	2.7
2026997257	8.9	273	359	70	79	140	162	182	826	0.180	1.8
2026997259	9.2	283	325	75	81	119	151	154	809	0.180	1.8
2026997267	9.4	294	343	72	78	143	173	169	798	0.180	2.3
2026997270	8.6	291	343	74	81	140	174	161	833	0.150	2.2
2026997274	8.4	264	297	86	84	101	129	139	594	0.150	2.8
2026997277	8.4	264	297	86	84	101	129	139	594	0.150	2.8
2026997279	9.5	248	296	78	85	97	124	137	638	0.150	2.5
2026997280	9.5	248	296	78	85	97	124	137	638	0.150	2.5
2026997281	9.5	248	296	78	85	97	124	137	638	0.150	2.5
2026997285	8.8	255	305	85	91	102	144	135	608	0.180	1.8
2026997965	8.3	256	295	95	87	111	146	138	589	0.180	1.7

Test	12
Specification	**95**
2026997200	114
2026997210	178
2026997222	161
2026997223	161
2026997224	161
2026997227	203
2026997228	203
2026997229	203
2026997230	124
2026997255	130
2026997260	133
2026997261	133
2026997264	183
2026997268	167
2026997282	132
2026997283	132
2026997284	132
Specification	**95**

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-14

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2026997203	116
2026997209	209
2026997212	178
2026997221	183
2026997225	161
2026997226	203
2026997257	130
2026997259	133
2026997267	167
2026997270	166
2026997274	204
2026997277	204
2026997279	181
2026997280	181
2026997281	181
2026997285	132
2026997965	124

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 12/09/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80571500
PO #: PO-604231
Weight: 205200.000 LB
Ship Date: 12/09/2021
Package: BULK
Mode: Hopper Car
Car #: HLTX007287
Seal No: 257529

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DNN610011

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9544	g/cm3
Production date		20211201	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 12/09/2021

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80571502
PO #: PO-604231
Weight: 204400.000 LB
Ship Date: 12/09/2021
Package: BULK
Mode: Hopper Car
Car #: HLTX007239
Seal No: 274461

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DNN610171

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9553	g/cm3
Production date		20211204	

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-014877	2022-03-28	DPA611182	2027060391	2027060388
0116-014878	2022-03-28	DPA611182	2027060391	2027060388
0116-014879	2022-03-28	DPA611182	2027059244	2027060388
0116-014880	2022-03-28	DPA611182	2027059244	2027060388
0116-014881	2022-03-28	DPA611182	2027059244	2027060388
0116-014882	2022-03-28	DPA611182	2027059244	2027060388
0116-014883	2022-03-28	DPA611182	2027059244	2027060390
0116-014884	2022-03-28	DPA611182	2027059244	2027060390
0116-014885	2022-03-28	DPA611182	2027059244	2027060390
0116-014886	2022-03-28	DPA611182	2027059244	2027060390
0116-014887	2022-03-29	DPA611182	2027059244	2027060390
0116-014888	2022-03-29	DPA611182	2027059230	2027060376
0116-014889	2022-03-29	DPA611182	2027059230	2027060376
0116-014890	2022-03-29	DPA611182	2027059230	2027060376
0116-014891	2022-03-29	DPA611182	2027059230	2027060376
0116-014892	2022-03-29	DPA611182	2027059230	2027060376
0116-014893	2022-03-29	DPA611182	2027059230	2027060376
0116-014906	2022-03-29	DPA611182	2027059230	2027075016
0116-014907	2022-03-29	DPA611182	2027075000	2027075016
0116-014908	2022-03-29	DPA611182	2027075000	2027075016
0116-014909	2022-03-29	DPA611182	2027075000	2027075016

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-014910	2022-03-29	DPA611182	2027075000	2027075003
0116-014911	2022-03-29	DPA611182	2027075000	2027075003
0116-014912	2022-03-29	DPA611182	2027075000	2027075003
0116-014913	2022-03-29	DPA611182	2027075000	2027075003
0116-014914	2022-03-29	DPA611182	2027075004	2027075003
0116-014915	2022-03-29	DPA611182	2027075004	2027075003
0116-014916	2022-03-29	DPA611182	2027075004	2027075002
0116-014917	2022-03-29	DPA611182	2027075004	2027075002
0116-014918	2022-03-29	DPA611182	2027075004	2027075002
0116-014919	2022-03-29	DPA611182	2027075004	2027075002
0116-014920	2022-03-29	DPA611182	2027075004	2027075002
0116-014921	2022-03-29	DPA611182	2027075004	2027075002
0116-014922	2022-03-29	DPA611182	2027075004	2027075002
0116-014923	2022-03-29	DPA611182	2027075004	2027075002
0116-014924	2022-03-29	DPA611182	2027074965	2027074998
0116-014925	2022-03-29	DPA611182	2027074965	2027074998
0116-014926	2022-03-29	DPA611182	2027074965	2027074998
0116-014927	2022-03-29	DPA611182	2027074965	2027074998
0116-014928	2022-03-29	DPA611182	2027074965	2027074998
0116-014929	2022-03-29	DPA611182	2027075012	2027074998
0116-014930	2022-03-30	DPA611182	2027075012	2027074998
0116-014931	2022-03-30	DPA611182	2027075012	2027074971
0116-014932	2022-03-30	DPA611182	2027075012	2027074971
0116-014933	2022-03-30	DPA611182	2027075012	2027074971
0116-014934	2022-03-30	DPA611182	2027075012	2027074971
0116-014935	2022-03-30	DPA611182	2027075005	2027074971
0116-014943	2022-03-30	DPA611182	2027075006	2027074971
0116-014944	2022-03-30	DPA611182	2027075006	2027074971
0116-014945	2022-03-30	DPA611182	2027075006	2027074971

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-014948	2022-03-30	DPA611182	2027075006	2027074971
0116-014949	2022-03-30	DPA611182	2027075021	2027074979
0116-014950	2022-03-31	DPA611182	2027075021	2027074979
0116-014951	2022-03-31	DPA611182	2027075021	2027074979
0116-014952	2022-03-31	DPA611182	2027075021	2027074979
0116-014953	2022-03-31	DPA611182	2027075021	2027074979
0116-014954	2022-03-31	DPA611182	2027075021	2027074996
0116-014955	2022-03-31	DPA611182	2027075020	2027074996
0116-014956	2022-03-31	DPA611182	2027075020	2027074996
0116-014957	2022-03-31	DPA611182	2027075020	2027074996
0116-014958	2022-03-31	DPA611182	2027075020	2027074996
0116-014966	2022-03-31	DPA611182	2027075020	2027074996
0116-014967	2022-03-31	DPA611182	2027074999	2027075015
0116-014968	2022-03-31	DPA611182	2027074999	2027075015
0116-014969	2022-03-31	DPA611182	2027074999	2027075015
0116-014970	2022-03-31	DPA611182	2027074999	2027075015
0116-014971	2022-03-31	DPA611182	2027074999	2027075015
0116-014972	2022-03-31	DPA611182	2027074999	2027075022
0116-014973	2022-03-31	DPA611182	2027074997	2027075022
0116-014974	2022-03-31	DPA611182	2027074997	2027075022
0116-014975	2022-03-31	DPA611182	2027074997	2027075022
0116-014976	2022-03-31	DPA611182	2027074997	2027075022
0116-014977	2022-03-31	DPA611182	2027074997	2027075022
0116-014978	2022-03-31	DPA611182	2027075013	2027075014
0116-014979	2022-03-31	DPA611182	2027075013	2027075014
0116-014980	2022-03-31	DPA611182	2027075013	2027075014
0116-014981	2022-03-31	DPA611182	2027075013	2027075014
0116-014982	2022-03-31	DPA611182	2027075013	2027075014
0116-014984	2022-03-31	DPA611182	2027075007	2027075017

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-014985	2022-03-31	DPA611182	2027075007	2027075017
0116-014986	2022-03-31	DPA611182	2027075007	2027075017
0116-014987	2022-03-31	DPA611182	2027075007	2027075017
0116-014988	2022-04-01	DPA611182	2027075007	2027075017
0116-014989	2022-04-01	DPA611182	2027075007	2027060382
0116-014990	2022-04-01	DPA611182	2027060384	2027060382
0116-014991	2022-04-01	DPA611182	2027060384	2027060382

QUANTITY (ROLLS): 86

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-014877	246.80	2.28	0.948	72	3.5	3.17
0116-014878	246.80	2.28	0.948	72	3.5	3.17
0116-014879	246.80	2.28	0.948	72	3.5	3.17
0116-014880	246.80	2.28	0.948	72	3.5	3.17
0116-014881	246.80	2.28	0.948	72	3.5	3.17
0116-014882	241.80	2.09	0.948	72	3.5	3.17
0116-014883	241.80	2.09	0.948	72	3.5	3.17
0116-014884	241.80	2.09	0.948	72	3.5	3.17
0116-014885	241.80	2.09	0.948	72	3.5	3.17
0116-014886	241.80	2.09	0.948	72	3.5	3.17
0116-014887	234.00	2.36	0.947	73	2.2	1.52
0116-014888	234.00	2.36	0.947	73	2.2	1.52
0116-014889	234.00	2.36	0.947	73	2.2	1.52
0116-014890	234.00	2.36	0.947	73	2.2	1.52
0116-014891	234.00	2.36	0.947	73	2.2	1.52
0116-014892	234.00	2.36	0.947	73	2.2	1.52
0116-014893	234.00	2.36	0.947	73	2.2	1.52
0116-014906	233.10	2.37	0.951	77	2.8	2.74
0116-014907	233.10	2.37	0.951	77	2.8	2.74
0116-014908	233.10	2.37	0.951	77	2.8	2.74
0116-014909	233.10	2.37	0.951	77	2.8	2.74
0116-014910	233.10	2.37	0.951	77	2.8	2.74
0116-014911	241.50	2.29	0.951	77	2.8	2.74
0116-014912	241.50	2.29	0.951	77	2.8	2.74

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-014913	241.50	2.29	0.951	77	2.8	2.74
0116-014914	241.50	2.29	0.951	77	2.8	2.74
0116-014915	241.50	2.29	0.951	77	2.8	2.74
0116-014916	247.10	2.31	0.952	87	1.9	1.88
0116-014917	247.10	2.31	0.952	87	1.9	1.88
0116-014918	247.10	2.31	0.952	87	1.9	1.88
0116-014919	247.10	2.31	0.952	87	1.9	1.88
0116-014920	247.10	2.31	0.952	87	1.9	1.88
0116-014921	241.70	2.34	0.952	87	1.9	1.88
0116-014922	241.70	2.34	0.952	87	1.9	1.88
0116-014923	241.70	2.34	0.952	87	1.9	1.88
0116-014924	241.70	2.34	0.952	87	1.9	1.88
0116-014925	241.70	2.34	0.952	87	1.9	1.88
0116-014926	232.90	2.30	0.951	78	2.0	2.23
0116-014927	232.90	2.30	0.951	78	2.0	2.23
0116-014928	232.90	2.30	0.951	78	2.0	2.23
0116-014929	232.90	2.30	0.951	78	2.0	2.23
0116-014930	232.90	2.30	0.951	78	2.0	2.23
0116-014931	232.67	2.21	0.951	78	2.0	2.23
0116-014932	232.67	2.21	0.951	78	2.0	2.23
0116-014933	232.67	2.21	0.951	78	2.0	2.23
0116-014934	232.67	2.21	0.951	78	2.0	2.23
0116-014935	232.67	2.21	0.951	78	2.0	2.23
0116-014943	215.67	2.49	0.942	69	2.3	3.21
0116-014944	215.67	2.49	0.942	69	2.3	3.21
0116-014945	215.67	2.49	0.942	69	2.3	3.21
0116-014948	233.00	2.45	0.951	77	2.4	3.28
0116-014949	233.00	2.45	0.951	77	2.4	3.28
0116-014950	233.00	2.45	0.951	77	2.4	3.28
0116-014951	233.00	2.45	0.951	77	2.4	3.28
0116-014952	233.00	2.45	0.951	77	2.4	3.28
0116-014953	229.00	2.45	0.951	77	2.3	3.28
0116-014954	229.00	2.32	0.951	77	2.3	3.28
0116-014955	229.00	2.32	0.951	77	2.3	3.28
0116-014956	229.00	2.32	0.951	77	2.3	3.28
0116-014957	229.00	2.32	0.951	77	2.3	3.28

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-014958	229.00	2.32	0.951	77	2.3	3.28
0116-014966	226.33	2.35	0.949	75	3.7	2.5
0116-014967	226.33	2.35	0.949	75	3.7	2.5
0116-014968	226.33	2.35	0.949	75	3.7	2.5
0116-014969	226.33	2.35	0.949	75	3.7	2.5
0116-014970	226.33	2.35	0.949	75	3.7	2.5
0116-014971	235.20	2.22	0.949	75	3.7	2.5
0116-014972	235.20	2.22	0.949	75	3.7	2.5
0116-014973	235.20	2.22	0.949	75	3.7	2.5
0116-014974	235.20	2.22	0.949	75	3.7	2.5
0116-014975	235.20	2.22	0.949	75	3.7	2.5
0116-014976	235.33	2.25	0.950	73	3.0	2.78
0116-014977	235.33	2.25	0.950	73	3.0	2.78
0116-014978	235.33	2.25	0.950	73	3.0	2.78
0116-014979	235.33	2.25	0.950	73	3.0	2.78
0116-014980	235.33	2.25	0.950	73	3.0	2.78
0116-014981	238.80	2.18	0.950	73	3.0	2.78
0116-014982	238.80	2.18	0.950	73	3.0	2.78
0116-014984	238.80	2.18	0.950	73	3.0	2.78
0116-014985	238.80	2.18	0.950	73	3.0	2.78
0116-014986	238.80	2.18	0.950	73	3.0	2.78
0116-014987	238.80	2.18	0.950	73	3.0	2.78
0116-014988	238.80	2.18	0.950	73	3.0	2.78
0116-014989	234.00	2.23	0.951	76	4.3	2.73
0116-014990	234.00	2.23	0.951	76	4.3	2.73
0116-014991	234.00	2.23	0.951	76	4.3	2.73

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059230	8.3	287	334	77	77	130	172	158	841	0.180	2.1
2027059244	8.9	318	353	76	77	143	151	171	823	0.180	1.8
2027060384	9.3	316	345	82	81	136	158	172	753	0.180	2.3
2027060391	8.4	269	298	73	75	118	204	164	876	0.150	2.3
2027074965	9.2	325	341	79	83	141	156	167	808	0.180	2.2
2027074997	9.0	300	312	62	75	124	124	175	854	0.180	2.2
2027074999	9.0	300	312	62	75	124	124	175	854	0.180	2.2
2027075000	9.0	300	312	62	75	124	124	175	854	0.180	2.2
2027075004	8.9	298	299	62	76	118	137	170	821	0.180	1.9
2027075005	8.4	328	319	69	79	119	128	163	816	0.180	1.8
2027075006	8.4	328	319	69	79	119	128	163	816	0.180	1.8
2027075007	8.4	328	319	69	79	119	128	163	816	0.180	1.8
2027075012	9.3	313	322	66	75	124	133	182	818	0.180	1.9
2027075013	8.1	269	299	71	81	104	142	165	748	0.180	1.7
2027075020	9.1	319	342	69	79	121	145	168	860	0.180	1.6
2027075021	8.7	306	352	67	77	124	146	145	780	0.180	1.7
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027060376	9.0	278	349	78	80	114	139	156	726	0.150	1.7
2027060382	8.7	302	347	79	78	133	178	159	769	0.180	1.8
2027060388	8.4	269	298	73	75	118	204	164	876	0.150	2.3
2027060390	8.4	269	298	73	75	118	204	164	876	0.150	2.3
2027074971	9.1	302	297	75	83	121	129	165	803	0.180	2.2
2027074979	9.2	291	329	73	84	120	126	143	811	0.180	2.7
2027074996	8.2	305	333	71	86	126	130	139	812	0.180	2.2
2027074998	9.0	300	312	62	75	124	124	175	854	0.180	2.2
2027075002	8.9	298	299	62	76	118	137	170	821	0.180	1.9
2027075003	8.9	298	299	62	76	118	137	170	821	0.180	1.9
2027075014	8.1	269	299	71	81	104	142	165	748	0.180	1.7
2027075015	8.1	269	299	71	81	104	142	165	748	0.180	1.7
2027075016	8.1	269	299	71	81	104	142	165	748	0.180	1.7
2027075017	9.1	319	342	69	79	121	145	168	860	0.180	1.6
2027075022	8.7	306	352	67	77	124	146	145	780	0.180	1.7

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-22

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
Specification	**95**
2027059230	151
2027059244	132
2027060384	163
2027060391	168
2027074965	155
2027074997	158
2027074999	158
2027075000	158
2027075004	135
2027075005	131
2027075006	131
2027075007	131
2027075012	135
2027075013	123
2027075020	116
2027075021	124
Specification	**95**
2027060376	121
2027060382	131
2027060388	168
2027060390	168
2027074971	157
2027074979	199
2027074996	158
2027074998	158
2027075002	135
2027075003	135
2027075014	123
2027075015	123
2027075016	123
2027075017	116
2027075022	124

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CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80601675
PO #: PO-604442
Weight: 206500.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006121
Seal No: 275166

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611182

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-015015	2022-04-01	DPA611182	2027060384	2027060385
0116-015016	2022-04-01	DPA611182	2027060384	2027060385
0116-015017	2022-04-01	DPA611182	2027060384	2027060385
0116-015018	2022-04-01	DPA611182	2027060369	2027060385
0116-015019	2022-04-01	DPA611182	2027060369	2027059241
0116-015020	2022-04-01	DPA611182	2027060369	2027059241
0116-015021	2022-04-01	DPA611182	2027060369	2027059241
0116-015022	2022-04-01	DPA611182	2027060369	2027059241
0116-015023	2022-04-01	DPA611182	2027060378	2027059241
0116-015024	2022-04-01	DPA611182	2027060378	2027059241
0116-015025	2022-04-01	DPA611182	2027060378	2027059241
0116-015026	2022-04-01	DPA611182	2027060378	2027060392
0116-015037	2022-04-02	DPA611182	2027059231	2027060368
0116-015038	2022-04-02	DPA611182	2027059231	2027060368
0116-015039	2022-04-02	DPA611182	2027074980	2027060368
0116-015040	2022-04-02	DPA611182	2027074980	2027074981
0116-015041	2022-04-02	DPA611182	2027074980	2027074981
0116-015042	2022-04-02	DPA611182	2027074980	2027074981
0116-015043	2022-04-02	DPA611182	2027074980	2027074981
0116-015044	2022-04-02	DPA611182	2027074980	2027074981
0116-015045	2022-04-02	DPA611182	2027074794	2027075011

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5 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015046	2022-04-02	DPA611182	2027074794	2027075011
0116-015047	2022-04-02	DPA611182	2027074794	2027075011
0116-015048	2022-04-02	DPA611182	2027074794	2027075011
0116-015049	2022-04-02	DPA611182	2027074794	2027075011
0116-015050	2022-04-02	DPA611182	2027074794	2027075011
0116-015051	2022-04-02	DPA611182	2027074796	2027074982
0116-015052	2022-04-02	DPA611182	2027074796	2027074982
0116-015053	2022-04-02	DPA611182	2027074796	2027074982
0116-015054	2022-04-02	DPA611182	2027074796	2027074982
0116-015055	2022-04-02	DPA611182	2027074796	2027074982
0116-015056	2022-04-02	DPA611182	2027074796	2027074955
0116-015060	2022-04-02	DPA611182	2027074796	2027074955
0116-015061	2022-04-02	DPA611182	2027074798	2027074955
0116-015062	2022-04-02	DPA611182	2027074798	2027074955
0116-015063	2022-04-02	DPA611182	2027074798	2027074793
0116-015064	2022-04-02	DPA611182	2027074798	2027074793
0116-015065	2022-04-02	DPA611182	2027074798	2027074793
0116-015066	2022-04-02	DPA611182	2027074798	2027074793
0116-015067	2022-04-02	DPA611182	2027074970	2027074793
0116-015068	2022-04-02	DPA611180	2027074970	2027074793
0116-015069	2022-04-02	DPA611180	2027074970	2027074956
0116-015070	2022-04-02	DPA611180	2027074970	2027074956
0116-015071	2022-04-02	DPA611180	2027074970	2027074956
0116-015072	2022-04-02	DPA611180	2027075035	2027074956
0116-015073	2022-04-02	DPA611180	2027075035	2027074795
0116-015074	2022-04-02	DPA611180	2027075035	2027074795
0116-015075	2022-04-02	DPA611180	2027075035	2027074795
0116-015076	2022-04-03	DPA611180	2027075035	2027074795
0116-015077	2022-04-03	DPA611180	2027075035	2027074795

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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5 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015078	2022-04-03	DPA611180	2027075035	2027074795
0116-015079	2022-04-03	DPA611180	2027075035	2027074795
0116-015080	2022-04-03	DPA611180	2027060365	2027074795
0116-015081	2022-04-03	DPA611180	2027060365	2027060367
0116-015082	2022-04-03	DPA611180	2027060365	2027060367
0116-015083	2022-04-03	DPA611180	2027060365	2027060367
0116-015084	2022-04-03	DPA611180	2027060365	2027060367
0116-015085	2022-04-03	DPA611180	2027074786	2027060367
0116-015086	2022-04-03	DPA611180	2027074786	2027060375
0116-015090	2022-04-03	DPA611180	2027074786	2027060375
0116-015091	2022-04-03	DPA611180	2027074786	2027060375
0116-015093	2022-04-03	DPA611180	2027074785	2027075018
0116-015094	2022-04-03	DPA611180	2027074785	2027075018
0116-015095	2022-04-03	DPA611180	2027074785	2027075018
0116-015096	2022-04-03	DPA611180	2027074785	2027075018
0116-015097	2022-04-03	DPA611180	2027074785	2027075018
0116-015098	2022-04-03	DPA611180	2027074785	2027075018
0116-015099	2022-04-03	DPA611180	2027074785	2027075018
0116-015100	2022-04-03	DPA611180	2027060372	2027060379
0116-015101	2022-04-03	DPA611180	2027060372	2027060379
0116-015102	2022-04-03	DPA611180	2027060372	2027060379
0116-015103	2022-04-03	DPA611180	2027060372	2027060379
0116-015104	2022-04-03	DPA611180	2027060372	2027060379
0116-015105	2022-04-03	DPA611180	2027060372	2027060379
0116-015106	2022-04-03	DPA611180	2027060372	2027060379
0116-015107	2022-04-03	DPA611180	2027074789	2027074987
0116-015108	2022-04-03	DPA611180	2027074789	2027074987
0116-015109	2022-04-03	DPA611180	2027074789	2027074987
0116-015110	2022-04-03	DPA611180	2027074789	2027074987

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5 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015111	2022-04-03	DPA611180	2027074789	2027074987
0116-015112	2022-04-03	DPA611180	2027074789	2027074987
0116-015113	2022-04-03	DPA611180	2027074989	2027074986
0116-015114	2022-04-03	DPA611180	2027074989	2027074986
0116-015115	2022-04-03	DPA611180	2027074989	2027074986
0116-015116	2022-04-03	DPA611180	2027074984	2027074991
0116-015117	2022-04-03	DPA611180	2027074984	2027074991
0116-015118	2022-04-03	DPA611180	2027074984	2027074991
0116-015119	2022-04-03	DPA611180	2027074984	2027074991
0116-015120	2022-04-03	DPA611180	2027074984	2027074991
0116-015124	2022-04-03	DPA611180	2027074984	2027074991
0116-015125	2022-04-03	DPA611180	2027075009	2027074995
0116-015126	2022-04-03	DPA611180	2027075009	2027074995
0116-015127	2022-04-04	DPA611180	2027075009	2027074995
0116-015128	2022-04-04	DPA611180	2027075009	2027074995
0116-015129	2022-04-04	DPA611180	2027075009	2027074995
0116-015130	2022-04-04	DPA611180	2027075010	2027074772
0116-015131	2022-04-04	DPA611180	2027075010	2027074772
0116-015132	2022-04-04	DPA611180	2027075010	2027074772
0116-015133	2022-04-04	DPA611180	2027075010	2027074772
0116-015134	2022-04-04	DPA611180	2027075010	2027074772
0116-015135	2022-04-04	DPA611180	2027075010	2027074772
0116-015136	2022-04-04	DPA611180	2027074788	2027059225
0116-015137	2022-04-04	DPA611180	2027074788	2027059225
0116-015138	2022-04-04	DPA611180	2027074788	2027059225
0116-015139	2022-04-04	DPA611180	2027074788	2027059225
0116-015140	2022-04-04	DPA611180	2027074788	2027059225
0116-015141	2022-04-04	DPA611180	2027059233	2027059232
0116-015142	2022-04-04	DPA611180	2027059233	2027059232

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5 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015143	2022-04-04	DPA611180	2027059233	2027059232
0116-015144	2022-04-04	DPA611180	2027059233	2027059232
0116-015145	2022-04-04	DPA611180	2027059233	2027059232
0116-015146	2022-04-04	DPA611180	2027059233	2027059232
0116-015147	2022-04-04	DPA611180	2027060373	2027060381
0116-015148	2022-04-04	DPA611180	2027060373	2027060381
0116-015149	2022-04-04	DPA611180	2027060373	2027060381
0116-015150	2022-04-04	DPA611180	2027060373	2027060381
0116-015151	2022-04-04	DPA611180	2027060373	2027060381
0116-015172	2022-04-04	DPA611180	2027059223	2027060374
0116-015173	2022-04-04	DPA611180	2027059223	2027060374
0116-015174	2022-04-04	DPA611180	2027059223	2027060374
0116-015175	2022-04-04	DPA611180	2027059223	2027060374
0116-015176	2022-04-04	DPA611180	2027059223	2027060374
0116-015177	2022-04-04	DPA611180	2027059223	2027060374
0116-015178	2022-04-04	DPA611180	2027059223	2027060374
0116-015179	2022-04-05	DPA611180	2027059223	2027060374
0116-015180	2022-04-05	DPA611180	2027059223	2027060374
0116-015181	2022-04-05	DPA611180	2027059223	2027060374
0116-015182	2022-04-05	DPA611180	2027059223	2027074781
0116-015183	2022-04-05	DPA611180	2027074791	2027074781
0116-015184	2022-04-05	DPA611180	2027074791	2027074781
0116-015185	2022-04-05	DPA611180	2027074791	2027074781
0116-015186	2022-04-05	DPA611180	2027074791	2027074781
0116-015187	2022-04-05	DPA611180	2027074791	2027075072
0116-015188	2022-04-05	DPA611180	2027075073	2027075072
0116-015189	2022-04-05	DPA611180	2027075073	2027075072
0116-015190	2022-04-05	DPA611180	2027075073	2027075072
0116-015191	2022-04-05	DPA611180	2027075073	2027075072

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

5 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015192	2022-04-05	DPA611180	2027075073	2027075072
0116-015195	2022-04-05	DPA611180	2027074774	2027074766
0116-015196	2022-04-05	DPA611180	2027074774	2027074766
0116-015197	2022-04-05	DPA611180	2027074774	2027074766
0116-015198	2022-04-05	DPA611180	2027074774	2027074766
0116-015202	2022-04-05	DPA611180	2027074774	2027075029
0116-015203	2022-04-05	DPA611180	2027082120	2027075029
0116-015204	2022-04-05	DPA611180	2027082120	2027075029
0116-015205	2022-04-05	DPA611180	2027082120	2027075029
0116-015206	2022-04-05	DPA611180	2027082120	2027075029

QUANTITY (ROLLS): 147

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SOLMAX.COM

5 Apr 2022

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-015015	231.33	2.28	0.950	75	3.4	3.4
0116-015016	231.33	2.28	0.950	75	3.4	3.4
0116-015017	231.33	2.28	0.950	75	3.4	3.4
0116-015018	231.33	2.28	0.950	75	3.4	3.4
0116-015019	231.33	2.28	0.950	75	3.4	3.4
0116-015020	228.33	2.24	0.950	75	3.4	3.4
0116-015021	228.33	2.24	0.950	75	3.4	3.4
0116-015022	228.33	2.24	0.950	75	3.4	3.4
0116-015023	228.33	2.24	0.950	75	3.4	3.4
0116-015024	228.33	2.24	0.950	75	3.4	3.4
0116-015025	235.67	2.29	0.951	76	1.9	1.14
0116-015026	235.67	2.29	0.951	76	1.9	1.14
0116-015037	228.67	2.29	0.956	74	3.2	2.738
0116-015038	228.67	2.29	0.956	74	3.2	2.738
0116-015039	228.67	2.29	0.956	74	3.2	2.738
0116-015040	228.67	2.29	0.956	74	3.2	2.738
0116-015041	228.67	2.29	0.956	74	3.2	2.738
0116-015042	227.67	2.50	0.956	74	3.2	2.738
0116-015043	227.67	2.50	0.956	74	3.2	2.738
0116-015044	227.67	2.50	0.956	74	3.2	2.738
0116-015045	227.67	2.50	0.956	74	3.2	2.738
0116-015046	227.67	2.50	0.956	74	3.2	2.738
0116-015047	226.00	2.42	0.952	64	2.2	1.7
0116-015048	226.00	2.42	0.952	64	2.2	1.7

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015049	226.00	2.42	0.952	64	2.2	1.7
0116-015050	226.00	2.42	0.952	64	2.2	1.7
0116-015051	226.00	2.42	0.952	64	2.2	1.7
0116-015052	237.10	2.38	0.952	64	2.2	1.7
0116-015053	237.10	2.38	0.952	64	2.2	1.7
0116-015054	237.10	2.38	0.952	64	2.2	1.7
0116-015055	237.10	2.38	0.952	64	2.2	1.7
0116-015056	237.10	2.38	0.952	64	2.2	1.7
0116-015060	236.10	2.35	0.953	78	2.7	3.29
0116-015061	236.10	2.35	0.953	78	2.7	3.29
0116-015062	236.10	2.35	0.953	78	2.7	3.29
0116-015063	236.10	2.35	0.953	78	2.7	3.29
0116-015064	236.10	2.35	0.953	78	2.7	3.29
0116-015065	235.60	2.34	0.953	78	2.7	3.29
0116-015066	235.60	2.34	0.953	78	2.7	3.29
0116-015067	235.60	2.34	0.953	78	2.7	3.29
0116-015068	235.60	2.34	0.953	78	2.7	3.29
0116-015069	235.60	2.34	0.953	78	2.7	3.29
0116-015070	236.10	2.35	0.951	74	3.8	2.73
0116-015071	236.10	2.35	0.951	74	3.8	2.73
0116-015072	236.10	2.35	0.951	74	3.8	2.73
0116-015073	236.10	2.35	0.951	74	3.8	2.73
0116-015074	236.10	2.35	0.951	74	3.8	2.73
0116-015075	238.30	2.16	0.951	74	3.8	2.73
0116-015076	238.30	2.16	0.951	74	3.8	2.73
0116-015077	238.30	2.16	0.951	74	3.8	2.73
0116-015078	238.30	2.16	0.951	74	3.8	2.73
0116-015079	238.30	2.16	0.951	74	3.8	2.73
0116-015080	248.80	2.32	0.952	64	3.5	2.34
0116-015081	248.80	2.32	0.952	64	3.5	2.34
0116-015082	248.80	2.32	0.952	64	3.5	2.34
0116-015083	248.80	2.32	0.952	64	3.5	2.34
0116-015084	248.80	2.32	0.952	64	3.5	2.34
0116-015085	245.40	2.26	0.952	64	3.5	2.34
0116-015086	245.40	2.26	0.952	64	3.5	2.34
0116-015090	227.90	2.31	0.955	78	6.5	3.42

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015091	227.90	2.31	0.955	78	6.5	3.42
0116-015093	228.50	2.31	0.955	80	4.3	2.98
0116-015094	228.50	2.31	0.955	80	4.3	2.98
0116-015095	228.50	2.31	0.955	80	4.3	2.98
0116-015096	228.50	2.31	0.955	80	4.3	2.98
0116-015097	237.90	2.12	0.955	80	4.3	2.98
0116-015098	237.90	2.12	0.955	80	4.3	2.98
0116-015099	237.90	2.12	0.955	80	4.3	2.98
0116-015100	237.90	2.12	0.955	80	4.3	2.98
0116-015101	237.90	2.12	0.955	80	4.3	2.98
0116-015102	237.90	2.12	0.955	80	4.3	2.98
0116-015103	233.30	2.44	0.952	82	2.4	2.07
0116-015104	233.30	2.44	0.952	82	2.4	2.07
0116-015105	233.30	2.44	0.952	82	2.4	2.07
0116-015106	233.30	2.44	0.952	82	2.4	2.07
0116-015107	233.30	2.44	0.952	82	2.4	2.07
0116-015108	241.80	2.33	0.952	82	2.4	2.07
0116-015109	241.80	2.33	0.952	82	2.4	2.07
0116-015110	241.80	2.33	0.952	82	2.4	2.07
0116-015111	241.80	2.33	0.952	82	2.4	2.07
0116-015112	241.80	2.33	0.952	82	2.4	2.07
0116-015113	238.00	2.34	0.953	77	3.1	2.38
0116-015114	238.00	2.34	0.953	77	3.1	2.38
0116-015115	238.00	2.34	0.953	77	3.1	2.38
0116-015116	238.00	2.34	0.953	77	3.1	2.38
0116-015117	238.00	2.34	0.953	77	3.1	2.38
0116-015118	230.30	2.26	0.953	77	3.1	2.38
0116-015119	230.30	2.26	0.953	77	3.1	2.38
0116-015120	230.30	2.26	0.953	77	3.1	2.38
0116-015124	238.60	2.24	0.952	83	4.9	4.93
0116-015125	238.60	2.24	0.952	83	4.9	4.93
0116-015126	238.60	2.24	0.952	83	4.9	4.93
0116-015127	238.60	2.24	0.952	83	4.9	4.93
0116-015128	238.60	2.24	0.952	83	4.9	4.93
0116-015129	235.50	2.42	0.952	83	4.9	4.93
0116-015130	235.50	2.42	0.952	83	4.9	4.93

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

SOLMAX Daniel Vasquez APPROVED QUALITY ASSURANCE

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015131	235.50	2.42	0.952	83	4.9	4.93
0116-015132	235.50	2.42	0.952	83	4.9	4.93
0116-015133	235.50	2.42	0.952	83	4.9	4.93
0116-015134	233.70	2.22	0.953	77	2.5	3.93
0116-015135	233.70	2.22	0.953	77	2.5	3.93
0116-015136	233.70	2.22	0.953	77	2.5	3.93
0116-015137	233.70	2.22	0.953	77	2.5	3.93
0116-015138	233.70	2.22	0.953	77	2.5	3.93
0116-015139	231.80	2.28	0.953	77	2.5	3.93
0116-015140	231.80	2.28	0.953	77	2.5	3.93
0116-015141	231.80	2.28	0.953	77	2.5	3.93
0116-015142	231.80	2.28	0.953	77	2.5	3.93
0116-015143	231.80	2.28	0.953	77	2.5	3.93
0116-015144	229.70	2.30	0.955	74	3.5	2.35
0116-015145	229.70	2.30	0.955	74	3.5	2.35
0116-015146	229.70	2.30	0.955	74	3.5	2.35
0116-015147	229.70	2.30	0.955	74	3.5	2.35
0116-015148	229.70	2.30	0.955	74	3.5	2.35
0116-015149	224.90	2.38	0.955	74	3.5	2.35
0116-015150	224.90	2.38	0.955	74	3.5	2.35
0116-015151	224.90	2.38	0.955	74	3.5	2.35
0116-015172	229.60	2.38	0.952	73	5.4	3.52
0116-015173	229.60	2.38	0.952	73	5.4	3.52
0116-015174	229.60	2.38	0.952	73	5.4	3.52
0116-015175	229.60	2.38	0.952	73	5.4	3.52
0116-015176	229.60	2.38	0.952	73	5.4	3.52
0116-015177	255.90	2.24	0.952	73	5.4	3.52
0116-015178	255.90	2.24	0.952	73	5.4	3.52
0116-015179	255.90	2.24	0.952	73	5.4	3.52
0116-015180	255.90	2.24	0.952	73	5.4	3.52
0116-015181	255.90	2.24	0.952	73	5.4	3.52
0116-015182	232.50	2.21	0.951	79	2.5	2.77
0116-015183	232.50	2.21	0.951	79	2.5	2.77
0116-015184	232.50	2.21	0.951	79	2.5	2.77
0116-015185	232.50	2.21	0.951	79	2.5	2.77
0116-015186	232.50	2.21	0.951	79	2.5	2.77

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015187	234.40	2.15	0.951	79	2.5	2.77
0116-015188	234.40	2.15	0.951	79	2.5	2.77
0116-015189	234.40	2.15	0.951	79	2.5	2.77
0116-015190	234.40	2.15	0.951	79	2.5	2.77
0116-015191	234.40	2.15	0.951	79	2.5	2.77
0116-015192	244.40	2.21	0.951	75	3.7	1.36
0116-015195	249.10	2.31	0.954	83	4.1	4.68
0116-015196	249.10	2.31	0.954	83	4.1	4.68
0116-015197	249.10	2.31	0.954	83	4.1	4.68
0116-015198	249.10	2.31	0.954	83	4.1	4.68
0116-015202	238.33	2.34	0.949	76	2.3	1.89
0116-015203	238.33	2.34	0.949	76	2.3	1.89
0116-015204	238.33	2.34	0.949	76	2.3	1.89
0116-015205	238.33	2.34	0.949	76	2.3	1.89
0116-015206	238.33	2.34	0.949	76	2.3	1.89

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
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QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059223	8.3	271	299	77	84	135	163	142	697	0.180	1.9
2027059231	8.3	287	334	77	77	130	172	158	841	0.180	2.1
2027059233	8.1	269	290	73	77	141	174	147	828	0.180	2.5
2027060365	8.8	320	366	72	76	147	163	178	844	0.180	2.0
2027060369	9.0	290	359	77	75	132	186	154	789	0.180	1.7
2027060372	8.8	295	342	78	79	113	161	151	775	0.180	1.9
2027060373	8.8	295	342	78	79	113	161	151	775	0.180	1.9
2027060378	9.0	278	349	78	80	114	139	156	726	0.150	1.7
2027060384	9.3	316	345	82	81	136	158	172	753	0.180	2.3
2027074774	9.2	300	353	72	80	124	147	157	821	0.180	1.9
2027074785	8.6	283	293	66	76	129	151	166	814	0.180	2.0
2027074786	8.6	283	293	66	76	129	151	166	814	0.180	2.0
2027074788	8.5	282	317	67	80	129	142	170	826	0.180	2.3
2027074789	8.5	282	317	67	80	129	142	170	826	0.180	2.3
2027074791	8.7	284	328	68	78	146	157	154	865	0.180	2.1
2027074794	8.7	284	328	68	78	146	157	154	865	0.180	2.1

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SOLMAX

MANUFACTURING QUALITY CONTROL

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027074796	9.3	298	301	68	77	134	136	160	907	0.180	1.7
2027074798	9.3	298	301	68	77	134	136	160	907	0.180	1.7
2027074970	9.1	302	297	75	83	121	129	165	803	0.180	2.2
2027074980	9.2	291	329	73	84	120	126	143	811	0.180	2.7
2027074984	8.9	275	319	75	83	112	139	137	692	0.180	1.7
2027074989	9.0	321	343	64	74	126	145	180	888	0.180	1.8
2027075009	9.3	313	322	66	75	124	133	182	818	0.180	1.9
2027075010	9.3	313	322	66	75	124	133	182	818	0.180	1.9
2027075035	9.1	319	347	69	81	144	156	167	850	0.180	2.2
2027075073	9.2	344	314	79	76	138	171	170	753	0.180	1.9
2027082120	9.5	321	356	68	79	131	138	182	822	0.180	1.8
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059225	8.6	283	337	76	76	131	148	151	832	0.180	2.0
2027059232	8.1	269	290	73	77	141	174	147	828	0.180	2.5
2027059241	8.8	282	338	76	81	150	201	169	836	0.180	2.0
2027060367	8.8	320	366	72	76	147	163	178	844	0.180	2.0
2027060368	9.0	290	359	77	75	132	186	154	789	0.180	1.7
2027060374	8.8	295	342	78	79	113	161	151	775	0.180	1.9
2027060375	8.8	295	342	78	79	113	161	151	775	0.180	1.9
2027060379	9.0	278	349	78	80	114	139	156	726	0.150	1.7
2027060381	8.7	302	347	79	78	133	178	159	769	0.180	1.8
2027060385	9.3	316	345	82	81	136	158	172	753	0.180	2.3
2027060392	8.4	253	332	75	76	111	190	160	749	0.180	2.2
2027074766	8.9	310	323	72	83	122	131	166	762	0.180	1.8
2027074772	9.2	300	353	72	80	124	147	157	821	0.180	1.9
2027074781	8.5	284	307	69	80	111	150	157	831	0.180	1.9
2027074793	8.7	284	328	68	78	146	157	154	865	0.180	2.1
2027074795	9.3	298	301	68	77	134	136	160	907	0.180	1.7
2027074955	8.8	283	313	74	83	137	132	137	812	0.180	2.1
2027074956	8.8	283	313	74	83	137	132	137	812	0.180	2.1
2027074981	8.9	275	319	75	83	112	139	137	692	0.180	1.7
2027074982	8.9	275	319	75	83	112	139	137	692	0.180	1.7
2027074986	8.2	296	292	68	82	105	137	147	769	0.180	1.9
2027074987	8.2	296	292	68	82	105	137	147	769	0.180	1.9
2027074991	9.0	321	343	64	74	126	145	180	888	0.180	1.8

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027074995	8.2	305	333	71	86	126	130	139	812	0.180	2.2
2027075011	9.3	313	322	66	75	124	133	182	818	0.180	1.9
2027075018	9.1	319	342	69	79	121	145	168	860	0.180	1.6
2027075029	9.0	300	321	69	79	143	156	166	798	0.180	2.3
2027075072	9.2	348	314	81	80	157	173	162	761	0.180	2.2

Test	12
Specification	**95**
2027059223	134
2027059231	151
2027059233	178
2027060365	145
2027060369	119
2027060372	139
2027060373	139
2027060378	121
2027060384	163
2027074774	139
2027074785	143
2027074786	143
2027074788	166
2027074789	166
2027074791	148
2027074794	148
2027074796	124
2027074798	124
2027074970	157
2027074980	199
2027074984	124
2027074989	132
2027075009	135
2027075010	135
2027075035	162
2027075073	160
2027082120	127
Specification	**95**

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-24

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027059225	147
2027059232	178
2027059241	147
2027060367	145
2027060368	119
2027060374	139
2027060375	139
2027060379	121
2027060381	131
2027060385	163
2027060392	156
2027074766	129
2027074772	139
2027074781	135
2027074793	148
2027074795	124
2027074955	151
2027074956	151
2027074981	124
2027074982	124
2027074986	134
2027074987	134
2027074991	132
2027074995	158
2027075011	135
2027075018	116
2027075029	163
2027075072	162

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

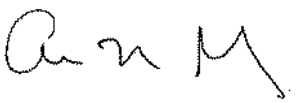
Delivery #: 80601675
PO #: PO-604442
Weight: 206500.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006121
Seal No: 275166

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611182

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.



AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80601673
PO #: PO-604442
Weight: 203750.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001525
Seal No: 275164

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611180

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

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MANUFACTURING QUALITY CONTROL

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-015208	2022-04-05	DPA611180	2027082120	2027075044
0116-015209	2022-04-05	DPA611180	2027074779	2027075044
0116-015210	2022-04-05	DPA611180	2027074779	2027075044
0116-015211	2022-04-05	DPA611180	2027074779	2027075044
0116-015212	2022-04-05	DPA611180	2027074779	2027075044
0116-015213	2022-04-05	DPA611180	2027074779	2027082121
0116-015214	2022-04-05	DPA611180	2027075026	2027082121
0116-015215	2022-04-05	DPA611180	2027075026	2027082121
0116-015216	2022-04-05	DPA611180	2027075026	2027082121
0116-015217	2022-04-05	DPA611180	2027075026	2027082121
0116-015218	2022-04-05	DPA611180	2027075026	2027075075
0116-015219	2022-04-05	DPA611180	2027075026	2027075075
0116-015220	2022-04-05	DPA611180	2027075076	2027075075
0116-015221	2022-04-05	DPA611180	2027075076	2027075075
0116-015222	2022-04-05	DPA611180	2027075076	2027075075
0116-015223	2022-04-05	DPA611180	2027075076	2027075075
0116-015233	2022-04-06	DPA611180	2027082119	2027075084
0116-015234	2022-04-06	DPA611180	2027082119	2027075081
0116-015235	2022-04-06	DPA611180	2027075071	2027075081
0116-015236	2022-04-06	DPA611180	2027075071	2027075081
0116-015237	2022-04-06	DPA611180	2027075071	2027075081

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19 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015238	2022-04-06	DPA611180	2027075071	2027075081
0116-015239	2022-04-06	DPA611180	2027075071	2027075030
0116-015240	2022-04-06	DPA611180	2027075086	2027075030
0116-015241	2022-04-06	DPA611180	2027075086	2027075030
0116-015242	2022-04-06	DPA611180	2027075086	2027075030
0116-015243	2022-04-06	DPA611180	2027075086	2027075030
0116-015244	2022-04-06	DPA611180	2027075086	2027075030
0116-015245	2022-04-06	DPA611180	2027075086	2027074778
0116-015246	2022-04-06	DPA611180	2027075062	2027074778
0116-015253	2022-04-07	DPA611180	2027075062	2027074778
0116-015254	2022-04-07	DPA611180	2027075062	2027074778
0116-015255	2022-04-07	DPA611180	2027075062	2027075037
0116-015256	2022-04-07	DPA611180	2027075070	2027075037
0116-015257	2022-04-07	DPA611180	2027075070	2027075037
0116-015258	2022-04-07	DPA611180	2027075070	2027075037
0116-015259	2022-04-07	DPA611180	2027075070	2027075037
0116-015260	2022-04-07	DPA611180	2027075070	2027060362
0116-015261	2022-04-07	DPA611180	2027074780	2027060362
0116-015262	2022-04-07	DPA611180	2027074780	2027060362
0116-015263	2022-04-07	DPA611180	2027074780	2027060362
0116-015266	2022-04-08	DPA611180	2027074780	2027060362
0116-015267	2022-04-08	DPA611180	2027074754	2027074755
0116-015268	2022-04-08	DPA611180	2027074754	2027074755
0116-015269	2022-04-08	DPA611180	2027074754	2027074755
0116-015270	2022-04-08	DPA611180	2027074754	2027074755
0116-015271	2022-04-08	DPA611180	2027074754	2027074755
0116-015272	2022-04-08	DPA611180	2027074754	2027074755
0116-015273	2022-04-08	DPA611180	2027074754	2027074755
0116-015274	2022-04-08	DPA611180	2027082111	2027059248

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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19 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015275	2022-04-08	DPA611180	2027082111	2027059248
0116-015276	2022-04-08	DPA611180	2027082111	2027059248
0116-015277	2022-04-08	DPA611180	2027082111	2027059248
0116-015278	2022-04-08	DPA611180	2027082111	2027059248
0116-015279	2022-04-08	DPA611180	2027082111	2027059248
0116-015280	2022-04-08	DPA611180	2027074760	2027059243
0116-015281	2022-04-08	DPA611180	2027074760	2027059243
0116-015282	2022-04-08	DPA611180	2027074760	2027059243
0116-015283	2022-04-08	DPA611180	2027074760	2027059243
0116-015284	2022-04-08	DPA611180	2027074760	2027059243
0116-015285	2022-04-08	DPA611180	2027074760	2027059243
0116-015286	2022-04-08	DPA611180	2027059246	2027060351
0116-015287	2022-04-08	DPA611180	2027059246	2027060351
0116-015288	2022-04-08	DPA611180	2027059246	2027060351
0116-015289	2022-04-08	DPA611180	2027059246	2027060351
0116-015290	2022-04-08	DPA611180	2027059246	2027060351
0116-015291	2022-04-08	DPA611180	2027059246	2027060351
0116-015292	2022-04-08	DPA611180	2027059246	2027060351
0116-015293	2022-04-08	DPA611180	2027059246	2027060351
0116-015294	2022-04-08	DPA611180	2027059246	2027060351
0116-015295	2022-04-08	DPA611180	2027059246	2027060350
0116-015296	2022-04-08	DPA611180	2027059221	2027060350
0116-015297	2022-04-08	DPA611180	2027059221	2027060350
0116-015298	2022-04-08	DPA611180	2027059221	2027060350
0116-015299	2022-04-08	DPA611180	2027059221	2027060350
0116-015300	2022-04-08	DPA611180	2027059221	2027060350
0116-015302	2022-04-08	DPA611180	2027059212	2027060350
0116-015303	2022-04-08	DPA611180	2027059212	2027060350
0116-015304	2022-04-08	DPA611180	2027059212	2027059215

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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19 Apr 2022

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-015305	2022-04-08	DPA611180	2027059212	2027059215
0116-015306	2022-04-08	DPA611180	2027059212	2027059215
0116-015312	2022-04-08	DPA611180	2027059212	2027059215
0116-015313	2022-04-08	DPA611180	2027075118	2027059224
0116-015314	2022-04-08	DPA611180	2027075118	2027059224
0116-015315	2022-04-08	DPA611180	2027075118	2027059224
0116-015316	2022-04-08	DPA611180	2027075118	2027059224

QUANTITY (ROLLS): 86

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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19 Apr 2022

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-015208	246.00	2.36	0.949	76	2.3	1.89
0116-015209	246.00	2.36	0.949	76	2.3	1.89
0116-015210	246.00	2.36	0.949	76	2.3	1.89
0116-015211	246.00	2.36	0.949	76	2.3	1.89
0116-015212	233.00	2.22	0.953	71	3.7	1.52
0116-015213	233.00	2.22	0.953	71	3.7	1.52
0116-015214	233.00	2.22	0.953	71	3.7	1.52
0116-015215	233.00	2.22	0.953	71	3.7	1.52
0116-015216	233.00	2.22	0.953	71	3.7	1.52
0116-015217	237.67	2.30	0.953	71	3.7	1.52
0116-015218	237.67	2.30	0.953	71	3.7	1.52
0116-015219	237.67	2.30	0.953	71	3.7	1.52
0116-015220	237.67	2.30	0.953	71	3.7	1.52
0116-015221	237.67	2.30	0.953	71	3.7	1.52
0116-015222	228.67	2.35	0.952	68	5.8	6.73
0116-015223	228.67	2.35	0.952	68	5.8	6.73
0116-015233	219.00	2.30	0.953	69	3.9	6.81
0116-015234	232.00	2.29	0.953	69	3.9	6.81
0116-015235	232.00	2.29	0.953	69	3.9	6.81
0116-015236	232.00	2.29	0.953	69	3.9	6.81
0116-015237	232.00	2.29	0.953	69	3.9	6.81
0116-015238	232.00	2.29	0.953	69	3.9	6.81
0116-015239	239.67	2.26	0.951	74	3.7	3.97
0116-015240	239.67	2.26	0.951	74	3.7	3.97

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015241	239.67	2.26	0.951	74	3.7	3.97
0116-015242	239.67	2.26	0.951	74	3.7	3.97
0116-015243	239.67	2.26	0.951	74	3.7	3.97
0116-015244	238.00	2.20	0.951	74	3.7	3.97
0116-015245	238.00	2.20	0.951	74	3.7	3.97
0116-015246	238.00	2.20	0.951	74	3.7	3.97
0116-015253	220.00	2.39	0.952	51	5.2	5.77
0116-015254	220.00	2.39	0.952	51	5.2	5.77
0116-015255	220.00	2.39	0.952	51	5.2	5.77
0116-015256	220.00	2.39	0.952	51	5.2	5.77
0116-015257	220.00	2.39	0.952	51	5.2	5.77
0116-015258	244.20	2.33	0.952	51	5.2	5.77
0116-015259	244.20	2.33	0.952	51	5.2	5.77
0116-015260	244.20	2.33	0.952	51	5.2	5.77
0116-015261	244.20	2.33	0.952	51	5.2	5.77
0116-015262	244.20	2.33	0.952	51	5.2	5.77
0116-015263	242.30	2.34	0.951	73	1.3	2.19
0116-015266	218.40	2.35	0.954	65	5.4	4.04
0116-015267	218.40	2.35	0.954	65	5.4	4.04
0116-015268	218.40	2.35	0.954	65	5.4	4.04
0116-015269	218.40	2.35	0.954	65	5.4	4.04
0116-015270	218.40	2.35	0.954	65	5.4	4.04
0116-015271	229.50	2.22	0.954	65	5.4	4.04
0116-015272	229.50	2.22	0.954	65	5.4	4.04
0116-015273	229.50	2.22	0.954	65	5.4	4.04
0116-015274	229.50	2.22	0.954	65	5.4	4.04
0116-015275	229.50	2.22	0.954	65	5.4	4.04
0116-015276	230.00	2.42	0.953	69	1.6	2.2
0116-015277	230.00	2.42	0.953	69	1.6	2.2
0116-015278	230.00	2.42	0.953	69	1.6	2.2
0116-015279	230.00	2.42	0.953	69	1.6	2.2
0116-015280	230.00	2.42	0.953	69	1.6	2.2
0116-015281	235.60	2.42	0.953	69	1.6	2.2
0116-015282	235.60	2.42	0.953	69	1.6	2.2
0116-015283	235.60	2.42	0.953	69	1.6	2.2
0116-015284	235.60	2.42	0.953	69	1.6	2.2

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015285	235.60	2.42	0.953	69	1.6	2.2
0116-015286	232.60	2.21	0.951	71	2.0	2.29
0116-015287	232.60	2.21	0.951	71	2.0	2.29
0116-015288	232.60	2.21	0.951	71	2.0	2.29
0116-015289	232.60	2.21	0.951	71	2.0	2.29
0116-015290	232.60	2.21	0.951	71	2.0	2.29
0116-015291	243.30	2.19	0.951	71	2.0	2.29
0116-015292	243.30	2.19	0.951	71	2.0	2.29
0116-015293	243.30	2.19	0.951	71	2.0	2.29
0116-015294	243.30	2.19	0.951	71	2.0	2.29
0116-015295	243.30	2.19	0.951	71	2.0	2.29
0116-015296	237.40	2.36	0.952	68	1.8	2.24
0116-015297	237.40	2.36	0.952	68	1.8	2.24
0116-015298	237.40	2.36	0.952	68	1.8	2.24
0116-015299	237.40	2.36	0.952	68	1.8	2.24
0116-015300	237.40	2.36	0.952	68	1.8	2.24
0116-015302	234.90	2.40	0.952	68	1.8	2.24
0116-015303	234.90	2.40	0.952	68	1.8	2.24
0116-015304	234.90	2.40	0.952	68	1.8	2.24
0116-015305	234.90	2.40	0.952	68	1.8	2.24
0116-015306	234.90	2.40	0.952	68	1.8	2.24
0116-015312	239.20	2.30	0.953	74	1.6	3.41
0116-015313	239.20	2.30	0.953	74	1.6	3.41
0116-015314	239.20	2.30	0.953	74	1.6	3.41
0116-015315	239.20	2.30	0.953	74	1.6	3.41
0116-015316	239.20	2.30	0.953	74	1.6	3.41

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059212	8.4	285	289	79	79	121	156	154	845	0.180	2.6
2027059221	8.3	271	299	77	84	135	163	142	697	0.180	1.9
2027059246	8.9	318	353	76	77	143	151	171	823	0.180	1.8
2027074754	8.6	275	290	77	83	114	128	144	707	0.180	1.9
2027074760	9.2	313	326	69	80	130	133	159	877	0.180	1.8
2027074779	8.5	284	307	69	80	111	150	157	831	0.180	1.9
2027074780	8.5	284	307	69	80	111	150	157	831	0.180	1.9
2027075026	8.6	297	291	69	76	131	145	138	828	0.180	1.8
2027075062	9.0	332	298	80	87	169	157	152	734	0.180	1.4
2027075070	9.0	348	321	81	77	157	173	762	682	0.180	1.3
2027075071	9.0	348	314	81	71	157	121	173	762	0.180	1.6
2027075076	9.2	344	315	79	69	138	121	171	754	0.180	1.7
2027075086	10.0	353	344	81	79	139	188	140	830	0.180	1.7
2027075118	8.9	319	305	71	78	122	134	155	798	0.180	1.7
2027082111	8.9	319	305	71	78	122	134	155	798	0.180	1.7
2027082119	10.3	360	382	74	80	134	153	166	916	0.180	1.6
2027082120	9.5	321	356	68	79	131	138	182	822	0.180	1.8
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059215	8.4	285	289	79	79	121	156	154	845	0.180	2.6
2027059224	8.6	283	337	76	76	131	148	151	832	0.180	2.0
2027059243	8.8	282	338	76	81	150	201	169	836	0.180	2.0
2027059248	9.3	319	361	75	77	132	153	175	710	0.180	2.2
2027060350	9.3	319	361	75	77	132	153	175	710	0.180	2.2
2027060351	9.3	319	361	75	77	132	153	175	710	0.180	2.2
2027060362	8.8	286	346	76	79	118	158	156	761	0.180	2.1
2027074755	8.3	271	325	69	80	118	125	155	824	0.180	1.8
2027074778	8.5	268	309	67	80	121	142	148	778	0.180	1.9
2027075030	9.0	300	321	69	79	143	156	166	798	0.180	2.3
2027075037	8.9	309	340	69	78	149	166	146	771	0.180	2.2
2027075044	8.8	297	322	68	83	128	142	158	752	0.180	2.0
2027075075	9.2	344	315	79	69	138	121	171	754	0.180	1.7
2027075081	8.5	319	304	81	70	130	114	150	681	0.180	1.9
2027075084	8.5	319	304	81	70	130	114	150	681	0.180	1.9
2027082121	9.5	321	356	68	79	131	138	182	822	0.180	1.8

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-25

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
Specification	**95**
2027059212	189
2027059221	134
2027059246	132
2027074754	134
2027074760	128
2027074779	135
2027074780	135
2027075026	129
2027075062	143
2027075070	112
2027075071	112
2027075076	124
2027075086	122
2027075118	123
2027082111	123
2027082119	117
2027082120	127
Specification	**95**
2027059215	189
2027059224	147
2027059243	147
2027059248	158
2027060350	158
2027060351	158
2027060362	153
2027074755	127
2027074778	138
2027075030	163
2027075037	155
2027075044	141
2027075075	124
2027075081	136
2027075084	136
2027082121	127

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80601673
PO #: PO-604442
Weight: 203750.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001525
Seal No: 275164

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611180

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-015514	2022-04-11	DPC610462	2027060393	2027059224
0116-015515	2022-04-11	DPC610462	2027060393	2027059201
0116-015516	2022-04-11	DPC610462	2027060393	2027059201
0116-015517	2022-04-11	DPC610462	2027060393	2027059201
0116-015518	2022-04-11	DPC610462	2027060393	2027059201
0116-015745	2022-04-15	DPC610532	2027074792	2027075113

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18 Apr 2022

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-015519	2022-04-11	DPC610462	2027060393	2027059201
0116-015520	2022-04-11	DPC610462	2027060393	2027059201
0116-015521	2022-04-11	DPC610462	2027060393	2027059201
0116-015522	2022-04-11	DPC610462	2027060352	2027059227
0116-015528	2022-04-11	DPC610462	2027060352	2027059227
0116-015529	2022-04-11	DPC610462	2027075104	2027082113
0116-015530	2022-04-11	DPC610462	2027075104	2027082113
0116-015531	2022-04-11	DPC610462	2027075104	2027082113
0116-015532	2022-04-12	DPC610462	2027075104	2027082113
0116-015533	2022-04-12	DPC610462	2027075108	2027075105
0116-015534	2022-04-12	DPC610462	2027075108	2027075105
0116-015536	2022-04-12	DPC610462	2027075108	2027075105
0116-015537	2022-04-12	DPC610462	2027075108	2027075105
0116-015538	2022-04-12	DPC610462	2027074963	2027074993
0116-015539	2022-04-12	DPC610462	2027074963	2027074993
0116-015540	2022-04-12	DPC610462	2027074963	2027074993
0116-015541	2022-04-12	DPC610462	2027074963	2027074993
0116-015542	2022-04-12	DPC610462	2027074963	2027074993
0116-015543	2022-04-12	DPC610462	2027074963	2027074993
0116-015544	2022-04-12	DPC610462	2027075087	2027059206
0116-015545	2022-04-12	DPC610462	2027075087	2027059206
0116-015546	2022-04-12	DPC610462	2027075087	2027059206

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015547	2022-04-12	DPC610462	2027075087	2027059206
0116-015548	2022-04-12	DPC610462	2027075087	2027059206
0116-015549	2022-04-12	DPC610462	2027075087	2027059206
0116-015551	2022-04-12	DPC610462	2027075053	2027075054
0116-015552	2022-04-12	DPC610462	2027075053	2027075054
0116-015553	2022-04-12	DPC610462	2027075053	2027075054
0116-015554	2022-04-12	DPC610462	2027075053	2027075054
0116-015555	2022-04-12	DPC610462	2027075094	2027075046
0116-015556	2022-04-12	DPC610462	2027075094	2027075046
0116-015557	2022-04-12	DPC610462	2027075094	2027075046
0116-015558	2022-04-12	DPC610462	2027075094	2027075046
0116-015559	2022-04-12	DPC610462	2027075094	2027075046
0116-015560	2022-04-12	DPC610462	2027075094	2027075046
0116-015561	2022-04-12	DPC610462	2027075077	2027075060
0116-015562	2022-04-12	DPC610462	2027075077	2027075060
0116-015563	2022-04-12	DPC610462	2027075077	2027075060
0116-015564	2022-04-12	DPC610462	2027075077	2027075060
0116-015565	2022-04-12	DPC610462	2027075077	2027075060
0116-015566	2022-04-12	DPC610462	2027059207	2027075033
0116-015569	2022-04-12	DPC610462	2027059207	2027075033
0116-015570	2022-04-12	DPC610462	2027059207	2027075033
0116-015571	2022-04-12	DPC610462	2027059207	2027075033
0116-015638	2022-04-13	DPC610462	2027059207	2027075033
0116-015639	2022-04-13	DPC610462	2027059207	2027075033
0116-015640	2022-04-13	DPC610462	2027059207	2027075033
0116-015645	2022-04-13	DPC610462	2027059207	2027075033
0116-015646	2022-04-13	DPC610462	2027059207	2027075033
0116-015647	2022-04-13	DPC610462	2027059207	2027075033
0116-015648	2022-04-13	DPC610462	2027059207	2027075033

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18 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015650	2022-04-13	DPC610462	2027075048	2027075028
0116-015651	2022-04-13	DPC610462	2027075048	2027075028
0116-015652	2022-04-13	DPC610462	2027075048	2027075028
0116-015653	2022-04-13	DPC610462	2027075048	2027075028
0116-015654	2022-04-13	DPC610462	2027075048	2027075028
0116-015655	2022-04-13	DPC610462	2027075048	2027075028
0116-015656	2022-04-13	DPC610462	2027075048	2027075028
0116-015657	2022-04-13	DPC610462	2027075048	2027075028
0116-015658	2022-04-13	DPC610462	2027075048	2027075028
0116-015659	2022-04-14	DPC610462	2027075048	2027075028
0116-015660	2022-04-14	DPC610462	2027075059	2027075038
0116-015661	2022-04-14	DPC610462	2027075059	2027075038
0116-015662	2022-04-14	DPC610462	2027075059	2027075038
0116-015663	2022-04-14	DPC610462	2027075059	2027075038
0116-015664	2022-04-14	DPC610462	2027075059	2027075038
0116-015665	2022-04-14	DPC610462	2027075059	2027075038
0116-015666	2022-04-14	DPC610462	2027082112	2027082115
0116-015667	2022-04-14	DPC610462	2027082112	2027082115
0116-015668	2022-04-14	DPC610462	2027082112	2027082115
0116-015669	2022-04-14	DPC610462	2027082112	2027082115
0116-015673	2022-04-14	DPC610462	2027082112	2027082115
0116-015674	2022-04-14	DPC610462	2027082112	2027082115
0116-015675	2022-04-14	DPC610462	2027074994	2027074976
0116-015676	2022-04-14	DPC610462	2027074994	2027074976
0116-015677	2022-04-14	DPC610462	2027074975	2027074977
0116-015678	2022-04-14	DPC610532	2027074975	2027074977
0116-015679	2022-04-14	DPC610532	2027074975	2027074977
0116-015680	2022-04-14	DPC610532	2027074975	2027074977
0116-015681	2022-04-14	DPC610532	2027074975	2027074977

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015682	2022-04-14	DPC610532	2027074973	2027074972
0116-015683	2022-04-14	DPC610532	2027074973	2027074972
0116-015684	2022-04-14	DPC610532	2027074973	2027074972
0116-015685	2022-04-14	DPC610532	2027074973	2027074972
0116-015686	2022-04-14	DPC610532	2027074973	2027074972
0116-015687	2022-04-14	DPC610532	2027074973	2027074972
0116-015688	2022-04-14	DPC610532	2027074969	2027074967
0116-015689	2022-04-14	DPC610532	2027074969	2027074967
0116-015690	2022-04-14	DPC610532	2027074969	2027074967
0116-015691	2022-04-14	DPC610532	2027074969	2027074967
0116-015692	2022-04-14	DPC610532	2027074969	2027074967
0116-015693	2022-04-14	DPC610532	2027074968	2027074964
0116-015694	2022-04-14	DPC610532	2027074968	2027074964
0116-015695	2022-04-14	DPC610532	2027074968	2027074964
0116-015696	2022-04-14	DPC610532	2027074968	2027074964
0116-015697	2022-04-14	DPC610532	2027074968	2027074964
0116-015698	2022-04-14	DPC610532	2027074968	2027074964
0116-015699	2022-04-14	DPC610532	2027074968	2027074962
0116-015700	2022-04-14	DPC610532	2027074968	2027074962
0116-015701	2022-04-14	DPC610532	2027074968	2027074962
0116-015702	2022-04-14	DPC610532	2027074968	2027074962
0116-015703	2022-04-14	DPC610532	2027075106	2027074962
0116-015704	2022-04-14	DPC610532	2027075106	2027075107
0116-015705	2022-04-14	DPC610532	2027075106	2027075107
0116-015706	2022-04-14	DPC610532	2027075106	2027075107
0116-015707	2022-04-14	DPC610532	2027075106	2027075107
0116-015708	2022-04-14	DPC610532	2027075106	2027075107
0116-015709	2022-04-14	DPC610532	2027075106	2027075107
0116-015710	2022-04-14	DPC610532	2027075106	2027075102

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015711	2022-04-14	DPC610532	2027082118	2027075102
0116-015712	2022-04-14	DPC610532	2027082118	2027075102
0116-015713	2022-04-14	DPC610532	2027082118	2027075102
0116-015714	2022-04-14	DPC610532	2027082118	2027075102
0116-015715	2022-04-14	DPC610532	2027082118	2027074953
0116-015716	2022-04-14	DPC610532	2027075101	2027074953
0116-015717	2022-04-14	DPC610532	2027075101	2027074953
0116-015718	2022-04-14	DPC610532	2027075101	2027074953
0116-015719	2022-04-14	DPC610532	2027075101	2027074953
0116-015720	2022-04-14	DPC610532	2027075101	2027074953
0116-015721	2022-04-14	DPC610532	2027075101	2027059219
0116-015722	2022-04-14	DPC610532	2027075034	2027059219
0116-015723	2022-04-14	DPC610532	2027075034	2027059219
0116-015724	2022-04-14	DPC610532	2027075034	2027059219
0116-015726	2022-04-15	DPC610532	2027075034	2027075032
0116-015727	2022-04-15	DPC610532	2027075092	2027075032
0116-015728	2022-04-15	DPC610532	2027075092	2027075032
0116-015729	2022-04-15	DPC610532	2027075092	2027075032
0116-015730	2022-04-15	DPC610532	2027075092	2027075032
0116-015731	2022-04-15	DPC610532	2027075111	2027075032
0116-015732	2022-04-15	DPC610532	2027075111	2027075080
0116-015733	2022-04-15	DPC610532	2027075111	2027075080
0116-015734	2022-04-15	DPC610532	2027075111	2027075080
0116-015735	2022-04-15	DPC610532	2027075111	2027075080
0116-015737	2022-04-15	DPC610532	2027075099	2027074783
0116-015738	2022-04-15	DPC610532	2027075099	2027074783
0116-015739	2022-04-15	DPC610532	2027075099	2027074783
0116-015740	2022-04-15	DPC610532	2027075099	2027074783
0116-015741	2022-04-15	DPC610532	2027075099	2027074783

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18 Apr 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-015742	2022-04-15	DPC610532	2027074792	2027074783
0116-015743	2022-04-15	DPC610532	2027074792	2027075113
0116-015744	2022-04-15	DPC610532	2027074792	2027075113
0116-015747	2022-04-15	DPC610532	2027075088	2027075113
0116-015748	2022-04-15	DPC610532	2027075088	2027075113
0116-015749	2022-04-15	DPC610532	2027075088	2027075036
0116-015750	2022-04-15	DPC610532	2027075088	2027075036
0116-015757	2022-04-15	DPC610532	2027075088	2027075036
0116-015758	2022-04-15	DPC610532	2027074771	2027075036

QUANTITY (ROLLS): 153

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18 Apr 2022

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-015519	227.00	2.32	0.953	66	4.3	3.1
0116-015520	227.00	2.32	0.953	66	4.3	3.1
0116-015521	227.00	2.32	0.953	66	4.3	3.1
0116-015522	227.00	2.32	0.953	66	4.3	3.1
0116-015528	229.00	2.34	0.952	67	4.8	2.3
0116-015529	229.00	2.34	0.952	67	4.8	2.3
0116-015530	229.00	2.34	0.952	67	4.8	2.3
0116-015531	229.00	2.34	0.952	67	4.8	2.3
0116-015532	229.00	2.34	0.952	67	4.8	2.3
0116-015533	235.67	2.71	0.952	67	4.8	2.3
0116-015534	235.67	2.71	0.952	67	4.8	2.3
0116-015536	235.67	2.71	0.952	67	4.8	2.3
0116-015537	235.67	2.71	0.952	67	4.8	2.3
0116-015538	235.67	2.71	0.952	67	4.8	2.3
0116-015539	224.00	2.43	0.954	63	1.1	1.56
0116-015540	224.00	2.43	0.954	63	1.1	1.56
0116-015541	224.00	2.43	0.954	63	1.1	1.56
0116-015542	224.00	2.43	0.954	63	1.1	1.56
0116-015543	224.00	2.43	0.954	63	1.1	1.56
0116-015544	230.00	2.26	0.954	63	1.1	1.56
0116-015545	230.00	2.26	0.954	63	1.1	1.56
0116-015546	230.00	2.26	0.954	63	1.1	1.56
0116-015547	230.00	2.26	0.954	63	1.1	1.56
0116-015548	230.00	2.26	0.954	63	1.1	1.56

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015549	226.00	2.27	0.951	84	1.9	1.2
0116-015551	226.00	2.27	0.951	84	1.9	1.2
0116-015552	226.00	2.27	0.951	84	1.9	1.2
0116-015553	226.00	2.27	0.951	84	1.9	1.2
0116-015554	226.00	2.27	0.951	84	1.9	1.2
0116-015555	225.00	2.29	0.951	84	1.9	1.2
0116-015556	225.00	2.29	0.951	84	1.9	1.2
0116-015557	225.00	2.29	0.951	84	1.9	1.2
0116-015558	225.00	2.29	0.951	84	1.9	1.2
0116-015559	225.00	2.29	0.951	84	1.9	1.2
0116-015560	229.67	2.34	0.951	63	1.5	2.11
0116-015561	229.67	2.34	0.951	63	1.5	2.11
0116-015562	229.67	2.34	0.951	63	1.5	2.11
0116-015563	229.67	2.34	0.951	63	1.5	2.11
0116-015564	229.67	2.34	0.951	63	1.5	2.11
0116-015565	231.10	2.51	0.951	63	1.5	2.11
0116-015566	231.10	2.51	0.951	63	1.5	2.11
0116-015569	231.10	2.51	0.951	63	1.5	2.11
0116-015570	231.10	2.51	0.951	63	1.5	2.11
0116-015571	233.60	2.33	0.952	68	2.2	1.94
0116-015638	246.20	2.31	0.952	78	2.0	1.68
0116-015639	246.20	2.31	0.952	78	2.0	1.68
0116-015640	246.20	2.31	0.952	78	2.0	1.68
0116-015645	247.20	2.35	0.952	78	2.0	1.68
0116-015646	247.20	2.35	0.952	78	2.0	1.68
0116-015647	247.20	2.35	0.952	78	2.0	1.68
0116-015648	247.20	2.35	0.952	78	2.0	1.68
0116-015650	245.60	2.39	0.955	75	2.2	1.7
0116-015651	245.60	2.39	0.955	75	2.2	1.7
0116-015652	245.60	2.39	0.955	75	2.2	1.7
0116-015653	245.60	2.39	0.955	75	2.2	1.7
0116-015654	245.60	2.39	0.955	75	2.2	1.7
0116-015655	240.90	2.29	0.955	75	2.2	1.7
0116-015656	240.90	2.29	0.955	75	2.2	1.7
0116-015657	240.90	2.29	0.955	75	2.2	1.7
0116-015658	240.90	2.29	0.955	75	2.2	1.7

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015659	240.90	2.29	0.955	75	2.2	1.7
0116-015660	241.40	2.29	0.954	74	1.7	1.36
0116-015661	241.40	2.29	0.954	74	1.7	1.36
0116-015662	241.40	2.29	0.954	74	1.7	1.36
0116-015663	241.40	2.29	0.954	74	1.7	1.36
0116-015664	241.40	2.29	0.954	74	1.7	1.36
0116-015665	244.10	2.24	0.954	74	1.7	1.36
0116-015666	244.10	2.24	0.954	74	1.7	1.36
0116-015667	244.10	2.24	0.954	74	1.7	1.36
0116-015668	244.10	2.24	0.954	74	1.7	1.36
0116-015669	244.10	2.24	0.954	74	1.7	1.36
0116-015673	229.70	2.41	0.951	70	4.6	2.41
0116-015674	229.70	2.41	0.951	70	4.6	2.41
0116-015675	229.70	2.41	0.951	70	4.6	2.41
0116-015676	229.70	2.41	0.951	70	4.6	2.41
0116-015677	229.70	2.41	0.951	70	4.6	2.41
0116-015678	240.50	2.38	0.951	70	4.6	2.41
0116-015679	240.50	2.38	0.951	70	4.6	2.41
0116-015680	240.50	2.38	0.951	70	4.6	2.41
0116-015681	240.50	2.38	0.951	70	4.6	2.41
0116-015682	240.50	2.38	0.951	70	4.6	2.41
0116-015683	242.00	2.16	0.951	81	1.1	1.78
0116-015684	242.00	2.16	0.951	81	1.1	1.78
0116-015685	242.00	2.16	0.951	81	1.1	1.78
0116-015686	242.00	2.16	0.951	81	1.1	1.78
0116-015687	242.00	2.16	0.951	81	1.1	1.78
0116-015688	241.20	2.27	0.951	81	1.1	1.78
0116-015689	241.20	2.27	0.951	81	1.1	1.78
0116-015690	241.20	2.27	0.951	81	1.1	1.78
0116-015691	241.20	2.27	0.951	81	1.1	1.78
0116-015692	241.20	2.27	0.951	81	1.1	1.78
0116-015693	241.20	2.27	0.951	81	1.1	1.78
0116-015694	237.33	2.29	0.953	72	1.9	1.86
0116-015695	237.33	2.29	0.953	72	1.9	1.86
0116-015696	237.33	2.29	0.953	72	1.9	1.86
0116-015697	237.33	2.29	0.953	72	1.9	1.86

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015698	237.33	2.29	0.953	72	1.9	1.86
0116-015699	241.00	2.32	0.953	72	1.9	1.86
0116-015700	241.00	2.32	0.953	72	1.9	1.86
0116-015701	241.00	2.32	0.953	72	1.9	1.86
0116-015702	241.00	2.32	0.953	72	1.9	1.86
0116-015703	241.00	2.32	0.953	72	1.9	1.86
0116-015704	240.00	2.31	0.952	73	1.8	1.45
0116-015705	240.00	2.31	0.952	73	1.8	1.45
0116-015706	240.00	2.31	0.952	73	1.8	1.45
0116-015707	240.00	2.31	0.952	73	1.8	1.45
0116-015708	240.00	2.31	0.952	73	1.8	1.45
0116-015709	247.33	2.28	0.952	73	1.8	1.45
0116-015710	247.33	2.28	0.952	73	1.8	1.45
0116-015711	247.33	2.28	0.952	73	1.8	1.45
0116-015712	247.33	2.28	0.952	73	1.8	1.45
0116-015713	247.33	2.28	0.952	73	1.8	1.45
0116-015714	239.33	2.37	0.954	73	2.0	1.03
0116-015715	239.33	2.37	0.954	73	2.0	1.03
0116-015716	239.33	2.37	0.954	73	2.0	1.03
0116-015717	239.33	2.37	0.954	73	2.0	1.03
0116-015718	239.33	2.37	0.954	73	2.0	1.03
0116-015719	237.67	2.31	0.954	73	2.0	1.03
0116-015720	237.67	2.31	0.954	73	2.0	1.03
0116-015721	237.67	2.31	0.954	73	2.0	1.03
0116-015722	237.67	2.31	0.954	73	2.0	1.03
0116-015723	237.67	2.31	0.954	73	2.0	1.03
0116-015724	242.00	2.36	0.953	78	1.3	1.14
0116-015726	240.00	2.31	0.952	73	1.8	1.45
0116-015727	240.00	2.31	0.952	73	1.8	1.45
0116-015728	240.00	2.31	0.952	73	1.8	1.45
0116-015729	245.33	2.25	0.952	73	1.8	1.45
0116-015730	245.33	2.25	0.952	73	1.8	1.45
0116-015731	245.33	2.25	0.952	73	1.8	1.45
0116-015732	245.33	2.25	0.952	73	1.8	1.45
0116-015733	245.33	2.25	0.952	73	1.8	1.45
0116-015734	235.33	2.31	0.952	71	1.0	1.16

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-015735	235.33	2.31	0.952	71	1.0	1.16
0116-015737	235.33	2.31	0.952	71	1.0	1.16
0116-015738	235.33	2.31	0.952	71	1.0	1.16
0116-015739	235.33	2.31	0.952	71	1.0	1.16
0116-015740	233.00	2.13	0.952	71	1.0	1.16
0116-015741	233.00	2.13	0.952	71	1.0	1.16
0116-015742	233.00	2.13	0.952	71	1.0	1.16
0116-015743	233.00	2.13	0.952	71	1.0	1.16
0116-015744	233.00	2.13	0.952	71	1.0	1.16
0116-015747	237.67	2.23	0.953	68	4.0	3.16
0116-015748	237.67	2.23	0.953	68	4.0	3.16
0116-015749	237.67	2.23	0.953	68	4.0	3.16
0116-015750	237.67	2.23	0.953	68	4.0	3.16
0116-015757	239.00	2.23	0.953	70	2.3	3.03
0116-015758	239.00	2.23	0.953	70	2.3	3.03

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059207	8.7	280	348	80	82	115	160	162	785	0.180	2.3
2027060352	8.7	287	338	72	76	122	146	169	925	0.180	2.0
2027060393	8.4	253	332	75	76	111	190	160	749	0.180	2.2
2027074771	9.2	300	353	72	80	124	147	157	821	0.180	1.9
2027074792	8.7	284	328	68	78	146	157	154	865	0.180	2.1
2027074963	8.3	278	306	72	83	131	153	147	647	0.180	2.2
2027074968	9.2	325	341	79	83	141	156	167	808	0.180	2.2
2027074969	9.1	302	297	75	83	121	129	165	803	0.180	2.2
2027074973	8.6	303	346	75	85	125	134	143	725	0.180	1.8
2027074975	8.6	303	346	75	85	125	134	143	725	0.180	1.8
2027074994	8.2	305	333	71	86	126	130	139	812	0.180	2.2
2027075034	9.1	319	347	69	81	144	156	167	850	0.180	2.2
2027075048	8.9	311	325	69	78	124	134	162	877	0.180	1.9
2027075053	9.2	323	353	73	80	118	136	154	829	0.180	2.2
2027075059	8.5	271	318	73	86	116	129	153	721	0.180	2.1
2027075077	8.8	303	304	67	83	124	105	136	783	0.180	1.7

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027075087	10.0	344	353	68	81	137	139	188	830	0.180	1.7
2027075088	10.0	344	353	68	81	137	139	188	830	0.180	1.7
2027075092	9.5	337	342	72	84	122	144	173	801	0.180	1.8
2027075094	8.5	305	318	68	82	127	147	164	828	0.180	1.8
2027075099	9.1	310	334	65	83	124	135	162	759	0.180	1.7
2027075101	8.9	300	324	72	84	115	145	156	843	0.180	1.8
2027075104	8.9	300	324	72	84	115	145	156	843	0.180	1.8
2027075106	8.7	298	316	69	79	124	125	140	762	0.180	1.9
2027075108	8.7	298	316	69	79	124	125	140	762	0.180	1.9
2027075111	9.6	322	345	69	81	109	142	166	761	0.180	1.8
2027082112	8.6	308	310	66	80	120	130	153	792	0.180	2.0
2027082118	10.3	360	382	74	80	134	153	166	916	0.180	1.6
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059201	9.7	258	344	78	78	102	148	173	924	0.180	1.8
2027059206	8.7	280	348	80	82	115	160	162	785	0.180	2.3
2027059219	8.5	267	323	78	79	129	153	147	814	0.180	1.8
2027059224	8.6	283	337	76	76	131	148	151	832	0.180	2.0
2027059227	8.6	283	337	76	76	131	148	151	832	0.180	2.0
2027074783	8.6	283	293	66	76	129	151	166	814	0.180	2.0
2027074953	8.8	283	313	74	83	137	132	137	812	0.180	2.1
2027074962	8.3	278	306	72	83	131	153	147	647	0.180	2.2
2027074964	8.3	278	306	72	83	131	153	147	647	0.180	2.2
2027074967	9.2	325	341	79	83	141	156	167	808	0.180	2.2
2027074972	9.1	302	297	75	83	121	129	165	803	0.180	2.2
2027074976	8.6	303	346	75	85	125	134	143	725	0.180	1.8
2027074977	9.2	291	329	73	84	120	126	143	811	0.180	2.7
2027074993	8.2	305	333	71	86	126	130	139	812	0.180	2.2
2027075028	8.6	297	291	69	76	131	145	138	828	0.180	1.8
2027075032	9.0	300	321	69	79	143	156	166	798	0.180	2.3
2027075033	9.1	319	347	69	81	144	156	167	850	0.180	2.2
2027075036	9.1	319	347	69	81	144	156	167	850	0.180	2.2
2027075038	8.9	309	340	69	78	149	166	146	771	0.180	2.2
2027075046	8.9	311	325	69	78	124	134	162	877	0.180	1.9
2027075054	9.2	323	353	73	80	118	136	154	829	0.180	2.2
2027075060	8.5	271	318	73	86	116	129	153	721	0.180	2.1

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027075080	8.8	303	304	67	83	124	105	136	783	0.180	1.7
2027075102	8.9	300	324	72	84	115	145	156	843	0.180	1.8
2027075105	8.7	298	316	69	79	124	125	140	762	0.180	1.9
2027075107	8.7	298	316	69	79	124	125	140	762	0.180	1.9
2027075113	9.6	347	380	70	80	127	146	174	818	0.180	1.7
2027082113	8.6	308	310	66	80	120	130	153	792	0.180	2.0
2027082115	8.6	308	310	66	80	120	130	153	792	0.180	2.0

Test	12
Specification	**95**
2027059207	168
2027060352	144
2027060393	156
2027074771	139
2027074792	148
2027074963	161
2027074968	155
2027074969	157
2027074973	130
2027074975	130
2027074994	158
2027075034	162
2027075048	139
2027075053	155
2027075059	147
2027075077	121
2027075087	121
2027075088	121
2027075092	128
2027075094	126
2027075099	121
2027075101	127
2027075104	127
2027075106	133
2027075108	133
2027075111	128

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-26

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2027082112	145
2027082118	117
Specification	**95**
2027059201	128
2027059206	168
2027059219	129
2027059224	147
2027059227	147
2027074783	143
2027074953	151
2027074962	161
2027074964	161
2027074967	155
2027074972	157
2027074976	130
2027074977	199
2027074993	158
2027075028	129
2027075032	163
2027075033	162
2027075036	162
2027075038	155
2027075046	139
2027075054	155
2027075060	147
2027075080	121
2027075102	127
2027075105	133
2027075107	133
2027075113	121
2027082113	145
2027082115	145

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 03/16/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80635604
PO #: 604765
Weight: 201300.000 LB
Ship Date: 03/16/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX007536
Seal No: 285512

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC610462

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9538	g/cm3
Production date		20220312	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 03/16/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80635606
PO #: 604765
Weight: 196700.000 LB
Ship Date: 03/16/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001728
Seal No: 285500

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC610532

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.32	g/10min
Density	D1505	0.9541	g/cm3
Production date		20220313	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-014753	2022-03-25	DPA611182	2330-543222	2330-543211
0116-014758	2022-03-25	DPA611182	2027059242	2027060387
0116-014759	2022-03-25	DPA611182	2027059242	2027060387
0116-014760	2022-03-25	DPA611182	2027059242	2027060387
0116-014771	2022-03-25	DPA611182	2027059236	2027060358
0116-014772	2022-03-25	DPA611182	2027059236	2027060358
0116-014779	2022-03-25	DPA611182	2027059236	2027060358
0116-014780	2022-03-25	DPA611182	2027059236	2027060358
0116-014781	2022-03-25	DPA611182	2027059236	2027060358
0116-014782	2022-03-25	DPA611182	2027059236	2027060358
0116-014783	2022-03-25	DPA611182	2027059236	2027060358
0116-014784	2022-03-25	DPA611182	2027059236	2027060358
0116-014785	2022-03-25	DPA611182	2027059236	2027060358
0116-014786	2022-03-25	DPA611182	2027060391	2027060389
0116-015223	2022-04-05	DPA611180	2027075076	2027075075
0116-015233	2022-04-06	DPA611180	2027082119	2027075084
0116-015236	2022-04-06	DPA611180	2027075071	2027075081
0116-015237	2022-04-06	DPA611180	2027075071	2027075081
0116-015238	2022-04-06	DPA611180	2027075071	2027075081
0116-015239	2022-04-06	DPA611180	2027075071	2027075030
0116-015240	2022-04-06	DPA611180	2027075086	2027075030

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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5 May 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-015241	2022-04-06	DPA611180	2027075086	2027075030
0116-015242	2022-04-06	DPA611180	2027075086	2027075030
0116-015243	2022-04-06	DPA611180	2027075086	2027075030
0116-015244	2022-04-06	DPA611180	2027075086	2027075030
0116-015245	2022-04-06	DPA611180	2027075086	2027074778
0116-015295	2022-04-08	DPA611180	2027059246	2027060350
0116-015296	2022-04-08	DPA611180	2027059221	2027060350
0116-015297	2022-04-08	DPA611180	2027059221	2027060350
0116-015298	2022-04-08	DPA611180	2027059221	2027060350
0116-015299	2022-04-08	DPA611180	2027059221	2027060350
0116-015716	2022-04-14	DPC610532	2027075101	2027074953
0116-015758	2022-04-15	DPC610532	2027074771	2027075036

QUANTITY (ROLLS): 33

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Solmax Geosynthetics LLC
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SOLMAX.COM

5 May 2022

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-014753	234.30	2.24	0.952	87	6.6	6.07
0116-014758	227.70	2.26	0.956	83	3.4	4.24
0116-014759	227.70	2.26	0.956	83	3.4	4.24
0116-014760	227.70	2.26	0.956	83	3.4	4.24
0116-014771	222.10	2.21	0.954	78	3.1	2.56
0116-014772	222.10	2.21	0.954	78	3.1	2.56
0116-014779	234.70	2.26	0.953	89	3.8	2.61
0116-014780	234.70	2.26	0.953	89	3.8	2.61
0116-014781	234.70	2.26	0.953	89	3.8	2.61
0116-014782	234.70	2.26	0.953	89	3.8	2.61
0116-014783	234.70	2.26	0.953	89	3.8	2.61
0116-014784	240.70	2.30	0.953	89	3.8	2.61
0116-014785	240.70	2.30	0.953	89	3.8	2.61
0116-014786	240.70	2.30	0.953	89	3.8	2.61
0116-015223	228.67	2.35	0.952	68	5.8	6.73
0116-015233	219.00	2.30	0.953	69	3.9	6.81
0116-015236	232.00	2.29	0.953	69	3.9	6.81
0116-015237	232.00	2.29	0.953	69	3.9	6.81
0116-015238	232.00	2.29	0.953	69	3.9	6.81
0116-015239	239.67	2.26	0.951	74	3.7	3.97
0116-015240	239.67	2.26	0.951	74	3.7	3.97
0116-015241	239.67	2.26	0.951	74	3.7	3.97
0116-015242	239.67	2.26	0.951	74	3.7	3.97
0116-015243	239.67	2.26	0.951	74	3.7	3.97
0116-015244	238.00	2.20	0.951	74	3.7	3.97
0116-015245	238.00	2.20	0.951	74	3.7	3.97
0116-015295	243.30	2.19	0.951	71	2.0	2.29
0116-015296	237.40	2.36	0.952	68	1.8	2.24
0116-015297	237.40	2.36	0.952	68	1.8	2.24
0116-015298	237.40	2.36	0.952	68	1.8	2.24
0116-015299	237.40	2.36	0.952	68	1.8	2.24
0116-015716	239.33	2.37	0.954	73	2.0	1.03
0116-015758	239.00	2.23	0.953	70	2.3	3.03

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²
13	Permeability		ASTM D4491		m/s

Test	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-543222	8.5	248	261	79	124	131	154	146	669	0.180	1.9
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2330-543211	9.0	270	250	106	126	119	144	152	658	0.180	1.6

Test	**12**	**13**
Specification	**95**	
2330-543222	144	0.420
Specification	**95**	
2330-543211	120	0.390

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059221	8.3	271	299	77	84	135	163	142	697	0.180	1.9
2027059236	8.8	308	362	79	79	151	198	153	768	0.180	2.1
2027059242	8.8	282	338	76	81	150	201	169	836	0.180	2.0
2027059246	8.9	318	353	76	77	143	151	171	823	0.180	1.8
2027060391	8.4	269	298	73	75	118	204	164	876	0.150	2.3
2027074771	9.2	300	353	72	80	124	147	157	821	0.180	1.9
2027075071	9.0	348	314	81	71	157	121	173	762	0.180	1.6
2027075076	9.2	344	315	79	69	138	121	171	754	0.180	1.7
2027075086	10.0	353	344	81	79	139	188	140	830	0.180	1.7
2027075101	8.9	300	324	72	84	115	145	156	843	0.180	1.8
2027082119	10.3	360	382	74	80	134	153	166	916	0.180	1.6
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027060350	9.3	319	361	75	77	132	153	175	710	0.180	2.2
2027060358	9.0	293	342	76	78	124	153	157	819	0.180	2.0
2027060387	9.3	316	345	82	81	136	158	172	753	0.180	2.3
2027060389	8.4	269	298	73	75	118	204	164	876	0.150	2.3
2027074778	8.5	268	309	67	80	121	142	148	778	0.180	1.9
2027074953	8.8	283	313	74	83	137	132	137	812	0.180	2.1
2027075030	9.0	300	321	69	79	143	156	166	798	0.180	2.3
2027075036	9.1	319	347	69	81	144	156	167	850	0.180	2.2
2027075075	9.2	344	315	79	69	138	121	171	754	0.180	1.7
2027075081	8.5	319	304	81	70	130	114	150	681	0.180	1.9
2027075084	8.5	319	304	81	70	130	114	150	681	0.180	1.9

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-28

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
Specification	**95**
2027059221	134
2027059236	151
2027059242	147
2027059246	132
2027060391	168
2027074771	139
2027075071	112
2027075076	124
2027075086	122
2027075101	127
2027082119	117
Specification	**95**
2027060350	158
2027060358	146
2027060387	163
2027060389	168
2027074778	138
2027074953	151
2027075030	163
2027075036	162
2027075075	124
2027075081	136
2027075084	136

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80601675
PO #: PO-604442
Weight: 206500.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006121
Seal No: 275166

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611182

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80601673
PO #: PO-604442
Weight: 203750.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001525
Seal No: 275164

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611180

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 03/16/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80635606
PO #: 604765
Weight: 196700.000 LB
Ship Date: 03/16/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001728
Seal No: 285500

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC610532

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.32	g/10min
Density	D1505	0.9541	g/cm3
Production date		20220313	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & E LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-014785	2022-03-25	DPA611182	2027059236	2027060358
0116-017062	2022-05-06	DPC611481	2027112536	2027112538
0116-017063	2022-05-06	DPC611481	2027112536	2027112526
0116-017064	2022-05-06	DPC611481	2027112536	2027112526
0116-017065	2022-05-06	DPC611481	2027108140	2027112526
0116-017066	2022-05-06	DPC611481	2027108140	2027112526
0116-017067	2022-05-06	DPC611481	2027108140	2027112526
0116-017068	2022-05-06	DPC611481	2027108140	2027112528
0116-017069	2022-05-06	DPC611481	2027108140	2027112528
0116-017070	2022-05-06	DPC611481	2027108140	2027112528
0116-017071	2022-05-06	DPC611481	2027112535	2027112528
0116-017072	2022-05-06	DPC611481	2027112535	2027112528
0116-017073	2022-05-06	DPC611481	2027112535	2027112528
0116-017074	2022-05-06	DPC611481	2027112535	2027112528
0116-017075	2022-05-06	DPC611481	2027112535	2027112541
0116-017076	2022-05-06	DPC611481	2027112535	2027112541
0116-017077	2022-05-06	DPC611481	2027112535	2027112541
0116-017078	2022-05-06	DPC611481	2027108052	2027112541
0116-017079	2022-05-06	DPC611481	2027108052	2027112541
0116-017080	2022-05-06	DPC611481	2027108052	2027112541
0116-017081	2022-05-06	DPC611481	2027108052	2027108121

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017082	2022-05-06	DPC611481	2027108052	2027108121
0116-017083	2022-05-06	DPC611481	2027108052	2027108121
0116-017084	2022-05-06	DPC611481	2027108128	2027108121
0116-017085	2022-05-06	DPC611481	2027108128	2027108121
0116-017086	2022-05-06	DPC611481	2027108128	2027108121
0116-017087	2022-05-06	DPC611481	2027108128	2027108120
0116-017088	2022-05-06	DPC611481	2027108128	2027108120
0116-017089	2022-05-06	DPC611481	2027108128	2027108120
0116-017090	2022-05-06	DPC611481	2027108128	2027108120
0116-017091	2022-05-06	DPC611481	2027108128	2027108120
0116-017092	2022-05-06	DPC611481	2027108127	2027108120
0116-017093	2022-05-06	DPC611481	2027108127	2027108133
0116-017094	2022-05-06	DPC611481	2027108127	2027108133
0116-017095	2022-05-06	DPC611481	2027108127	2027108133
0116-017096	2022-05-06	DPC611481	2027108127	2027108133
0116-017097	2022-05-06	DPC611481	2027108127	2027108133
0116-017098	2022-05-06	DPC611481	2027108132	2027108133
0116-017099	2022-05-06	DPC611481	2027108132	2027107187
0116-017100	2022-05-06	DPC611481	2027108132	2027107187
0116-017101	2022-05-06	DPC611481	2027108132	2027107187
0116-017105	2022-05-06	DPC611481	2027108132	2027107187
0116-017106	2022-05-06	DPC611481	2027108132	2027107187
0116-017107	2022-05-06	DPC611481	2027108132	2027107187
0116-017108	2022-05-06	DPC611481	2027108132	2027107187
0116-017109	2022-05-06	DPC611481	2027112533	2027117425
0116-017110	2022-05-07	DPC611481	2027112533	2027117425
0116-017111	2022-05-07	DPC611481	2027112533	2027117425
0116-017112	2022-05-07	DPC611481	2027112533	2027117425
0116-017113	2022-05-07	DPC611481	2027112533	2027117425

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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12 May 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017114	2022-05-07	DPC611481	2027107189	2027112532
0116-017115	2022-05-07	DPC611481	2027107189	2027112532
0116-017116	2022-05-07	DPC611481	2027107189	2027112532
0116-017117	2022-05-07	DPC611481	2027107189	2027112532
0116-017118	2022-05-07	DPC611481	2027107189	2027112532
0116-017119	2022-05-07	DPC611481	2027107189	2027112532
0116-017120	2022-05-07	DPC611481	2027107189	2027108118
0116-017121	2022-05-07	DPC611481	2027107189	2027108118
0116-017122	2022-05-07	DPC611481	2027112194	2027108118
0116-017123	2022-05-07	DPC611481	2027112194	2027108118
0116-017124	2022-05-07	DPC611481	2027112194	2027108118
0116-017125	2022-05-07	DPC611481	2027112194	2027108118
0116-017126	2022-05-07	DPC611481	2027112194	2027108118
0116-017127	2022-05-07	DPC611481	2027112194	2027108118
0116-017128	2022-05-07	DPC611481	2027108050	2027107188
0116-017129	2022-05-07	DPC611481	2027108050	2027107188
0116-017130	2022-05-07	DPC611481	2027108050	2027107188
0116-017131	2022-05-07	DPC611481	2027108050	2027107188
0116-017132	2022-05-07	DPC611481	2027108050	2027107188
0116-017133	2022-05-07	DPC611481	2027108050	2027112192
0116-017134	2022-05-07	DPC611481	2027108050	2027112192
0116-017135	2022-05-07	DPC611481	2027108050	2027112192
0116-017136	2022-05-07	DPC611481	2027108050	2027112192
0116-017137	2022-05-07	DPC611481	2027108050	2027112192
0116-017138	2022-05-07	DPC611481	2027108050	2027112192
0116-017139	2022-05-07	DPC611481	2027112525	2027112516
0116-017140	2022-05-07	DPC611481	2027112525	2027112516
0116-017141	2022-05-07	DPC611481	2027112525	2027112516
0116-017142	2022-05-07	DPC611481	2027112525	2027112516

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017143	2022-05-07	DPC611481	2027112525	2027112516
0116-017144	2022-05-07	DPC611481	2027112525	2027112516
0116-017145	2022-05-07	DPC611481	2027112525	2027112516
0116-017146	2022-05-07	DPC611481	2027112514	2027112197
0116-017147	2022-05-07	DPC611481	2027112514	2027112197
0116-017148	2022-05-07	DPC611481	2027112514	2027112197
0116-017149	2022-05-07	DPC611481	2027112514	2027112197
0116-017150	2022-05-07	DPC611481	2027112514	2027112197
0116-017175	2022-05-08	DPC611481	2027112518	2027112184
0116-017176	2022-05-08	DPC611481	2027112518	2027112184
0116-017177	2022-05-08	DPC611481	2027112518	2027112184
0116-017178	2022-05-08	DPC611481	2027112518	2027112184
0116-017179	2022-05-08	DPC611481	2027112509	2027112524
0116-017180	2022-05-08	DPC611481	2027112509	2027112524
0116-017181	2022-05-08	DPC611481	2027112509	2027112524
0116-017182	2022-05-08	DPC611481	2027112509	2027112524
0116-017183	2022-05-08	DPC611481	2027112509	2027112524
0116-017184	2022-05-08	DPC611481	2027112509	2027112524
0116-017185	2022-05-08	DPC611481	2027112510	2027112517
0116-017186	2022-05-08	DPC611481	2027112510	2027112517
0116-017187	2022-05-08	DPC611481	2027112510	2027112517
0116-017188	2022-05-08	DPC611481	2027112510	2027112517
0116-017222	2022-05-09	DPC611481	2027107194	2027112522
0116-017223	2022-05-09	DPC611481	2027107194	2027112522
0116-017224	2022-05-09	DPC611481	2027107194	2027112522
0116-017225	2022-05-09	DPC611481	2027107194	2027112522
0116-017226	2022-05-09	DPC611481	2027107194	2027107199
0116-017229	2022-05-09	DPC611481	2027107190	2027107199
0116-017230	2022-05-09	DPC611481	2027107190	2027107199

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017231	2022-05-09	DPC611481	2027107190	2027107199
0116-017232	2022-05-09	DPC611481	2027107190	2027107199
0116-017240	2022-05-10	DPC611481	2027112519	2027112511
0116-017241	2022-05-10	DPC611481	2027112519	2027112511
0116-017242	2022-05-10	DPC611481	2027112519	2027112511
0116-017243	2022-05-10	DPC611481	2027112519	2027112511
0116-017244	2022-05-10	DPC611481	2027112519	2027112511
0116-017245	2022-05-10	DPC611481	2027112519	2027108117
0116-017246	2022-05-10	DPC611481	2027112505	2027108117
0116-017247	2022-05-10	DPC611481	2027112505	2027108117
0116-017248	2022-05-10	DPC611481	2027112505	2027108117
0116-017249	2022-05-10	DPC611481	2027112505	2027108117
0116-017250	2022-05-10	DPC611481	2027112505	2027108117
0116-017251	2022-05-10	DPC611481	2027108124	2027108122
0116-017252	2022-05-10	DPC611481	2027108124	2027108122
0116-017253	2022-05-10	DPC611481	2027108124	2027108122
0116-017254	2022-05-10	DPC611481	2027108124	2027108122
0116-017255	2022-05-10	DPC611481	2027108124	2027107193
0116-017256	2022-05-10	DPC611481	2027108124	2027107193
0116-017257	2022-05-10	DPC611481	2027112502	2027107193
0116-017258	2022-05-10	DPC611481	2027112502	2027107193
0116-017259	2022-05-10	DPC611481	2027112502	2027107193
0116-017260	2022-05-10	DPC611481	2027112502	2027107193
0116-017261	2022-05-10	DPC611481	2027112502	2027112504
0116-017262	2022-05-10	DPC611481	2027112515	2027112504
0116-017263	2022-05-10	DPC611481	2027112515	2027112504
0116-017264	2022-05-10	DPC611481	2027112515	2027112504
0116-017265	2022-05-10	DPC611481	2027112515	2027112504
0116-017271	2022-05-11	DPC611481	2027112508	2027108058

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017272	2022-05-11	DPC611481	2027112508	2027108058
0116-017273	2022-05-11	DPC611481	2027112508	2027108058
0116-017274	2022-05-11	DPC611481	2027112508	2027108058
0116-017275	2022-05-11	DPC611481	2027112508	2027108058
0116-017276	2022-05-11	DPC611481	2027112508	2027108108
0116-017277	2022-05-11	DPC611481	2027112500	2027108108
0116-017278	2022-05-11	DPC611481	2027112500	2027108108
0116-017279	2022-05-11	DPC611480	2027112500	2027108108
0116-017280	2022-05-11	DPC611480	2027112500	2027108108
0116-017281	2022-05-11	DPC611480	2027112500	2027108108
0116-017282	2022-05-11	DPC611480	2027112500	2027112181
0116-017283	2022-05-11	DPC611480	2027112530	2027112181
0116-017284	2022-05-11	DPC611480	2027112530	2027112181
0116-017285	2022-05-11	DPC611480	2027112530	2027112181
0116-017286	2022-05-11	DPC611480	2027112530	2027112181
0116-017287	2022-05-11	DPC611480	2027112530	2027112181
0116-017288	2022-05-11	DPC611480	2027112530	2027112181
0116-017289	2022-05-11	DPC611480	2027112530	2027112181
0116-017290	2022-05-11	DPC611480	2027112530	2027112181
0116-017291	2022-05-11	DPC611480	2027112530	2027112181
0116-017292	2022-05-11	DPC611480	2027112530	2027112181
0116-017313	2022-05-11	DPC611480	2027125742	2027125749
0116-017314	2022-05-11	DPC611480	2027125742	2027125749
0116-017315	2022-05-11	DPC611480	2027125742	2027125749
0116-017316	2022-05-11	DPC611480	2027125742	2027125749
0116-017317	2022-05-11	DPC611480	2027125742	2027125749
0116-017318	2022-05-11	DPC611480	2027125740	2027125745
0116-017319	2022-05-11	DPC611480	2027125740	2027125745
0116-017320	2022-05-11	DPC611480	2027125740	2027125745

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017321	2022-05-11	DPC611480	2027125740	2027125745
0116-017322	2022-05-12	DPC611480	2027125740	2027125745
0116-017323	2022-05-12	DPC611480	2027125740	2027125745
0116-017324	2022-05-12	DPC611480	2027125731	2027125738
0116-017325	2022-05-12	DPC611480	2027125731	2027125738
0116-017326	2022-05-12	DPC611480	2027125731	2027125738
0116-017327	2022-05-12	DPC611480	2027125731	2027125738
0116-017328	2022-05-12	DPC611480	2027125731	2027125738
0116-017329	2022-05-12	DPC611480	2027125731	2027125730
0116-017330	2022-05-12	DPC611480	2027125744	2027125730
0116-017331	2022-05-12	DPC611480	2027125744	2027125730
0116-017332	2022-05-12	DPC611480	2027125744	2027125730
0116-017333	2022-05-12	DPC611480	2027125744	2027125730
0116-017334	2022-05-12	DPC611480	2027125744	2027125730
0116-017335	2022-05-12	DPC611480	2027125748	2027125714
0116-017336	2022-05-12	DPC611480	2027125748	2027125714
0116-017337	2022-05-12	DPC611480	2027125748	2027125714
0116-017338	2022-05-12	DPC611480	2027125748	2027125714
0116-017339	2022-05-12	DPC611480	2027125748	2027125714
0116-017340	2022-05-12	DPC611480	2027125748	2027125747
0116-017341	2022-05-12	DPC611480	2027125748	2027125747
0116-017342	2022-05-12	DPC611480	2027125748	2027125747
0116-017343	2022-05-12	DPC611480	2027125737	2027125747
0116-017344	2022-05-12	DPC611480	2027125737	2027125747
0116-017345	2022-05-12	DPC611480	2027125734	2027125717
0116-017346	2022-05-12	DPC611480	2027125734	2027125717
0116-017347	2022-05-12	DPC611480	2027125734	2027125717
0116-017348	2022-05-12	DPC611480	2027125734	2027125717
0116-017349	2022-05-12	DPC611480	2027125734	2027125717

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12 May 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & E LF

0116-017350	2022-05-12	DPC611480	2027125727	2027125736
0116-017351	2022-05-12	DPC611480	2027125727	2027125736
0116-017352	2022-05-12	DPC611480	2027125727	2027125736
0116-017353	2022-05-12	DPC611480	2027125727	2027125736
0116-017354	2022-05-12	DPC611480	2027125727	2027125736
0116-017355	2022-05-12	DPC611480	2027125727	2027125736
0116-017356	2022-05-12	DPC611480	2027125753	2027108059
0116-017357	2022-05-12	DPC611480	2027125753	2027108059
0116-017358	2022-05-12	DPC611480	2027125753	2027108059
0116-017359	2022-05-12	DPC611480	2027125753	2027108059
0116-017360	2022-05-12	DPC611480	2027125753	2027108059
0116-017361	2022-05-12	DPC611480	2027125741	2027125754
0116-017362	2022-05-12	DPC611480	2027125741	2027125754
0116-017368	2022-05-12	DPC611480	2027125715	2027108129
0116-017369	2022-05-12	DPC611480	2027125715	2027108129
0116-017370	2022-05-12	DPC611480	2027125715	2027108129
0116-017371	2022-05-12	DPC611480	2027125715	2027108123
0116-017372	2022-05-12	DPC611480	2027125715	2027108123
0116-017373	2022-05-12	DPC611480	2027125715	2027108123

QUANTITY (ROLLS): 214

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-014785	240.70	2.30	0.953	89	3.8	2.61
0116-017062	253.40	2.65	0.953	89	3.5	2.82
0116-017063	253.40	2.65	0.953	89	3.5	2.82
0116-017064	253.40	2.65	0.953	89	3.5	2.82
0116-017065	253.40	2.65	0.953	89	3.5	2.82
0116-017066	253.40	2.65	0.953	89	3.5	2.82
0116-017067	253.40	2.65	0.953	89	3.5	2.82
0116-017068	253.40	2.65	0.953	89	3.5	2.82
0116-017069	253.40	2.65	0.953	89	3.5	2.82
0116-017070	253.40	2.65	0.953	89	3.5	2.82
0116-017071	253.40	2.65	0.953	89	3.5	2.82
0116-017072	255.10	2.73	0.951	90	1.8	1.4
0116-017073	255.10	2.73	0.951	90	1.8	1.4
0116-017074	255.10	2.73	0.951	90	1.8	1.4
0116-017075	255.10	2.73	0.951	90	1.8	1.4
0116-017076	247.80	2.78	0.951	90	1.8	1.4
0116-017077	247.80	2.78	0.951	90	1.8	1.4
0116-017078	247.80	2.78	0.951	90	1.8	1.4
0116-017079	247.80	2.78	0.951	90	1.8	1.4
0116-017080	247.80	2.78	0.951	90	1.8	1.4
0116-017081	254.20	2.77	0.951	87	1.9	1.82
0116-017082	254.20	2.77	0.951	87	1.9	1.82
0116-017083	254.20	2.77	0.951	87	1.9	1.82
0116-017084	254.20	2.77	0.951	87	1.9	1.82

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017085	254.20	2.77	0.951	87	1.9	1.82
0116-017086	255.50	2.47	0.951	87	1.9	1.82
0116-017087	255.50	2.47	0.951	87	1.9	1.82
0116-017088	255.50	2.47	0.951	87	1.9	1.82
0116-017089	255.50	2.47	0.951	87	1.9	1.82
0116-017090	255.50	2.47	0.951	87	1.9	1.82
0116-017091	248.60	2.67	0.952	87	2.6	1.5
0116-017092	248.60	2.67	0.952	87	2.6	1.5
0116-017093	248.60	2.67	0.952	87	2.6	1.5
0116-017094	248.60	2.67	0.952	87	2.6	1.5
0116-017095	248.60	2.67	0.952	87	2.6	1.5
0116-017096	253.90	2.70	0.952	87	2.6	1.5
0116-017097	253.90	2.70	0.952	87	2.6	1.5
0116-017098	253.90	2.70	0.952	87	2.6	1.5
0116-017099	253.90	2.70	0.952	87	2.6	1.5
0116-017100	253.90	2.70	0.952	87	2.6	1.5
0116-017101	253.90	2.70	0.952	87	2.6	1.5
0116-017105	228.50	2.35	0.954	90	2.5	1.67
0116-017106	228.50	2.35	0.954	90	2.5	1.67
0116-017107	228.50	2.35	0.954	90	2.5	1.67
0116-017108	228.50	2.35	0.954	90	2.5	1.67
0116-017109	228.50	2.35	0.954	90	2.5	1.67
0116-017110	228.50	2.35	0.954	90	2.5	1.67
0116-017111	228.50	2.35	0.954	90	2.5	1.67
0116-017112	228.50	2.35	0.954	90	2.5	1.67
0116-017113	228.50	2.35	0.954	90	2.5	1.67
0116-017114	228.50	2.35	0.954	90	2.5	1.67
0116-017115	245.90	2.74	0.955	78	1.8	2.54
0116-017116	245.90	2.74	0.955	78	1.8	2.54
0116-017117	245.90	2.74	0.955	78	1.8	2.54
0116-017118	245.90	2.74	0.955	78	1.8	2.54
0116-017119	245.90	2.74	0.955	78	1.8	2.54
0116-017120	245.90	2.74	0.955	78	1.8	2.54
0116-017121	245.90	2.74	0.955	78	1.8	2.54
0116-017122	245.90	2.74	0.955	78	1.8	2.54
0116-017123	245.90	2.74	0.955	78	1.8	2.54

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017124	245.90	2.74	0.955	78	1.8	2.54
0116-017125	247.80	2.69	0.956	81	2.7	2.13
0116-017126	247.90	2.69	0.956	81	2.7	2.13
0116-017127	247.90	2.69	0.956	81	2.7	2.13
0116-017128	247.90	2.69	0.956	81	2.7	2.13
0116-017129	247.90	2.69	0.956	81	2.7	2.13
0116-017130	247.90	2.69	0.956	81	2.7	2.13
0116-017131	247.90	2.69	0.956	81	2.7	2.13
0116-017132	247.90	2.69	0.956	81	2.7	2.13
0116-017133	247.90	2.69	0.956	81	2.7	2.13
0116-017134	247.90	2.69	0.956	81	2.7	2.13
0116-017135	253.70	2.65	0.954	86	1.2	1.4
0116-017136	253.70	2.65	0.954	86	1.2	1.4
0116-017137	253.70	2.65	0.954	86	1.2	1.4
0116-017138	253.70	2.65	0.954	86	1.2	1.4
0116-017139	253.70	2.65	0.954	86	1.2	1.4
0116-017140	253.70	2.65	0.954	86	1.2	1.4
0116-017141	253.70	2.65	0.954	86	1.2	1.4
0116-017142	253.70	2.65	0.954	86	1.2	1.4
0116-017143	253.70	2.65	0.954	86	1.2	1.4
0116-017144	253.70	2.65	0.954	86	1.2	1.4
0116-017145	252.67	2.72	0.950	94	1.2	1.64
0116-017146	252.67	2.72	0.950	94	1.2	1.64
0116-017147	252.67	2.72	0.950	94	1.2	1.64
0116-017148	252.67	2.72	0.950	94	1.2	1.64
0116-017149	252.67	2.72	0.950	94	1.2	1.64
0116-017150	252.67	2.72	0.950	94	1.2	1.64
0116-017175	227.67	2.77	0.952	66	6.8	7.36
0116-017176	227.67	2.77	0.952	66	6.8	7.36
0116-017177	227.67	2.77	0.952	66	6.8	7.36
0116-017178	227.67	2.77	0.952	66	6.8	7.36
0116-017179	227.67	2.77	0.952	66	6.8	7.36
0116-017180	224.00	2.29	0.952	66	6.8	7.36
0116-017181	224.00	2.29	0.952	66	6.8	7.36
0116-017182	224.00	2.29	0.952	66	6.8	7.36
0116-017183	224.00	2.29	0.952	66	6.8	7.36

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017184	224.00	2.29	0.952	66	6.8	7.36
0116-017185	243.33	2.67	0.951	71	2.7	3.34
0116-017186	243.33	2.67	0.951	71	2.7	3.34
0116-017187	243.33	2.67	0.951	71	2.7	3.34
0116-017188	243.33	2.67	0.951	71	2.7	3.34
0116-017222	246.67	2.58	0.953	71	4.9	5.78
0116-017223	246.67	2.58	0.953	71	4.9	5.78
0116-017224	246.67	2.58	0.953	71	4.9	5.78
0116-017225	246.67	2.58	0.953	71	4.9	5.78
0116-017226	246.67	2.58	0.953	71	4.9	5.78
0116-017229	255.33	2.72	0.953	71	4.9	5.78
0116-017230	255.33	2.72	0.953	71	4.9	5.78
0116-017231	255.33	2.72	0.953	71	4.9	5.78
0116-017232	255.33	2.72	0.953	71	4.9	5.78
0116-017240	251.00	2.72	0.952	80	3.5	4.24
0116-017241	251.00	2.72	0.952	80	3.5	4.24
0116-017242	251.00	2.72	0.952	80	3.5	4.24
0116-017243	251.00	2.72	0.952	80	3.5	4.24
0116-017244	251.00	2.72	0.952	80	3.5	4.24
0116-017245	251.00	2.75	0.952	80	3.5	4.24
0116-017246	251.00	2.75	0.952	80	3.5	4.24
0116-017247	251.00	2.75	0.952	80	3.5	4.24
0116-017248	251.00	2.75	0.952	80	3.5	4.24
0116-017249	251.00	2.75	0.952	80	3.5	4.24
0116-017250	257.33	2.74	0.952	88	2.8	1.83
0116-017251	257.33	2.74	0.952	88	2.8	1.83
0116-017252	257.33	2.74	0.952	88	2.8	1.83
0116-017253	257.33	2.74	0.952	88	2.8	1.83
0116-017254	257.33	2.74	0.952	88	2.8	1.83
0116-017255	251.67	2.70	0.952	88	2.8	1.83
0116-017256	251.67	2.70	0.952	88	2.8	1.83
0116-017257	251.67	2.70	0.952	88	2.8	1.83
0116-017258	251.67	2.70	0.952	88	2.8	1.83
0116-017259	251.67	2.70	0.952	88	2.8	1.83
0116-017260	245.00	2.68	0.951	77	3.1	2.99
0116-017261	245.00	2.68	0.951	77	3.1	2.99

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PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017262	245.00	2.68	0.951	77	3.1	2.99
0116-017263	245.00	2.68	0.951	77	3.1	2.99
0116-017264	245.00	2.68	0.951	77	3.1	2.99
0116-017265	246.70	2.76	0.951	77	3.1	2.99
0116-017271	250.70	2.74	0.953	81	2.8	3.51
0116-017272	250.70	2.74	0.953	81	2.8	3.51
0116-017273	250.70	2.74	0.953	81	2.8	3.51
0116-017274	250.70	2.74	0.953	81	2.8	3.51
0116-017275	250.70	2.74	0.953	81	2.8	3.51
0116-017276	250.70	2.74	0.953	81	2.8	3.51
0116-017277	250.70	2.74	0.953	81	2.8	3.51
0116-017278	250.70	2.74	0.953	81	2.8	3.51
0116-017279	250.70	2.74	0.953	81	2.8	3.51
0116-017280	250.70	2.74	0.953	81	2.8	3.51
0116-017281	253.70	2.83	0.955	95	1.4	1.5
0116-017282	253.70	2.83	0.955	95	1.4	1.5
0116-017283	253.70	2.83	0.955	95	1.4	1.5
0116-017284	253.70	2.83	0.955	95	1.4	1.5
0116-017285	253.70	2.83	0.955	95	1.4	1.5
0116-017286	253.70	2.83	0.955	95	1.4	1.5
0116-017287	253.70	2.83	0.955	95	1.4	1.5
0116-017288	253.70	2.83	0.955	95	1.4	1.5
0116-017289	253.70	2.83	0.955	95	1.4	1.5
0116-017290	253.70	2.83	0.955	95	1.4	1.5
0116-017291	245.70	2.69	0.954	81	1.6	2.55
0116-017292	245.70	2.69	0.954	81	1.6	2.55
0116-017313	241.10	2.88	0.953	76	6.7	6.12
0116-017314	241.10	2.88	0.953	76	6.7	6.12
0116-017315	241.10	2.88	0.953	76	6.7	6.12
0116-017316	241.10	2.88	0.953	76	6.7	6.12
0116-017317	241.10	2.88	0.953	76	6.7	6.12
0116-017318	240.40	2.80	0.953	76	6.7	6.12
0116-017319	240.40	2.80	0.953	76	6.7	6.12
0116-017320	240.40	2.80	0.953	76	6.7	6.12
0116-017321	240.40	2.80	0.953	76	6.7	6.12
0116-017322	240.40	2.80	0.953	76	6.7	6.12

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017323	238.90	2.73	0.955	72	2.4	2.52
0116-017324	238.90	2.73	0.955	72	2.4	2.52
0116-017325	238.90	2.73	0.955	72	2.4	2.52
0116-017326	238.90	2.73	0.955	72	2.4	2.52
0116-017327	238.90	2.73	0.955	72	2.4	2.52
0116-017328	238.90	2.73	0.955	72	2.4	2.52
0116-017329	238.90	2.73	0.955	72	2.4	2.52
0116-017330	238.90	2.73	0.955	72	2.4	2.52
0116-017331	238.90	2.73	0.955	72	2.4	2.52
0116-017332	238.90	2.73	0.955	72	2.4	2.52
0116-017333	244.50	2.74	0.954	76	1.2	1.56
0116-017334	244.50	2.74	0.954	76	1.2	1.56
0116-017335	244.50	2.74	0.954	76	1.2	1.56
0116-017336	244.50	2.74	0.954	76	1.2	1.56
0116-017337	244.50	2.74	0.954	76	1.2	1.56
0116-017338	244.50	2.74	0.954	76	1.2	1.56
0116-017339	244.50	2.74	0.954	76	1.2	1.56
0116-017340	244.50	2.74	0.954	76	1.2	1.56
0116-017341	244.50	2.74	0.954	76	1.2	1.56
0116-017342	244.50	2.74	0.954	76	1.2	1.56
0116-017343	245.20	2.71	0.953	82	1.6	2.21
0116-017344	245.20	2.71	0.953	82	1.6	2.21
0116-017345	245.20	2.71	0.953	82	1.6	2.21
0116-017346	245.20	2.71	0.953	82	1.6	2.21
0116-017347	245.20	2.71	0.953	82	1.6	2.21
0116-017348	245.20	2.71	0.953	82	1.6	2.21
0116-017349	245.20	2.71	0.953	82	1.6	2.21
0116-017350	245.20	2.71	0.953	82	1.6	2.21
0116-017351	245.20	2.71	0.953	82	1.6	2.21
0116-017352	245.20	2.71	0.953	82	1.6	2.21
0116-017353	250.80	2.78	0.954	83	3.6	2.66
0116-017354	250.80	2.78	0.954	83	3.6	2.66
0116-017355	250.80	2.78	0.954	83	3.6	2.66
0116-017356	250.80	2.78	0.954	83	3.6	2.66
0116-017357	250.80	2.78	0.954	83	3.6	2.66
0116-017358	250.80	2.78	0.954	83	3.6	2.66

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017359	250.80	2.78	0.954	83	3.6	2.66
0116-017360	250.80	2.78	0.954	83	3.6	2.66
0116-017361	250.80	2.78	0.954	83	3.6	2.66
0116-017362	250.80	2.78	0.954	83	3.6	2.66
0116-017368	244.67	2.66	0.954	75	1.7	1.57
0116-017369	244.67	2.66	0.954	75	1.7	1.57
0116-017370	244.67	2.66	0.954	75	1.7	1.57
0116-017371	244.67	2.66	0.954	75	1.7	1.57
0116-017372	244.67	2.66	0.954	75	1.7	1.57
0116-017373	244.67	2.66	0.954	75	1.7	1.57

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - Transmissivity



PROJECT NUMBER: 856
REFERENCE NUMBER: SO-092691

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Test Method	Frequency	Unit
	Transmissivity	ASTM D4716	1/540,000 ft²	*(m²/sec)*

Specification: Geocomposite

Roll Number	Pressure (psf)	Gradient	Net/Composite	Transmissivity Results (m²/sec)	(gal/min/ft)	Seat Time (min)	Boundary
0116-014785	10,000	0.10	Geocomposite	2.33E-04	1.13	15	Steel plates
Geonet	10,000	0.10	Geonet	5.95E-03	28.74	15	Steel plates
0116-017105	10,000	0.10	Geocomposite	2.58E-04	1.25	15	Steel plates
Geonet	10,000	0.10	Geonet	4.89E-03	23.62	15	Steel plates
0116-017187	10,000	0.10	Geocomposite	2.94E-04	1.42	15	Steel plates
Geonet	10,000	0.10	Geonet	4.94E-03	23.87	15	Steel plates
0116-017336	10,000	0.10	Geocomposite	2.27E-04	1.10	15	Steel plates
Geonet	10,000	0.10	Geonet	6.23E-03	30.10	15	Steel plates

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059236	8.8	308	362	79	79	151	198	153	768	0.180	2.1
2027107189	8.1	271	326	84	86	111	158	167	801	0.180	1.6
2027107190	8.1	271	326	84	86	111	158	167	801	0.180	1.6
2027107194	9.9	333	393	87	80	123	155	164	856	0.180	1.6
2027108050	9.4	311	369	85	78	114	161	157	802	0.180	1.8
2027108052	9.3	287	392	82	75	119	173	165	847	0.180	2.0
2027108124	9.4	304	399	85	76	128	150	170	882	0.180	2.2
2027108127	9.5	307	356	80	81	135	181	168	835	0.180	2.1
2027108128	9.5	307	356	80	81	135	181	168	835	0.180	2.1
2027108132	9.3	316	390	97	89	131	178	160	841	0.180	2.0
2027108140	8.9	296	351	80	75	111	147	145	817	0.180	1.8
2027112194	9.3	299	380	82	77	126	143	160	840	0.180	1.6
2027112500	8.8	292	387	84	77	110	202	181	909	0.180	1.7
2027112502	9.0	291	373	85	79	123	162	168	879	0.180	1.8
2027112505	9.0	291	373	85	79	123	162	168	879	0.180	1.8
2027112508	8.9	285	361	85	79	121	153	150	774	0.180	1.7

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027112509	8.9	285	361	85	79	121	153	150	774	0.180	1.7
2027112510	8.5	282	356	84	76	114	146	139	870	0.180	1.7
2027112514	8.9	298	343	87	80	110	151	163	784	0.180	1.8
2027112515	8.9	298	343	87	80	110	151	163	784	0.180	1.8
2027112518	9.4	340	408	85	78	117	152	170	851	0.180	1.6
2027112519	9.4	340	408	85	78	117	152	170	851	0.180	1.6
2027112525	8.7	292	376	84	76	114	159	156	775	0.180	1.7
2027112530	9.2	296	360	82	78	117	162	157	832	0.180	1.7
2027112533	9.2	296	360	82	78	117	162	157	832	0.180	1.7
2027112535	9.0	296	365	80	77	117	155	168	786	0.180	1.9
2027112536	9.0	296	365	80	77	117	155	168	786	0.180	1.9
2027125715	8.8	305	404	78	76	126	152	176	889	0.180	1.7
2027125727	8.6	276	339	78	79	116	165	167	829	0.180	1.9
2027125731	8.1	263	306	86	77	101	144	136	686	0.180	2.1
2027125734	9.6	327	388	80	77	135	165	171	865	0.180	1.7
2027125737	8.8	299	362	81	78	127	168	151	869	0.180	1.7
2027125740	9.3	328	407	83	75	125	160	171	851	0.180	1.7
2027125741	9.3	328	407	83	75	125	160	171	851	0.180	1.7
2027125742	9.3	328	407	83	75	125	160	171	851	0.180	1.7
2027125744	9.6	338	403	77	72	131	156	174	1,003	0.180	1.8
2027125748	8.4	276	316	74	75	116	142	161	887	0.180	1.8
2027125753	9.4	321	377	84	80	126	137	172	838	0.180	1.6
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027060358	9.0	293	342	76	78	124	153	157	819	0.180	2.0
2027107187	9.3	324	383	86	79	137	167	159	846	0.180	1.9
2027107188	9.3	324	383	86	79	137	167	159	846	0.180	1.9
2027107193	9.9	333	393	87	80	123	155	164	856	0.180	1.6
2027107199	9.4	311	369	85	78	114	161	157	802	0.180	1.8
2027108058	10.6	281	339	82	64	122	153	139	888	0.180	1.8
2027108059	9.3	283	389	81	78	117	169	170	865	0.180	1.9
2027108108	8.7	267	327	86	77	110	156	164	727	0.180	1.7
2027108117	9.7	313	374	87	78	121	162	147	826	0.180	1.8
2027108118	9.7	313	374	87	78	121	162	147	826	0.180	1.8
2027108120	9.6	301	396	86	78	137	197	160	777	0.180	2.3
2027108121	9.6	301	396	86	78	137	197	160	777	0.180	2.3

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027108122	9.6	301	396	86	78	137	197	160	777	0.180	2.3
2027108123	9.4	304	399	85	76	128	150	170	882	0.180	2.2
2027108129	9.5	307	356	80	81	135	181	168	835	0.180	2.1
2027108133	9.3	316	390	97	89	131	178	160	841	0.180	2.0
2027112181	8.8	269	363	81	69	132	163	173	849	0.180	2.0
2027112184	8.9	260	326	79	74	131	156	139	742	0.180	2.1
2027112192	9.1	302	376	80	74	130	155	168	914	0.180	1.6
2027112197	9.3	299	380	82	77	126	143	160	840	0.180	1.6
2027112504	9.0	291	373	85	79	123	162	168	879	0.180	1.8
2027112511	8.5	282	356	84	76	114	146	139	870	0.180	1.7
2027112516	8.9	298	343	87	80	110	151	163	784	0.180	1.8
2027112517	8.9	298	343	87	80	110	151	163	784	0.180	1.8
2027112522	8.7	292	376	84	76	114	159	156	775	0.180	1.7
2027112524	8.7	292	376	84	76	114	159	156	775	0.180	1.7
2027112526	8.9	297	362	84	79	121	153	157	806	0.180	1.7
2027112528	8.9	297	362	84	79	121	153	157	806	0.180	1.7
2027112532	9.2	296	360	82	78	117	162	157	832	0.180	1.7
2027112538	8.4	292	315	79	80	124	143	164	808	0.180	1.8
2027112541	8.4	292	315	79	80	124	143	164	808	0.180	1.8
2027117425	9.3	273	364	89	75	141	217	161	851	0.180	2.4
2027125714	8.8	305	404	78	76	126	152	176	889	0.180	1.7
2027125717	9.1	306	348	79	73	125	149	159	911	0.180	1.7
2027125730	8.1	263	306	86	77	101	144	136	686	0.180	2.1
2027125736	8.8	299	362	81	78	127	168	151	869	0.180	1.7
2027125738	8.8	299	362	81	78	127	168	151	869	0.180	1.7
2027125745	9.6	338	403	77	72	131	156	174	1,003	0.180	1.8
2027125747	9.6	338	403	77	72	131	156	174	1,003	0.180	1.8
2027125749	8.4	276	316	74	75	116	142	161	887	0.180	1.8
2027125754	9.4	321	377	84	80	126	137	172	838	0.180	1.6

Test	12
Specification	**95**
2027059236	151
2027107189	116
2027107190	116
2027107194	112

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027108050	127
2027108052	140
2027108124	157
2027108127	150
2027108128	150
2027108132	143
2027108140	127
2027112194	114
2027112500	123
2027112502	127
2027112505	127
2027112508	121
2027112509	121
2027112510	125
2027112514	129
2027112515	129
2027112518	112
2027112519	112
2027112525	122
2027112530	118
2027112533	118
2027112535	135
2027112536	135
2027125715	123
2027125727	135
2027125731	153
2027125734	119
2027125737	121
2027125740	119
2027125741	119
2027125742	119
2027125744	126
2027125748	128
2027125753	116
Specification	**95**

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

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PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027060358	146
2027107187	139
2027107188	139
2027107193	112
2027107199	127
2027108058	131
2027108059	136
2027108108	119
2027108117	129
2027108118	129
2027108120	164
2027108121	164
2027108122	164
2027108123	157
2027108129	150
2027108133	143
2027112181	141
2027112184	148
2027112192	118
2027112197	114
2027112504	127
2027112511	125
2027112516	129
2027112517	129
2027112522	122
2027112524	122
2027112526	121
2027112528	121
2027112532	118
2027112538	130
2027112541	130
2027117425	176
2027125714	123
2027125717	120
2027125730	153
2027125736	121

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-30

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027125738	121
2027125745	126
2027125747	126
2027125749	128
2027125754	116

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 01/26/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

Delivery #: 80601675
PO #: PO-604442
Weight: 206500.000 LB
Ship Date: 01/26/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006121
Seal No: 275166

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPA611182

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220123	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/06/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80650301
PO #: 604930
Weight: 205250.000 LB
Ship Date: 04/06/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006280
Seal No: 285332

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC611481

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9538	g/cm3
Production date		20220401	

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However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/06/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80650300
PO #: 604930
Weight: 206050.000 LB
Ship Date: 04/06/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006129
Seal No: 285330

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC611480

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9538	g/cm3
Production date		20220401	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-32

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-017416	2022-05-13	DPC611480	2027125724	2027108123
0116-017417	2022-05-13	DPC611480	2027125724	2027107186
0116-017418	2022-05-13	DPC611480	2027125724	2027107186
0116-017419	2022-05-13	DPC611480	2027112513	2027107186
0116-017420	2022-05-13	DPC611480	2027112513	2027107186
0116-017421	2022-05-13	DPC611480	2027112513	2027107186
0116-017422	2022-05-13	DPC611480	2027112513	2027125723
0116-017423	2022-05-13	DPC611480	2027112513	2027125723
0116-017424	2022-05-13	DPC611480	2027112513	2027125723
0116-017425	2022-05-14	DPC611480	2027125719	2027125723
0116-017426	2022-05-14	DPC611480	2027125719	2027125723
0116-017427	2022-05-14	DPC611480	2027125719	2027125723
0116-017428	2022-05-14	DPC611480	2027125719	2027125755
0116-017429	2022-05-14	DPC611480	2027125719	2027125755
0116-017430	2022-05-14	DPC611480	2027112188	2027125755
0116-017431	2022-05-14	DPC611480	2027112188	2027125755
0116-017432	2022-05-14	DPC611480	2027112188	2027125755
0116-017433	2022-05-14	DPC611480	2027112188	2027127647
0116-017434	2022-05-14	DPC611480	2027112188	2027127647
0116-017435	2022-05-14	DPC611480	2027112188	2027127647
0116-017436	2022-05-14	DPC611480	2027127643	2027127647

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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16 May 2022

MANUFACTURING QUALITY CONTROL

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-32

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017437	2022-05-14	DPC611480	2027127643	2027127647
0116-017438	2022-05-14	DPC611480	2027127643	2027127647
0116-017439	2022-05-14	DPC611480	2027127643	2027127648
0116-017440	2022-05-14	DPC611480	2027127643	2027127648
0116-017441	2022-05-14	DPC611480	2027127645	2027127648
0116-017442	2022-05-14	DPC611480	2027127645	2027127648
0116-017443	2022-05-14	DPC611480	2027127645	2027127648
0116-017444	2022-05-14	DPC611480	2027127645	2027127950
0116-017445	2022-05-14	DPC611480	2027127645	2027127950

QUANTITY (ROLLS): 30

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-32

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-32

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-017416	245.67	2.78	0.949	69	3.6	5.39
0116-017417	245.67	2.78	0.949	69	3.6	5.39
0116-017418	245.67	2.78	0.949	69	3.6	5.39
0116-017419	245.67	2.78	0.949	69	3.6	5.39
0116-017420	245.67	2.78	0.949	69	3.6	5.39
0116-017421	245.00	2.78	0.949	69	3.6	5.39
0116-017422	245.00	2.78	0.949	69	3.6	5.39
0116-017423	245.00	2.78	0.949	69	3.6	5.39
0116-017424	245.00	2.78	0.949	69	3.6	5.39
0116-017425	245.00	2.78	0.949	69	3.6	5.39
0116-017426	246.33	2.68	0.950	77	6.7	7.57
0116-017427	246.33	2.68	0.950	77	6.7	7.57
0116-017428	246.33	2.68	0.950	77	6.7	7.57
0116-017429	246.33	2.68	0.950	77	6.7	7.57
0116-017430	246.33	2.68	0.950	77	6.7	7.57
0116-017431	233.00	2.79	0.950	77	6.7	7.57
0116-017432	233.00	2.79	0.950	77	6.7	7.57
0116-017433	233.00	2.79	0.950	77	6.7	7.57
0116-017434	233.00	2.79	0.950	77	6.7	7.57
0116-017435	233.00	2.79	0.950	77	6.7	7.57
0116-017436	238.67	2.86	0.951	74	4.9	4.31
0116-017437	238.67	2.86	0.951	74	4.9	4.31
0116-017438	238.67	2.86	0.951	74	4.9	4.31
0116-017439	238.67	2.86	0.951	74	4.9	4.31
0116-017440	238.67	2.86	0.951	74	4.9	4.31
0116-017441	232.67	2.78	0.951	74	4.9	4.31
0116-017442	232.67	2.78	0.951	74	4.9	4.31
0116-017443	232.67	2.78	0.951	74	4.9	4.31
0116-017444	232.67	2.78	0.951	74	4.9	4.31
0116-017445	232.67	2.78	0.951	74	4.9	4.31

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-32

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027112188	9.4	298	345	85	78	139	165	150	758	0.180	2.0
2027112513	8.5	282	356	84	76	114	146	139	870	0.180	1.7
2027125719	9.1	306	348	79	73	125	149	159	911	0.180	1.7
2027125724	8.6	276	339	78	79	116	165	167	829	0.180	1.9
2027127643	8.7	341	369	69	86	139	141	167	867	0.180	1.7
2027127645	8.6	339	310	66	84	143	140	160	775	0.180	1.8
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027107186	9.3	324	383	86	79	137	167	159	846	0.180	1.9
2027108123	9.4	304	399	85	76	128	150	170	882	0.180	2.2
2027125723	9.6	316	379	85	74	119	167	156	764	0.180	2.0
2027125755	9.4	321	377	84	80	126	137	172	838	0.180	1.6
2027127647	8.6	339	310	66	84	143	140	160	775	0.180	1.8
2027127648	8.6	339	310	66	84	143	140	160	775	0.180	1.8
2027127950	9.4	355	345	69	85	148	163	162	907	0.180	1.9

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-32

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
Specification	**95**
2027112188	142
2027112513	125
2027125719	120
2027125724	135
2027127643	120
2027127645	125
Specification	**95**
2027107186	139
2027108123	157
2027125723	142
2027125755	116
2027127647	125
2027127648	125
2027127950	138

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 04/06/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80650300
PO #: 604930
Weight: 206050.000 LB
Ship Date: 04/06/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006129
Seal No: 285330

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC611480

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9538	g/cm3
Production date		20220401	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & E LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-017865	2022-05-20	DPD610770	2027127951	2027127950
0116-017866	2022-05-20	DPD610770	2027127951	2027127950
0116-017867	2022-05-20	DPD610770	2027127951	2027128002
0116-017868	2022-05-20	DPD610770	2027127951	2027128002
0116-017869	2022-05-20	DPD610770	2027125729	2027128002
0116-017870	2022-05-20	DPD610770	2027125729	2027128002
0116-017871	2022-05-20	DPD610770	2027125729	2027128002
0116-017872	2022-05-20	DPD610770	2027125729	2027128002
0116-017873	2022-05-20	DPD610770	2027125729	2027128002
0116-017874	2022-05-20	DPD610770	2027134733	2027125762
0116-017875	2022-05-20	DPD610461	2027134733	2027125762
0116-017876	2022-05-20	DPD610461	2027134733	2027125762
0116-017877	2022-05-21	DPD610461	2027134733	2027125762
0116-017878	2022-05-21	DPD610461	2027134733	2027125762
0116-017879	2022-05-21	DPD610461	2027134733	2027127639
0116-017880	2022-05-21	DPD610461	2027127634	2027127639
0116-017881	2022-05-21	DPD610461	2027127634	2027127639
0116-017882	2022-05-21	DPD610461	2027127634	2027127639
0116-017883	2022-05-21	DPD610461	2027127634	2027127639
0116-017884	2022-05-21	DPD610461	2027127634	2027127639
0116-017885	2022-05-21	DPD610461	2027107191	2027125721

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017886	2022-05-21	DPD610461	2027107191	2027125721
0116-017887	2022-05-21	DPD610461	2027107191	2027125721
0116-017888	2022-05-21	DPD610461	2027107191	2027125721
0116-017889	2022-05-21	DPD610461	2027107191	2027125721
0116-017890	2022-05-21	DPD610461	2027107191	2027128001
0116-017891	2022-05-21	DPD610461	2027125720	2027128001
0116-017892	2022-05-21	DPD610461	2027125720	2027128001
0116-017893	2022-05-21	DPD610461	2027125720	2027128001
0116-017894	2022-05-21	DPD610461	2027125720	2027128001
0116-017895	2022-05-21	DPD610461	2027125720	2027128001
0116-017896	2022-05-21	DPD610461	2027125720	2027127957
0116-017897	2022-05-21	DPD610461	2027127960	2027127957
0116-017898	2022-05-21	DPD610461	2027127960	2027127957
0116-017899	2022-05-21	DPD610461	2027127960	2027127957
0116-017900	2022-05-21	DPD610461	2027127960	2027127957
0116-017901	2022-05-21	DPD610461	2027127960	2027108054
0116-017902	2022-05-21	DPD610461	2027125713	2027108054
0116-017903	2022-05-21	DPD610461	2027125713	2027108054
0116-017904	2022-05-21	DPD610461	2027125713	2027108054
0116-017905	2022-05-21	DPD610461	2027125713	2027108054
0116-017906	2022-05-21	DPD610461	2027125713	2027108054
0116-017907	2022-05-21	DPD610461	2027125713	2027125718
0116-017908	2022-05-21	DPD610461	2027127961	2027125718
0116-017909	2022-05-21	DPD610461	2027127961	2027125718
0116-017910	2022-05-21	DPD610461	2027127961	2027125718
0116-017911	2022-05-21	DPD610461	2027127961	2027125718
0116-017912	2022-05-21	DPD610461	2027127961	2027127958
0116-017913	2022-05-21	DPD610461	2027127955	2027127958
0116-017914	2022-05-21	DPD610461	2027127955	2027127958

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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26 May 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017915	2022-05-21	DPD610461	2027127955	2027127958
0116-017916	2022-05-21	DPD610461	2027127955	2027127958
0116-017917	2022-05-21	DPD610461	2027127955	2027127958
0116-017918	2022-05-21	DPD610461	2027127955	2027127953
0116-017919	2022-05-21	DPD610461	2027128017	2027127953
0116-017920	2022-05-21	DPD610461	2027128017	2027127953
0116-017921	2022-05-21	DPD610461	2027128017	2027127953
0116-017922	2022-05-21	DPD610461	2027128017	2027127953
0116-017923	2022-05-21	DPD610461	2027128017	2027127959
0116-017924	2022-05-21	DPD610461	2027127952	2027127959
0116-017930	2022-05-21	DPD610461	2027127988	2027127954
0116-017931	2022-05-21	DPD610461	2027127988	2027127954
0116-017932	2022-05-21	DPD610461	2027127988	2027127954
0116-017933	2022-05-21	DPD610461	2027127988	2027127954
0116-017934	2022-05-21	DPD610461	2027127988	2027127954
0116-017935	2022-05-21	DPD610461	2027127988	2027127954
0116-017936	2022-05-21	DPD610461	2027127988	2027127954
0116-017937	2022-05-21	DPD610461	2027127988	2027127954
0116-017938	2022-05-21	DPD610461	2027127988	2027127954
0116-017948	2022-05-22	DPD610461	2027127988	2027127954
0116-017949	2022-05-22	DPD610461	2027127988	2027127954
0116-017950	2022-05-22	DPD610461	2027127988	2027127954
0116-017951	2022-05-22	DPD610461	2027127988	2027127954
0116-017952	2022-05-22	DPD610461	2027127988	2027127954
0116-017953	2022-05-22	DPD610461	2027127988	2027127954
0116-017954	2022-05-22	DPD610461	2027134742	2027134751
0116-017955	2022-05-22	DPD610461	2027134742	2027134751
0116-017956	2022-05-22	DPD610461	2027134742	2027134751
0116-017957	2022-05-22	DPD610461	2027134742	2027134751

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017958	2022-05-23	DPD610461	2027134742	2027134751
0116-017959	2022-05-23	DPD610461	2027134743	2027134747
0116-017960	2022-05-23	DPD610461	2027134743	2027134747
0116-017961	2022-05-23	DPD610461	2027134743	2027134747
0116-017962	2022-05-23	DPD610461	2027134743	2027134747
0116-017963	2022-05-23	DPD610461	2027134743	2027134747
0116-017964	2022-05-23	DPD610461	2027134743	2027134747
0116-017965	2022-05-23	DPD610461	2027128060	2027134755
0116-017966	2022-05-23	DPD610461	2027128060	2027134755
0116-017967	2022-05-23	DPD610461	2027128060	2027134755
0116-017968	2022-05-23	DPD610461	2027128060	2027134755
0116-017969	2022-05-23	DPD610461	2027128060	2027134755
0116-017970	2022-05-23	DPD610461	2027128060	2027134755
0116-017971	2022-05-23	DPD610461	2027128060	2027134755
0116-017972	2022-05-23	DPD610461	2027134744	2027134745
0116-017973	2022-05-23	DPD610461	2027134744	2027134745
0116-017974	2022-05-23	DPD610461	2027134744	2027134745
0116-017975	2022-05-23	DPD610461	2027134744	2027134745
0116-017976	2022-05-23	DPD610461	2027134744	2027134745
0116-017977	2022-05-23	DPD610461	2027134746	2027134754
0116-017978	2022-05-23	DPD610461	2027134746	2027134754
0116-017979	2022-05-23	DPD610461	2027134746	2027134754
0116-017980	2022-05-23	DPD610461	2027134746	2027134754
0116-017981	2022-05-23	DPD610461	2027134746	2027134754
0116-017982	2022-05-23	DPD610461	2027134746	2027134754
0116-017983	2022-05-23	DPD610461	2027127637	2027134753
0116-017984	2022-05-23	DPD610461	2027127637	2027134753
0116-017985	2022-05-23	DPD610461	2027127637	2027134753
0116-017986	2022-05-23	DPD610461	2027127637	2027134753

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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26 May 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-017987	2022-05-23	DPD610461	2027127637	2027134753
0116-017988	2022-05-23	DPD610461	2027127641	2027134753
0116-017989	2022-05-23	DPD610461	2027127641	2027127638
0116-017990	2022-05-23	DPD610461	2027127641	2027127638
0116-017991	2022-05-23	DPD610461	2027127641	2027127638
0116-017992	2022-05-23	DPD610461	2027127641	2027127638
0116-017993	2022-05-23	DPD610461	2027127640	2027127642
0116-017995	2022-05-23	DPD610461	2027127640	2027127642
0116-017996	2022-05-23	DPD610461	2027127640	2027127642
0116-017997	2022-05-23	DPD610461	2027127640	2027127642
0116-017998	2022-05-23	DPD610461	2027127644	2027127649
0116-017999	2022-05-23	DPD610461	2027127644	2027127649
0116-018000	2022-05-23	DPD610461	2027127644	2027127649
0116-018001	2022-05-23	DPD610461	2027127644	2027127649
0116-018002	2022-05-23	DPD610461	2027127644	2027127649
0116-018003	2022-05-23	DPD610461	2027127644	2027127649
0116-018004	2022-05-23	DPD610461	2027112187	2027127975
0116-018005	2022-05-23	DPD610461	2027112187	2027127975
0116-018006	2022-05-23	DPD610461	2027112187	2027127975
0116-018050	2022-05-24	DPD610461	2027112187	2027127975
0116-018051	2022-05-24	DPD610461	2027112187	2027127975
0116-018052	2022-05-24	DPD610461	2027125756	2027127636
0116-018053	2022-05-24	DPD610461	2027125756	2027127636
0116-018054	2022-05-24	DPD610461	2027125756	2027127636
0116-018055	2022-05-24	DPD610461	2027125756	2027127636
0116-018056	2022-05-24	DPD610461	2027125756	2027127636
0116-018063	2022-05-24	DPD610461	2027125756	2027127636
0116-018064	2022-05-24	DPD610461	2027112189	2027125726
0116-018065	2022-05-24	DPD610461	2027112189	2027125726

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018066	2022-05-25	DPD610461	2027112189	2027125726
0116-018070	2022-05-25	DPD610461	2027112189	2027125726
0116-018071	2022-05-25	DPD610461	2027127999	2027127982
0116-018072	2022-05-25	DPD610461	2027127999	2027127982
0116-018073	2022-05-25	DPD610461	2027127999	2027127982
0116-018074	2022-05-25	DPD610461	2027127999	2027127982
0116-018075	2022-05-25	DPD610461	2027127999	2027127982
0116-018076	2022-05-25	DPD610461	2027127646	2027127635
0116-018077	2022-05-25	DPD610461	2027127646	2027127635
0116-018078	2022-05-25	DPD610461	2027127646	2027127635
0116-018085	2022-05-25	DPD610461	2027127646	2027127635
0116-018086	2022-05-25	DPD610461	2027127646	2027127635
0116-018087	2022-05-25	DPD610461	2027127646	2027127635
0116-018088	2022-05-25	DPD610461	2027128036	2027108053
0116-018089	2022-05-25	DPD610461	2027128036	2027108053
0116-018090	2022-05-26	DPD610461	2027128036	2027108053
0116-018091	2022-05-26	DPD610461	2027128036	2027108053
0116-018092	2022-05-26	DPD610461	2027128036	2027108053
0116-018093	2022-05-26	DPD610461	2027112521	2027128040
0116-018094	2022-05-26	DPD610461	2027112521	2027128040
0116-018095	2022-05-26	DPD610461	2027112521	2027128040
0116-018096	2022-05-26	DPD610461	2027112521	2027128040
0116-018097	2022-05-26	DPD610461	2027112521	2027128040
0116-018098	2022-05-26	DPD610461	2027112521	2027128040
0116-018099	2022-05-26	DPD610461	2027108145	2027128040
0116-018100	2022-05-26	DPD610461	2027108145	2027128040
0116-018101	2022-05-26	DPD610461	2027108145	2027128040
0116-018102	2022-05-26	DPD610461	2027108145	2027128040
0116-018103	2022-05-26	DPD610461	2027108145	2027125735

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018104	2022-05-26	DPD610461	2027112529	2027125735
0116-018105	2022-05-26	DPD610461	2027112529	2027125735
0116-018106	2022-05-26	DPD610461	2027112529	2027125735
0116-018107	2022-05-26	DPD610461	2027112529	2027125735
0116-018108	2022-05-26	DPD610461	2027112529	2027128043
0116-018109	2022-05-26	DPD610461	2027112529	2027128043
0116-018110	2022-05-26	DPD610461	2027112531	2027128043
0116-018111	2022-05-26	DPD610461	2027112531	2027128043
0116-018112	2022-05-26	DPD610461	2027112531	2027128043
0116-018113	2022-05-26	DPD610461	2027112531	2027128043
0116-018114	2022-05-26	DPD610461	2027112531	2027128043
0116-018115	2022-05-26	DPD610461	2027112531	2027128043
0116-018116	2022-05-26	DPD610461	2027112531	2027128043
0116-018117	2022-05-26	DPD610461	2027112531	2027128043
0116-018118	2022-05-26	DPD610460	2027128043	2027125732
0116-018119	2022-05-26	DPD610460	2027128043	2027125732

QUANTITY (ROLLS): 182

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26 May 2022

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-017865	243.80	2.66	0.953	82	2.7	2.84
0116-017866	243.80	2.66	0.953	82	2.7	2.84
0116-017867	243.80	2.66	0.953	82	2.7	2.84
0116-017868	243.80	2.66	0.953	82	2.7	2.84
0116-017869	243.80	2.66	0.953	82	2.7	2.84
0116-017870	243.80	2.66	0.953	82	2.7	2.84
0116-017871	243.80	2.66	0.953	82	2.7	2.84
0116-017872	243.80	2.66	0.953	82	2.7	2.84
0116-017873	243.80	2.66	0.953	82	2.7	2.84
0116-017874	243.80	2.66	0.953	82	2.7	2.84
0116-017875	247.70	2.78	0.954	77	3.0	1.93
0116-017876	247.70	2.78	0.954	77	3.0	1.93
0116-017877	247.70	2.78	0.954	77	3.0	1.93
0116-017878	247.70	2.78	0.954	77	3.0	1.93
0116-017879	247.70	2.78	0.954	77	3.0	1.93
0116-017880	247.70	2.78	0.954	77	3.0	1.93
0116-017881	247.70	2.78	0.954	77	3.0	1.93
0116-017882	247.70	2.78	0.954	77	3.0	1.93
0116-017883	247.70	2.78	0.954	77	3.0	1.93
0116-017884	247.70	2.78	0.954	77	3.0	1.93
0116-017885	246.10	2.80	0.955	80	1.3	1.4
0116-017886	246.10	2.80	0.955	80	1.3	1.4
0116-017887	246.10	2.80	0.955	80	1.3	1.4
0116-017888	246.10	2.80	0.955	80	1.3	1.4

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017889	246.10	2.80	0.955	80	1.3	1.4
0116-017890	246.10	2.80	0.955	80	1.3	1.4
0116-017891	246.10	2.80	0.955	80	1.3	1.4
0116-017892	246.10	2.80	0.955	80	1.3	1.4
0116-017893	246.10	2.80	0.955	80	1.3	1.4
0116-017894	246.10	2.80	0.955	80	1.3	1.4
0116-017895	247.50	2.75	0.954	83	1.5	1.83
0116-017896	247.50	2.75	0.954	83	1.5	1.83
0116-017897	247.50	2.75	0.954	83	1.5	1.83
0116-017898	247.50	2.75	0.954	83	1.5	1.83
0116-017899	247.50	2.75	0.954	83	1.5	1.83
0116-017900	247.50	2.75	0.954	83	1.5	1.83
0116-017901	247.50	2.75	0.954	83	1.5	1.83
0116-017902	247.50	2.75	0.954	83	1.5	1.83
0116-017903	247.50	2.75	0.954	83	1.5	1.83
0116-017904	247.50	2.75	0.954	83	1.5	1.83
0116-017905	248.10	2.77	0.955	82	1.6	2.8
0116-017906	248.10	2.77	0.955	82	1.6	2.8
0116-017907	248.10	2.77	0.955	82	1.6	2.8
0116-017908	248.10	2.77	0.955	82	1.6	2.8
0116-017909	248.10	2.77	0.955	82	1.6	2.8
0116-017910	248.10	2.77	0.955	82	1.6	2.8
0116-017911	248.10	2.77	0.955	82	1.6	2.8
0116-017912	248.10	2.77	0.955	82	1.6	2.8
0116-017913	248.10	2.77	0.955	82	1.6	2.8
0116-017914	248.10	2.77	0.955	82	1.6	2.8
0116-017915	251.00	2.63	0.955	85	1.5	1.3
0116-017916	251.00	2.63	0.955	85	1.5	1.3
0116-017917	251.00	2.63	0.955	85	1.5	1.3
0116-017918	251.00	2.63	0.955	85	1.5	1.3
0116-017919	251.00	2.63	0.955	85	1.5	1.3
0116-017920	255.00	2.58	0.955	85	1.5	1.3
0116-017921	255.00	2.58	0.955	85	1.5	1.3
0116-017922	255.00	2.58	0.955	85	1.5	1.3
0116-017923	255.00	2.58	0.955	85	1.5	1.3
0116-017924	255.00	2.58	0.955	85	1.5	1.3

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017930	230.00	2.74	0.953	70	6.2	4.88
0116-017931	230.00	2.74	0.953	70	6.2	4.88
0116-017932	230.00	2.74	0.953	70	6.2	4.88
0116-017933	230.00	2.74	0.953	70	6.2	4.88
0116-017934	230.00	2.74	0.953	70	6.2	4.88
0116-017935	233.67	2.73	0.948	71	5.2	5.51
0116-017936	233.67	2.73	0.948	71	5.2	5.51
0116-017937	233.67	2.73	0.948	71	5.2	5.51
0116-017938	233.67	2.73	0.948	71	5.2	5.51
0116-017948	213.00	2.74	0.946	65	1.5	2.2
0116-017949	213.00	2.74	0.946	65	1.5	2.2
0116-017950	213.00	2.74	0.946	65	1.5	2.2
0116-017951	213.00	2.74	0.946	65	1.5	2.2
0116-017952	213.00	2.74	0.946	65	1.5	2.2
0116-017953	248.00	2.72	0.948	79	2.2	1.17
0116-017954	248.00	2.72	0.948	79	2.2	1.17
0116-017955	248.00	2.72	0.948	79	2.2	1.17
0116-017956	248.00	2.72	0.948	79	2.2	1.17
0116-017957	248.00	2.72	0.948	79	2.2	1.17
0116-017958	257.00	2.65	0.948	79	2.2	1.17
0116-017959	257.00	2.65	0.948	79	2.2	1.17
0116-017960	257.00	2.65	0.948	79	2.2	1.17
0116-017961	257.00	2.65	0.948	79	2.2	1.17
0116-017962	257.00	2.65	0.948	79	2.2	1.17
0116-017963	251.00	2.77	0.949	86	3.4	1.98
0116-017964	251.00	2.77	0.949	86	3.4	1.98
0116-017965	251.00	2.77	0.949	86	3.4	1.98
0116-017966	251.00	2.77	0.949	86	3.4	1.98
0116-017967	251.00	2.77	0.949	86	3.4	1.98
0116-017968	239.00	2.74	0.949	86	3.4	1.98
0116-017969	239.00	2.74	0.949	86	3.4	1.98
0116-017970	239.00	2.74	0.949	86	3.4	1.98
0116-017971	239.00	2.74	0.949	86	3.4	1.98
0116-017972	239.00	2.74	0.949	86	3.4	1.98
0116-017973	247.00	2.76	0.949	81	1.8	1.73
0116-017974	247.00	2.76	0.949	81	1.8	1.73

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-017975	247.00	2.76	0.949	81	1.8	1.73
0116-017976	247.00	2.76	0.949	81	1.8	1.73
0116-017977	247.00	2.76	0.949	81	1.8	1.73
0116-017978	246.00	2.76	0.949	81	1.8	1.73
0116-017979	246.00	2.76	0.949	81	1.8	1.73
0116-017980	246.00	2.76	0.949	81	1.8	1.73
0116-017981	246.00	2.76	0.949	81	1.8	1.73
0116-017982	246.00	2.76	0.949	81	1.8	1.73
0116-017983	247.33	2.65	0.951	78	2.8	2.5
0116-017984	247.33	2.65	0.951	78	2.8	2.5
0116-017985	247.33	2.65	0.951	78	2.8	2.5
0116-017986	247.33	2.65	0.951	78	2.8	2.5
0116-017987	247.33	2.65	0.951	78	2.8	2.5
0116-017988	247.67	2.61	0.951	78	2.8	2.5
0116-017989	247.67	2.61	0.951	78	2.8	2.5
0116-017990	247.67	2.61	0.951	78	2.8	2.5
0116-017991	247.67	2.61	0.951	78	2.8	2.5
0116-017992	247.67	2.61	0.951	78	2.8	2.5
0116-017993	246.33	2.71	0.954	81	1.5	1.39
0116-017995	246.33	2.71	0.954	81	1.5	1.39
0116-017996	246.33	2.71	0.954	81	1.5	1.39
0116-017997	246.33	2.71	0.954	81	1.5	1.39
0116-017998	246.33	2.71	0.954	81	1.5	1.39
0116-017999	245.00	2.65	0.954	81	1.5	1.39
0116-018000	245.00	2.65	0.954	81	1.5	1.39
0116-018001	245.00	2.65	0.954	81	1.5	1.39
0116-018002	245.00	2.65	0.954	81	1.5	1.39
0116-018003	245.00	2.65	0.954	81	1.5	1.39
0116-018004	239.33	2.63	0.954	81	1.5	1.39
0116-018005	239.33	2.63	0.954	81	1.5	1.39
0116-018006	239.33	2.63	0.954	81	1.5	1.39
0116-018050	241.30	2.71	0.955	79	4.0	3.75
0116-018051	241.30	2.71	0.955	79	4.0	3.75
0116-018052	241.30	2.71	0.955	79	4.0	3.75
0116-018053	241.30	2.71	0.955	79	4.0	3.75
0116-018054	241.30	2.71	0.955	79	4.0	3.75

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

TEST RESULTS - ROLLS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018055	241.30	2.71	0.955	79	4.0	3.75
0116-018056	241.30	2.71	0.955	79	4.0	3.75
0116-018063	253.30	2.65	0.952	80	4.1	3.53
0116-018064	253.30	2.65	0.952	80	4.1	3.53
0116-018065	253.30	2.65	0.952	80	4.1	3.53
0116-018066	253.30	2.65	0.952	80	4.1	3.53
0116-018070	240.50	2.64	0.953	79	3.0	3.61
0116-018071	240.50	2.64	0.953	79	3.0	3.61
0116-018072	240.50	2.64	0.953	79	3.0	3.61
0116-018073	240.50	2.64	0.953	79	3.0	3.61
0116-018074	240.50	2.64	0.953	79	3.0	3.61
0116-018075	240.50	2.64	0.953	79	3.0	3.61
0116-018076	240.50	2.64	0.953	79	3.0	3.61
0116-018077	240.50	2.64	0.953	79	3.0	3.61
0116-018078	240.50	2.64	0.953	79	3.0	3.61
0116-018085	254.00	2.71	0.953	83	4.1	6.84
0116-018086	254.00	2.71	0.953	83	4.1	6.84
0116-018087	254.00	2.71	0.953	83	4.1	6.84
0116-018088	254.00	2.71	0.953	83	4.1	6.84
0116-018089	254.00	2.71	0.953	83	4.1	6.84
0116-018090	254.00	2.71	0.953	83	4.1	6.84
0116-018091	254.00	2.71	0.953	83	4.1	6.84
0116-018092	254.00	2.71	0.953	83	4.1	6.84
0116-018093	254.00	2.71	0.953	83	4.1	6.84
0116-018094	254.00	2.71	0.953	83	4.1	6.84
0116-018095	246.20	2.32	0.955	82	4.9	4.4
0116-018096	246.20	2.32	0.955	82	4.9	4.4
0116-018097	246.20	2.32	0.955	82	4.9	4.4
0116-018098	246.20	2.32	0.955	82	4.9	4.4
0116-018099	246.20	2.32	0.955	82	4.9	4.4
0116-018100	246.20	2.32	0.955	82	4.9	4.4
0116-018101	246.20	2.32	0.955	82	4.9	4.4
0116-018102	246.20	2.32	0.955	82	4.9	4.4
0116-018103	246.20	2.32	0.955	82	4.9	4.4
0116-018104	246.20	2.32	0.955	82	4.9	4.4
0116-018105	242.20	2.32	0.951	77	4.9	4.15

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018106	242.20	2.32	0.951	77	4.9	4.15
0116-018107	242.20	2.32	0.951	77	4.9	4.15
0116-018108	242.20	2.32	0.951	77	4.9	4.15
0116-018109	242.20	2.32	0.951	77	4.9	4.15
0116-018110	242.20	2.32	0.951	77	4.9	4.15
0116-018111	242.20	2.32	0.951	77	4.9	4.15
0116-018112	242.20	2.32	0.951	77	4.9	4.15
0116-018113	242.20	2.32	0.951	77	4.9	4.15
0116-018114	242.20	2.32	0.951	77	4.9	4.15
0116-018115	238.90	2.53	0.951	78	1.4	4.01
0116-018116	238.90	2.53	0.951	78	1.4	4.01
0116-018117	238.90	2.53	0.951	78	1.4	4.01
0116-018118	238.90	2.53	0.951	78	1.4	4.01
0116-018119	238.90	2.53	0.951	78	1.4	4.01

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027107191	8.1	271	326	84	86	111	158	167	801	0.180	1.6
2027108145	8.6	286	380	80	76	117	153	175	837	0.180	1.9
2027112187	9.4	298	345	85	78	139	165	150	758	0.180	2.0
2027112189	9.4	298	345	85	78	139	165	150	758	0.180	2.0
2027112521	9.4	340	408	85	78	117	152	170	851	0.180	1.6
2027112529	8.9	297	362	84	79	121	153	157	806	0.180	1.7
2027112531	9.2	296	360	82	78	117	162	157	832	0.180	1.7
2027125713	8.8	305	404	78	76	126	152	176	889	0.180	1.7
2027125720	9.6	316	379	85	74	119	167	156	764	0.180	2.0
2027125729	8.1	263	306	86	77	101	144	136	686	0.180	2.1
2027125756	8.8	291	338	78	77	127	161	155	873	0.180	1.7
2027127634	9.6	345	354	69	84	145	155	196	792	0.180	1.7
2027127637	8.9	325	350	70	85	137	156	176	989	0.180	1.9
2027127640	8.9	325	350	70	85	137	156	176	989	0.180	1.9
2027127641	8.7	341	369	69	86	139	141	167	867	0.180	1.7
2027127644	8.7	341	369	69	86	139	141	167	867	0.180	1.7

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX Daniel Vasquez APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027127646	8.6	339	310	66	84	143	140	160	775	0.180	1.8
2027127951	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127952	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127955	9.6	370	361	67	84	130	138	173	851	0.180	2.4
2027127960	8.8	292	294	63	86	124	119	167	732	0.180	2.4
2027127961	9.3	328	321	66	87	137	122	165	845	0.180	2.4
2027127988	9.6	331	345	69	81	149	145	190	879	0.180	1.6
2027127999	9.3	315	311	68	84	138	137	161	765	0.180	1.7
2027128017	8.8	324	335	63	82	127	138	161	740	0.180	1.9
2027128036	9.1	336	339	71	87	128	131	157	817	0.180	1.9
2027128060	9.3	317	351	68	84	140	150	191	901	0.180	2.0
2027134733	9.7	337	352	73	89	132	150	164	813	0.180	2.0
2027134742	8.5	322	345	73	89	125	124	154	807	0.180	2.0
2027134743	8.5	322	345	73	89	125	124	154	807	0.180	2.0
2027134744	9.1	334	349	70	86	140	138	185	894	0.180	2.0
2027134746	9.1	334	349	70	86	140	138	185	894	0.180	2.0
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027108053	9.3	287	392	82	75	119	173	165	847	0.180	2.0
2027108054	9.3	287	392	82	75	119	173	165	847	0.180	2.0
2027125718	9.1	306	348	79	73	125	149	159	911	0.180	1.7
2027125721	9.6	316	379	85	74	119	167	156	764	0.180	2.0
2027125726	8.6	276	339	78	79	116	165	167	829	0.180	1.9
2027125732	9.6	327	388	80	77	135	165	171	865	0.180	1.7
2027125735	9.6	327	388	80	77	135	165	171	865	0.180	1.7
2027125762	9.4	285	392	85	73	101	155	168	952	0.180	1.8
2027127635	9.6	345	354	69	84	145	155	196	792	0.180	1.7
2027127636	9.6	345	354	69	84	145	155	196	792	0.180	1.7
2027127638	8.9	325	350	70	85	137	156	176	989	0.180	1.9
2027127639	8.9	325	350	70	85	137	156	176	989	0.180	1.9
2027127642	8.7	341	369	69	86	139	141	167	867	0.180	1.7
2027127649	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127950	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127953	9.6	370	361	67	84	130	138	173	851	0.180	2.4
2027127954	9.6	370	361	67	84	130	138	173	851	0.180	2.4
2027127957	8.8	292	294	63	86	124	119	167	732	0.180	2.4

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027127958	8.8	292	294	63	86	124	119	167	732	0.180	2.4
2027127959	8.8	292	294	63	86	124	119	167	732	0.180	2.4
2027127975	8.7	298	315	69	80	116	128	146	852	0.180	1.7
2027127982	9.7	349	359	67	77	144	153	176	809	0.180	1.7
2027128001	8.4	297	314	71	83	123	141	153	799	0.180	1.7
2027128002	8.4	297	314	71	83	123	141	153	799	0.180	1.7
2027128040	9.3	330	351	70	87	129	136	165	922	0.180	1.9
2027128043	9.0	326	307	73	90	151	157	146	756	0.180	2.4
2027134745	9.1	334	349	70	86	140	138	185	894	0.180	2.0
2027134747	9.1	334	349	70	86	140	138	185	894	0.180	2.0
2027134751	9.4	342	350	71	87	132	147	182	880	0.180	1.9
2027134753	8.9	321	311	71	90	156	173	149	784	0.180	2.2
2027134754	8.9	321	311	71	90	156	173	149	784	0.180	2.2
2027134755	8.9	321	311	71	90	156	173	149	784	0.180	2.2

Test	12
Specification	**95**
2027107191	116
2027108145	137
2027112187	142
2027112189	142
2027112521	112
2027112529	121
2027112531	118
2027125713	123
2027125720	142
2027125729	153
2027125756	122
2027127634	122
2027127637	137
2027127640	137
2027127641	120
2027127644	120
2027127646	125
2027127951	138
2027127952	138

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2027127955	173
2027127960	174
2027127961	174
2027127988	117
2027127999	119
2027128017	135
2027128036	138
2027128060	140
2027134733	145
2027134742	145
2027134743	145
2027134744	142
2027134746	142
Specification	**95**
2027108053	140
2027108054	140
2027125718	120
2027125721	142
2027125726	135
2027125732	119
2027125735	119
2027125762	132
2027127635	122
2027127636	122
2027127638	137
2027127639	137
2027127642	120
2027127649	138
2027127950	138
2027127953	173
2027127954	173
2027127957	174
2027127958	174
2027127959	174
2027127975	120

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-35

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027127982	123
2027128001	123
2027128002	123
2027128040	133
2027128043	171
2027134745	142
2027134747	142
2027134751	134
2027134753	157
2027134754	157
2027134755	157

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659527
PO #: 604930
Weight: 206550.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001404
Seal No: 288094

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610770

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220417	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659525
PO #: 604930
Weight: 210650.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006130
Seal No: 285734

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610461

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220410	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659526
PO #: 604930
Weight: 206200.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX104236
Seal No: 285733

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610460

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220410	

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QUALITY ASSURANCE SUPERINTENDENT

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MANUFACTURING QUALITY CONTROL

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-018120	2022-05-26	DPD610461	2027125733	2027125732
0116-018121	2022-05-26	DPD610461	2027125733	2027125732
0116-018122	2022-05-26	DPD610461	2027125733	2027125732
0116-018123	2022-05-26	DPD610461	2027125733	2027125732
0116-018124	2022-05-26	DPD610461	2027125733	2027112527
0116-018125	2022-05-26	DPD610461	2027125733	2027112527
0116-018126	2022-05-26	DPD610461	2027125733	2027112527
0116-018127	2022-05-26	DPD610461	2027125739	2027112527
0116-018128	2022-05-26	DPD610461	2027125739	2027112527
0116-018129	2022-05-26	DPD610461	2027125739	2027125752
0116-018130	2022-05-26	DPD610461	2027125739	2027125752
0116-018131	2022-05-26	DPD610461	2027125739	2027125752
0116-018132	2022-05-26	DPD610461	2027107196	2027125752
0116-018140	2022-05-26	DPD610461	2027107196	2027125752
0116-018141	2022-05-26	DPD610461	2027107196	2027134740
0116-018142	2022-05-26	DPD610461	2027107196	2027134740
0116-018143	2022-05-27	DPD610461	2027134748	2027134740
0116-018144	2022-05-27	DPD610461	2027134748	2027134740
0116-018152	2022-05-27	DPD610461	2027134741	2027125750
0116-018153	2022-05-27	DPD610461	2027134741	2027125750
0116-018154	2022-05-27	DPD610461	2027134741	2027125750

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018155	2022-05-27	DPD610461	2027134741	2027125750
0116-018156	2022-05-27	DPD610461	2027134741	2027128071
0116-018157	2022-05-27	DPD610461	2027134741	2027128071
0116-018158	2022-05-27	DPD610461	2027134729	2027128071
0116-018159	2022-05-27	DPD610461	2027134729	2027128071
0116-018160	2022-05-27	DPD610461	2027134729	2027128071
0116-018161	2022-05-27	DPD610461	2027134729	2027128071
0116-018162	2022-05-27	DPD610461	2027134729	2027128074
0116-018163	2022-05-27	DPD610461	2027133119	2027128074
0116-018164	2022-05-27	DPD610461	2027133119	2027128074
0116-018165	2022-05-27	DPD610461	2027133119	2027128074
0116-018166	2022-05-27	DPD610461	2027133119	2027128074
0116-018167	2022-05-27	DPD610461	2027133119	2027128074
0116-018168	2022-05-27	DPD610461	2027133119	2027128074
0116-018169	2022-05-27	DPD610461	2027133119	2027128073
0116-018170	2022-05-27	DPD610461	2027128072	2027128073
0116-018171	2022-05-27	DPD610461	2027128072	2027128073
0116-018172	2022-05-27	DPD610461	2027128072	2027128073
0116-018173	2022-05-27	DPD610461	2027128072	2027128073
0116-018174	2022-05-27	DPD610460	2027128072	2027125716
0116-018175	2022-05-27	DPD610460	2027128061	2027125716
0116-018176	2022-05-27	DPD610460	2027128061	2027125716
0116-018177	2022-05-27	DPD610460	2027128061	2027125716
0116-018178	2022-05-27	DPD610460	2027128061	2027125716
0116-018179	2022-05-27	DPD610460	2027128061	2027125716
0116-018180	2022-05-27	DPD610460	2027128061	2027128078
0116-018181	2022-05-27	DPD610460	2027134734	2027128078
0116-018182	2022-05-27	DPD610460	2027134734	2027128078
0116-018183	2022-05-27	DPD610460	2027134734	2027128078

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018184	2022-05-27	DPD610460	2027134734	2027128078
0116-018185	2022-05-27	DPD610460	2027134734	2027128076
0116-018189	2022-05-27	DPD610460	2027134734	2027128076
0116-018190	2022-05-27	DPD610460	2027128079	2027128076
0116-018191	2022-05-27	DPD610460	2027128079	2027128076
0116-018192	2022-05-27	DPD610460	2027128079	2027128076
0116-018193	2022-05-27	DPD610460	2027128079	2027128052
0116-018194	2022-05-27	DPD610460	2027128079	2027128052
0116-018195	2022-05-27	DPD610460	2027128075	2027128052
0116-018196	2022-05-27	DPD610460	2027128075	2027128052
0116-018197	2022-05-27	DPD610460	2027128075	2027128052
0116-018198	2022-05-28	DPD610460	2027128075	2027128064
0116-018199	2022-05-28	DPD610460	2027128075	2027128064
0116-018200	2022-05-28	DPD610460	2027128075	2027128064
0116-018201	2022-05-28	DPD610460	2027134732	2027128064
0116-018202	2022-05-28	DPD610460	2027134732	2027128064
0116-018203	2022-05-28	DPD610460	2027134732	2027128064
0116-018204	2022-05-28	DPD610460	2027134732	2027128062
0116-018205	2022-05-28	DPD610460	2027134732	2027128062
0116-018206	2022-05-28	DPD610460	2027128037	2027128062
0116-018207	2022-05-28	DPD610460	2027128037	2027128062
0116-018208	2022-05-28	DPD610460	2027128037	2027128062
0116-018222	2022-05-28	DPD610460	2027128037	2027127968
0116-018223	2022-05-28	DPD610460	2027128037	2027127968
0116-018224	2022-05-28	DPD610460	2027128037	2027127968
0116-018225	2022-05-28	DPD610460	2027128037	2027127968
0116-018226	2022-05-28	DPD610460	2027142465	2027127968
0116-018227	2022-05-28	DPD610460	2027142465	2027127968
0116-018228	2022-05-28	DPD610460	2027142465	2027127993

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018229	2022-05-28	DPD610460	2027142465	2027127993
0116-018230	2022-05-28	DPD610460	2027142465	2027127993
0116-018231	2022-05-28	DPD610460	2027142465	2027127993
0116-018232	2022-05-28	DPD610460	2027125746	2027127993
0116-018233	2022-05-28	DPD610460	2027125746	2027127998
0116-018234	2022-05-28	DPD610460	2027125746	2027127998
0116-018235	2022-05-28	DPD610460	2027125722	2027127998
0116-018236	2022-05-28	DPD610460	2027125722	2027127998
0116-018237	2022-05-28	DPD610460	2027125722	2027127998
0116-018238	2022-05-28	DPD610460	2027125722	2027127998
0116-018239	2022-05-28	DPD610460	2027125722	2027108062
0116-018240	2022-05-28	DPD610460	2027125722	2027108062
0116-018241	2022-05-28	DPD610460	2027134739	2027108062
0116-018242	2022-05-28	DPD610460	2027134739	2027108062
0116-018243	2022-05-28	DPD610460	2027134739	2027108062
0116-018244	2022-05-29	DPD610460	2027134739	2027127995
0116-018245	2022-05-29	DPD610460	2027134739	2027127995
0116-018246	2022-05-29	DPD610460	2027134739	2027127995
0116-018247	2022-05-29	DPD610460	2027134739	2027127995
0116-018248	2022-05-29	DPD610460	2027134739	2027127995
0116-018249	2022-05-29	DPD610460	2027134739	2027127995
0116-018250	2022-05-29	DPD610460	2027128049	2027127990
0116-018251	2022-05-29	DPD610460	2027128049	2027127990
0116-018252	2022-05-29	DPD610460	2027128049	2027127990
0116-018253	2022-05-29	DPD610460	2027128049	2027127990
0116-018254	2022-05-29	DPD610460	2027128049	2027127990
0116-018255	2022-05-29	DPD610460	2027128049	2027125761
0116-018256	2022-05-29	DPD610460	2027128065	2027125761
0116-018257	2022-05-29	DPD610460	2027128065	2027125761

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018258	2022-05-29	DPD610460	2027128065	2027125761
0116-018259	2022-05-29	DPD610460	2027128065	2027125761
0116-018260	2022-05-29	DPD610460	2027128065	2027125761
0116-018261	2022-05-29	DPD610460	2027128063	2027125761
0116-018262	2022-05-29	DPD610460	2027128063	2027125761
0116-018263	2022-05-29	DPD610460	2027128063	2027125761
0116-018264	2022-05-29	DPD610460	2027128063	2027125761
0116-018265	2022-05-29	DPD610460	2027128063	2027125761
0116-018266	2022-05-29	DPD610460	2027128063	2027125761
0116-018267	2022-05-29	DPD610460	2027108119	2027125761
0116-018268	2022-05-29	DPD610460	2027108119	2027125761
0116-018269	2022-05-29	DPD610460	2027108119	2027125761
0116-018270	2022-05-29	DPD610460	2027108119	2027125761
0116-018271	2022-05-29	DPD610460	2027108119	2027125761
0116-018272	2022-05-29	DPD610460	2027108119	2027125760
0116-018273	2022-05-29	DPD610460	2027108119	2027125760
0116-018274	2022-05-29	DPD610460	2027128057	2027125760
0116-018275	2022-05-29	DPD610460	2027128057	2027125760
0116-018276	2022-05-29	DPD610460	2027128057	2027125760
0116-018277	2022-05-29	DPD610460	2027128057	2027125760
0116-018278	2022-05-29	DPD610460	2027128057	2027125760
0116-018279	2022-05-29	DPD610460	2027128057	2027125760
0116-018280	2022-05-29	DPD610460	2027128048	2027108068
0116-018281	2022-05-29	DPD610460	2027128048	2027108068
0116-018282	2022-05-29	DPD610460	2027128048	2027108068
0116-018283	2022-05-29	DPD610460	2027128048	2027108068
0116-018284	2022-05-29	DPD610460	2027128048	2027108068
0116-018285	2022-05-29	DPD610460	2027128048	2027108068
0116-018286	2022-05-29	DPD610460	2027128048	2027108068

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018287	2022-05-29	DPD610460	2027128030	2027128042
0116-018288	2022-05-29	DPD610460	2027128030	2027128042
0116-018289	2022-05-29	DPD610460	2027128030	2027128042
0116-018290	2022-05-29	DPD610460	2027128030	2027128042
0116-018291	2022-05-29	DPD610460	2027128030	2027128042
0116-018292	2022-05-29	DPD610460	2027125759	2027128047
0116-018293	2022-05-29	DPD610460	2027125759	2027128047
0116-018294	2022-05-29	DPD610460	2027125759	2027128047
0116-018295	2022-05-29	DPD610460	2027125759	2027128047
0116-018296	2022-05-29	DPD610460	2027108116	2027134752
0116-018297	2022-05-29	DPD610460	2027108116	2027134752
0116-018298	2022-05-29	DPD610460	2027108116	2027134752
0116-018299	2022-05-29	DPD610460	2027128046	2027128054
0116-018300	2022-05-29	DPD610460	2027128046	2027128054
0116-018301	2022-05-29	DPD610460	2027128046	2027128054
0116-018302	2022-05-29	DPD610460	2027128046	2027128054
0116-018303	2022-05-30	DPD610460	2027128046	2027128054
0116-018304	2022-05-30	DPD610460	2027128046	2027128054
0116-018305	2022-05-30	DPD610460	2027127984	2027059214
0116-018306	2022-05-30	DPD610460	2027127984	2027059214
0116-018307	2022-05-30	DPD610460	2027127984	2027059214
0116-018308	2022-05-30	DPD610460	2027127984	2027059214
0116-018309	2022-05-30	DPD610460	2027127984	2027059214
0116-018310	2022-05-30	DPD610460	2027142456	2027142462
0116-018311	2022-05-30	DPD610460	2027142456	2027142462
0116-018312	2022-05-30	DPD610460	2027142456	2027142462
0116-018313	2022-05-30	DPD610460	2027142456	2027142462
0116-018314	2022-05-30	DPD610460	2027142456	2027142462
0116-018315	2022-05-30	DPD610460	2027142456	2027128056

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018316	2022-05-30	DPD610460	2027142461	2027128056
0116-018317	2022-05-30	DPD610460	2027142461	2027128056
0116-018318	2022-05-30	DPD610460	2027142461	2027128056
0116-018319	2022-05-30	DPD610460	2027142461	2027128056
0116-018320	2022-05-30	DPD610460	2027142461	2027128056
0116-018321	2022-05-30	DPD610460	2027128055	2027128032
0116-018322	2022-05-30	DPD610460	2027128055	2027128032
0116-018323	2022-05-30	DPD610460	2027128055	2027128032
0116-018324	2022-05-30	DPD610460	2027128055	2027128032
0116-018325	2022-05-30	DPD610460	2027128055	2027128032
0116-018326	2022-05-30	DPD610460	2027128055	2027128038
0116-018327	2022-05-30	DPD610460	2027128039	2027128038
0116-018328	2022-05-30	DPD610460	2027128039	2027128038
0116-018329	2022-05-30	DPD610460	2027128039	2027128038
0116-018330	2022-05-30	DPD610460	2027128039	2027128038
0116-018331	2022-05-30	DPD610460	2027128039	2027128038
0116-018332	2022-05-30	DPD610460	2027127965	2027128031
0116-018333	2022-05-30	DPD610460	2027127965	2027128031
0116-018334	2022-05-30	DPD610460	2027127965	2027128031
0116-018335	2022-05-30	DPD610460	2027127965	2027128031
0116-018336	2022-05-30	DPD610460	2027127965	2027128031
0116-018337	2022-05-30	DPD610460	2027127965	2027127966
0116-018338	2022-05-30	DPD610460	2027127970	2027127966
0116-018339	2022-05-30	DPD610460	2027127970	2027127966
0116-018340	2022-05-30	DPD610460	2027127970	2027127966
0116-018341	2022-05-30	DPD610460	2027127970	2027127966
0116-018342	2022-05-30	DPD610460	2027127970	2027127966
0116-018343	2022-05-30	DPD610460	2027127970	2027127966
0116-018344	2022-05-30	DPD610460	2027134735	2027134738

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018345	2022-05-30	DPD610460	2027134735	2027134738
0116-018346	2022-05-30	DPD610460	2027134735	2027134738
0116-018347	2022-05-30	DPD610460	2027134735	2027134738
0116-018348	2022-05-30	DPD610460	2027134735	2027134738
0116-018349	2022-05-30	DPD610460	2027125725	2027134736
0116-018350	2022-05-30	DPD610460	2027125725	2027134736
0116-018351	2022-05-30	DPD610460	2027125725	2027134736
0116-018352	2022-05-30	DPD610460	2027125725	2027134736
0116-018353	2022-05-30	DPD610460	2027134731	2027134736
0116-018354	2022-05-30	DPD610460	2027134731	2027134736
0116-018355	2022-05-30	DPD610460	2027134731	2027134737
0116-018356	2022-05-30	DPD610460	2027134731	2027134737
0116-018357	2022-05-30	DPD610460	2027134731	2027134737
0116-018358	2022-05-30	DPD610460	2027128077	2027134737
0116-018359	2022-05-30	DPD610460	2027128077	2027134737
0116-018360	2022-05-30	DPD610460	2027128077	2027134730
0116-018361	2022-05-30	DPD610460	2027128077	2027134730
0116-018362	2022-05-30	DPD610460	2027128077	2027134730
0116-018363	2022-05-30	DPD610460	2027134749	2027134730
0116-018364	2022-05-30	DPD610460	2027134749	2027134730
0116-018365	2022-05-30	DPD610460	2027134749	2027134730
0116-018366	2022-05-31	DPD610460	2027134749	2027127996
0116-018367	2022-05-31	DPD610460	2027134749	2027127996
0116-018368	2022-05-31	DPD610460	2027127991	2027127996
0116-018369	2022-05-31	DPD610460	2027127991	2027127996
0116-018370	2022-05-31	DPD610460	2027127991	2027127996
0116-018371	2022-05-31	DPD610460	2027127991	2027128029
0116-018373	2022-05-31	DPD610460	2027127991	2027128029
0116-018374	2022-05-31	DPD610460	2027127991	2027128029

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018375	2022-05-31	DPD610460	2027127991	2027128029
0116-018376	2022-05-31	DPD610460	2027127991	2027128029
0116-018377	2022-05-31	DPD610460	2027128019	2027128018
0116-018378	2022-05-31	DPD610460	2027128019	2027128018
0116-018379	2022-05-31	DPD610460	2027128019	2027128018
0116-018380	2022-05-31	DPD610460	2027128019	2027128018
0116-018381	2022-05-31	DPD610460	2027128019	2027128018
0116-018382	2022-05-31	DPD610460	2027128028	2027128018
0116-018383	2022-05-31	DPD610460	2027128028	2027127962
0116-018384	2022-05-31	DPD610460	2027128028	2027127962
0116-018385	2022-05-31	DPD610460	2027128028	2027127962
0116-018386	2022-05-31	DPD610460	2027128028	2027127962
0116-018387	2022-05-31	DPD610460	2027128028	2027127962
0116-018388	2022-05-31	DPD610460	2027128023	2027127962
0116-018389	2022-05-31	DPD610460	2027128023	2027128022
0116-018390	2022-05-31	DPD610460	2027128023	2027128022
0116-018391	2022-05-31	DPD610460	2027128023	2027128022
0116-018392	2022-05-31	DPD610460	2027128023	2027128022
0116-018393	2022-05-31	DPD610460	2027128024	2027128022
0116-018394	2022-05-31	DPD610460	2027128024	2027128034
0116-018395	2022-05-31	DPD610460	2027128024	2027128034
0116-018396	2022-05-31	DPD610460	2027128024	2027128034
0116-018397	2022-05-31	DPD610460	2027128024	2027128034
0116-018407	2022-05-31	DPD610460	2027128024	2027128021
0116-018408	2022-05-31	DPD610460	2027128024	2027128021
0116-018409	2022-05-31	DPD610460	2027128025	2027128021
0116-018410	2022-05-31	DPD610460	2027128025	2027128021
0116-018415	2022-05-31	DPD610460	2027128025	2027128020
0116-018416	2022-05-31	DPD610460	2027128025	2027128020

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018417	2022-05-31	DPD610460	2027128025	2027128020
0116-018418	2022-05-31	DPD610460	2027134750	2027128020
0116-018419	2022-05-31	DPD610460	2027134750	2027128020
0116-018420	2022-05-31	DPD610460	2027134750	2027128026
0116-018421	2022-05-31	DPD610460	2027134750	2027128026
0116-018422	2022-05-31	DPD610460	2027134750	2027128026
0116-018423	2022-05-31	DPD610460	2027134750	2027128026
0116-018424	2022-05-31	DPD610460	2027128000	2027128026
0116-018425	2022-05-31	DPD610460	2027128000	2027128026
0116-018426	2022-05-31	DPD610460	2027128000	2027128067
0116-018427	2022-05-31	DPD610460	2027128000	2027128067
0116-018428	2022-05-31	DPD610460	2027128000	2027128067
0116-018429	2022-06-01	DPD610460	2027128035	2027128067
0116-018430	2022-06-01	DPD610460	2027128035	2027128067
0116-018431	2022-06-01	DPD610460	2027128035	2027128004
0116-018432	2022-06-01	DPD610460	2027128035	2027128004
0116-018433	2022-06-01	DPD610460	2027128035	2027128004
0116-018434	2022-06-01	DPD610460	2027128035	2027128004
0116-018435	2022-06-01	DPD610460	2027128027	2027128004
0116-018436	2022-06-01	DPD610460	2027128027	2027128004
0116-018437	2022-06-01	DPD610460	2027128027	2027127997
0116-018438	2022-06-01	DPD610460	2027128027	2027127997
0116-018439	2022-06-01	DPD610460	2027128027	2027127997
0116-018440	2022-06-01	DPD610460	2027128027	2027127997
0116-018441	2022-06-01	DPD610460	2027128066	2027127997
0116-018442	2022-06-01	DPD610460	2027128066	2027125757
0116-018443	2022-06-01	DPD610460	2027128066	2027125757
0116-018444	2022-06-01	DPD610460	2027128066	2027125757
0116-018445	2022-06-01	DPD610460	2027128066	2027125757

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

0116-018446	2022-06-01	DPD610460	2027128066	2027125757
0116-018447	2022-06-01	DPD610460	2027128066	2027125757
0116-018448	2022-06-01	DPD610460	2027128045	2027125758
0116-018449	2022-06-01	DPD610460	2027128045	2027125758
0116-018450	2022-06-01	DPD610460	2027128045	2027125758
0116-018451	2022-06-01	DPD610460	2027128045	2027125758
0116-018452	2022-06-01	DPD610460	2027128045	2027125758
0116-018453	2022-06-01	DPD610460	2027128050	2027128041
0116-018454	2022-06-01	DPD610460	2027128050	2027128041
0116-018455	2022-06-01	DPD610460	2027128050	2027128041
0116-018456	2022-06-01	DPD610460	2027128050	2027128041
0116-018461	2022-06-02	DPD610460	2027128053	2027128041
0116-018462	2022-06-02	DPD610460	2027128053	2027134756
0116-018463	2022-06-02	DPD610460	2027128053	2027134756
0116-018464	2022-06-02	DPD610460	2027128053	2027134756
0116-018465	2022-06-02	DPD610460	2027128053	2027134756

QUANTITY (ROLLS): 298

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Solmax Geosynthetics LLC
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SOLMAX.COM

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX Daniel Vasquez APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-018120	241.10	2.77	0.951	78	1.4	4.01
0116-018121	241.10	2.77	0.951	78	1.4	4.01
0116-018122	241.10	2.77	0.951	78	1.4	4.01
0116-018123	241.10	2.77	0.951	78	1.4	4.01
0116-018124	241.10	2.77	0.951	78	1.4	4.01
0116-018125	239.00	2.68	0.952	71	2.7	2.58
0116-018126	239.00	2.68	0.952	71	2.7	2.58
0116-018127	239.00	2.68	0.952	71	2.7	2.58
0116-018128	239.00	2.68	0.952	71	2.7	2.58
0116-018129	239.00	2.68	0.952	71	2.7	2.58
0116-018130	237.67	2.71	0.952	71	2.7	2.58
0116-018131	237.67	2.71	0.952	71	2.7	2.58
0116-018132	237.67	2.71	0.952	71	2.7	2.58
0116-018140	237.67	2.68	0.953	75	4.8	3.88
0116-018141	237.67	2.68	0.953	75	4.8	3.88
0116-018142	237.67	2.68	0.953	75	4.8	3.88
0116-018143	237.67	2.68	0.953	75	4.8	3.88
0116-018144	237.67	2.68	0.953	75	4.8	3.88
0116-018152	245.00	2.59	0.947	72	2.9	2.54
0116-018153	245.00	2.59	0.947	72	2.9	2.54
0116-018154	245.00	2.59	0.947	72	2.9	2.54
0116-018155	245.00	2.59	0.947	72	2.9	2.54
0116-018156	245.00	2.59	0.947	72	2.9	2.54
0116-018157	243.00	2.62	0.947	72	2.9	2.54

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018158	243.00	2.62	0.947	72	2.9	2.54
0116-018159	243.00	2.62	0.947	72	2.9	2.54
0116-018160	243.00	2.62	0.947	72	2.9	2.54
0116-018161	243.00	2.62	0.947	72	2.9	2.54
0116-018162	246.67	2.59	0.954	72	1.7	2.76
0116-018163	246.67	2.59	0.954	72	1.7	2.76
0116-018164	246.67	2.59	0.954	72	1.7	2.76
0116-018165	246.67	2.59	0.954	72	1.7	2.76
0116-018166	246.67	2.59	0.954	72	1.7	2.76
0116-018167	245.33	2.71	0.954	72	1.7	2.76
0116-018168	245.33	2.71	0.954	72	1.7	2.76
0116-018169	245.33	2.71	0.954	72	1.7	2.76
0116-018170	245.33	2.71	0.954	72	1.7	2.76
0116-018171	245.33	2.71	0.954	72	1.7	2.76
0116-018172	242.67	2.69	0.953	67	3.6	3.55
0116-018173	242.67	2.69	0.953	67	3.6	3.55
0116-018174	242.67	2.69	0.953	67	3.6	3.55
0116-018175	242.67	2.69	0.953	67	3.6	3.55
0116-018176	242.67	2.69	0.953	67	3.6	3.55
0116-018177	242.00	2.61	0.953	67	3.6	3.55
0116-018178	242.00	2.61	0.953	67	3.6	3.55
0116-018179	242.00	2.61	0.953	67	3.6	3.55
0116-018180	242.00	2.61	0.953	67	3.6	3.55
0116-018181	242.00	2.61	0.953	67	3.6	3.55
0116-018182	231.33	2.56	0.952	69	2.0	2.84
0116-018183	231.33	2.56	0.952	69	2.0	2.84
0116-018184	231.33	2.56	0.952	69	2.0	2.84
0116-018185	231.33	2.56	0.952	69	2.0	2.84
0116-018189	231.33	2.56	0.952	69	2.0	2.84
0116-018190	230.00	2.70	0.952	69	2.0	2.84
0116-018191	230.00	2.70	0.952	69	2.0	2.84
0116-018192	230.00	2.70	0.952	69	2.0	2.84
0116-018193	230.00	2.70	0.952	69	2.0	2.84
0116-018194	230.00	2.70	0.952	69	2.0	2.84
0116-018195	237.33	2.65	0.951	69	2.5	2.12
0116-018196	237.33	2.65	0.951	69	2.5	2.12

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018197	237.33	2.65	0.951	69	2.5	2.12
0116-018198	237.33	2.65	0.951	69	2.5	2.12
0116-018199	237.33	2.65	0.951	69	2.5	2.12
0116-018200	236.00	2.65	0.951	69	2.5	2.12
0116-018201	236.00	2.65	0.951	69	2.5	2.12
0116-018202	236.00	2.65	0.951	69	2.5	2.12
0116-018203	236.00	2.65	0.951	69	2.5	2.12
0116-018204	236.00	2.68	0.949	69	2.5	2.12
0116-018205	230.33	2.68	0.949	69	3.9	3.87
0116-018206	230.33	2.68	0.949	69	3.9	3.87
0116-018207	230.33	2.68	0.949	69	3.9	3.87
0116-018208	230.33	2.68	0.949	69	3.9	3.87
0116-018222	235.30	2.66	0.954	70	4.7	5.78
0116-018223	235.30	2.66	0.954	70	4.7	5.78
0116-018224	235.30	2.66	0.954	70	4.7	5.78
0116-018225	235.30	2.66	0.954	70	4.7	5.78
0116-018226	235.30	2.66	0.954	70	4.7	5.78
0116-018227	235.30	2.66	0.954	70	4.7	5.78
0116-018228	235.30	2.66	0.954	70	4.7	5.78
0116-018229	235.30	2.66	0.954	70	4.7	5.78
0116-018230	235.30	2.66	0.954	70	4.7	5.78
0116-018231	235.30	2.66	0.954	70	4.7	5.78
0116-018232	240.50	2.83	0.953	70	3.2	6.55
0116-018233	240.50	2.83	0.953	70	3.2	6.55
0116-018234	240.50	2.83	0.953	70	3.2	6.55
0116-018235	240.50	2.83	0.953	70	3.2	6.55
0116-018236	240.50	2.83	0.953	70	3.2	6.55
0116-018237	240.50	2.83	0.953	70	3.2	6.55
0116-018238	240.50	2.83	0.953	70	3.2	6.55
0116-018239	240.50	2.83	0.953	70	3.2	6.55
0116-018240	240.50	2.83	0.953	70	3.2	6.55
0116-018241	240.50	2.83	0.953	70	3.2	6.55
0116-018242	238.10	2.48	0.953	70	3.1	6.22
0116-018243	238.10	2.48	0.953	70	3.1	6.22
0116-018244	238.10	2.48	0.953	70	3.1	6.22
0116-018245	238.10	2.48	0.953	70	3.1	6.22

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
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PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018246	238.10	2.48	0.953	70	3.1	6.22
0116-018247	238.10	2.48	0.953	70	3.1	6.22
0116-018248	238.10	2.48	0.953	70	3.1	6.22
0116-018249	238.10	2.48	0.953	70	3.1	6.22
0116-018250	238.10	2.48	0.953	70	3.1	6.22
0116-018251	238.10	2.48	0.953	70	3.1	6.22
0116-018252	235.20	2.79	0.952	67	4.4	1.57
0116-018253	235.20	2.79	0.952	67	4.4	1.57
0116-018254	235.20	2.79	0.952	67	4.4	1.57
0116-018255	235.20	2.79	0.952	67	4.4	1.57
0116-018256	235.20	2.79	0.952	67	4.4	1.57
0116-018257	235.20	2.79	0.952	67	4.4	1.57
0116-018258	235.20	2.79	0.952	67	4.4	1.57
0116-018259	235.20	2.79	0.952	67	4.4	1.57
0116-018260	235.20	2.79	0.952	67	4.4	1.57
0116-018261	235.20	2.79	0.952	67	4.4	1.57
0116-018262	251.80	2.61	0.953	68	3.5	1.82
0116-018263	251.80	2.61	0.953	68	3.5	1.82
0116-018264	251.80	2.61	0.953	68	3.5	1.82
0116-018265	251.80	2.61	0.953	68	3.5	1.82
0116-018266	251.80	2.61	0.953	68	3.5	1.82
0116-018267	251.80	2.61	0.953	68	3.5	1.82
0116-018268	251.80	2.61	0.953	68	3.5	1.82
0116-018269	251.80	2.61	0.953	68	3.5	1.82
0116-018270	251.80	2.61	0.953	68	3.5	1.82
0116-018271	251.80	2.61	0.953	68	3.5	1.82
0116-018272	235.60	2.63	0.954	64	3.2	3.43
0116-018273	235.60	2.63	0.954	64	3.2	3.43
0116-018274	235.60	2.63	0.954	64	3.2	3.43
0116-018275	235.60	2.63	0.954	64	3.2	3.43
0116-018276	235.60	2.63	0.954	64	3.2	3.43
0116-018277	235.60	2.63	0.954	64	3.2	3.43
0116-018278	235.60	2.63	0.954	64	3.2	3.43
0116-018279	235.60	2.63	0.954	64	3.2	3.43
0116-018280	235.60	2.63	0.954	64	3.2	3.43
0116-018281	235.60	2.63	0.954	64	3.2	3.43

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018282	243.30	2.71	0.955	73	5.6	3.1
0116-018283	243.30	2.71	0.955	73	5.6	3.1
0116-018284	243.30	2.71	0.955	73	5.6	3.1
0116-018285	243.30	2.71	0.955	73	5.6	3.1
0116-018286	243.30	2.71	0.955	73	5.6	3.1
0116-018287	243.30	2.71	0.955	73	5.6	3.1
0116-018288	243.30	2.71	0.955	73	5.6	3.1
0116-018289	243.30	2.71	0.955	73	5.6	3.1
0116-018290	243.30	2.71	0.955	73	5.6	3.1
0116-018291	243.30	2.71	0.955	73	5.6	3.1
0116-018292	242.80	2.72	0.954	74	3.5	1.2
0116-018293	242.80	2.72	0.954	74	3.5	1.2
0116-018294	242.80	2.72	0.954	74	3.5	1.2
0116-018295	242.80	2.72	0.954	74	3.5	1.2
0116-018296	242.80	2.72	0.954	74	3.5	1.2
0116-018297	242.80	2.72	0.954	74	3.5	1.2
0116-018298	242.80	2.72	0.954	74	3.5	1.2
0116-018299	242.80	2.72	0.954	74	3.5	1.2
0116-018300	242.80	2.72	0.954	74	3.5	1.2
0116-018301	242.80	2.72	0.954	74	3.5	1.2
0116-018302	233.70	2.77	0.953	69	2.5	1.49
0116-018303	233.70	2.77	0.953	69	2.5	1.49
0116-018304	233.70	2.77	0.953	69	2.5	1.49
0116-018305	233.70	2.77	0.953	69	2.5	1.49
0116-018306	233.70	2.77	0.953	69	2.5	1.49
0116-018307	233.70	2.77	0.953	69	2.5	1.49
0116-018308	233.70	2.77	0.953	69	2.5	1.49
0116-018309	233.70	2.77	0.953	69	2.5	1.49
0116-018310	233.70	2.77	0.953	69	2.5	1.49
0116-018311	233.70	2.77	0.953	69	2.5	1.49
0116-018312	233.10	2.68	0.954	72	2.5	2
0116-018313	233.10	2.68	0.954	72	2.5	2
0116-018314	233.10	2.68	0.954	72	2.5	2
0116-018315	233.10	2.68	0.954	72	2.5	2
0116-018316	233.10	2.68	0.954	72	2.5	2
0116-018317	233.10	2.68	0.954	72	2.5	2

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018318	233.10	2.68	0.954	72	2.5	2
0116-018319	233.10	2.68	0.954	72	2.5	2
0116-018320	233.10	2.68	0.954	72	2.5	2
0116-018321	233.10	2.68	0.954	72	2.5	2
0116-018322	232.80	2.66	0.951	64	2.5	1.4
0116-018323	232.80	2.66	0.951	64	2.5	1.4
0116-018324	232.80	2.66	0.951	64	2.5	1.4
0116-018325	232.80	2.66	0.951	64	2.5	1.4
0116-018326	232.80	2.66	0.951	64	2.5	1.4
0116-018327	232.80	2.66	0.951	64	2.5	1.4
0116-018328	232.80	2.66	0.951	64	2.5	1.4
0116-018329	232.80	2.66	0.951	64	2.5	1.4
0116-018330	232.80	2.66	0.951	64	2.5	1.4
0116-018331	232.80	2.66	0.951	64	2.5	1.4
0116-018332	241.00	2.90	0.950	73	1.4	2.27
0116-018333	241.00	2.90	0.950	73	1.4	2.27
0116-018334	241.00	2.90	0.950	73	1.4	2.27
0116-018335	241.00	2.90	0.950	73	1.4	2.27
0116-018336	241.00	2.90	0.950	73	1.4	2.27
0116-018337	241.00	2.90	0.950	73	1.4	2.27
0116-018338	241.00	2.90	0.950	73	1.4	2.27
0116-018339	241.00	2.90	0.950	73	1.4	2.27
0116-018340	241.00	2.90	0.950	73	1.4	2.27
0116-018341	241.00	2.90	0.950	73	1.4	2.27
0116-018342	239.60	2.71	0.954	74	1.7	1.63
0116-018343	239.60	2.71	0.954	74	1.7	1.63
0116-018344	239.60	2.71	0.954	74	1.7	1.63
0116-018345	239.60	2.71	0.954	74	1.7	1.63
0116-018346	239.60	2.71	0.954	74	1.7	1.63
0116-018347	239.60	2.71	0.954	74	1.7	1.63
0116-018348	239.60	2.71	0.954	74	1.7	1.63
0116-018349	239.60	2.71	0.954	74	1.7	1.63
0116-018350	239.60	2.71	0.954	74	1.7	1.63
0116-018351	239.60	2.71	0.954	74	1.7	1.63
0116-018352	232.50	2.80	0.955	71	5.9	4.25
0116-018353	232.50	2.80	0.955	71	5.9	4.25

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018354	232.50	2.80	0.955	71	5.9	4.25
0116-018355	232.50	2.80	0.955	71	5.9	4.25
0116-018356	232.50	2.80	0.955	71	5.9	4.25
0116-018357	232.50	2.80	0.955	71	5.9	4.25
0116-018358	232.50	2.80	0.955	71	5.9	4.25
0116-018359	232.50	2.80	0.955	71	5.9	4.25
0116-018360	232.50	2.80	0.955	71	5.9	4.25
0116-018361	232.50	2.80	0.955	71	5.9	4.25
0116-018362	236.00	2.79	0.954	66	2.2	2.84
0116-018363	236.00	2.79	0.954	66	2.2	2.84
0116-018364	236.00	2.79	0.954	66	2.2	2.84
0116-018365	236.00	2.79	0.954	66	2.2	2.84
0116-018366	236.00	2.79	0.954	66	2.2	2.84
0116-018367	236.00	2.79	0.954	66	2.2	2.84
0116-018368	236.00	2.79	0.954	66	2.2	2.84
0116-018369	236.00	2.79	0.954	66	2.2	2.84
0116-018370	236.00	2.79	0.954	66	2.2	2.84
0116-018371	236.00	2.79	0.954	66	2.2	2.84
0116-018373	234.70	2.68	0.953	72	4.5	3.72
0116-018374	234.70	2.68	0.953	72	4.5	3.72
0116-018375	234.70	2.68	0.953	72	4.5	3.72
0116-018376	234.70	2.68	0.953	72	4.5	3.72
0116-018377	234.70	2.68	0.953	72	4.5	3.72
0116-018378	234.70	2.68	0.953	72	4.5	3.72
0116-018379	234.70	2.68	0.953	72	4.5	3.72
0116-018380	234.70	2.68	0.953	72	4.5	3.72
0116-018381	234.70	2.68	0.953	72	4.5	3.72
0116-018382	234.70	2.68	0.953	72	4.5	3.72
0116-018383	237.80	2.49	0.954	71	4.9	3.25
0116-018384	237.80	2.49	0.954	71	4.9	3.25
0116-018385	237.80	2.49	0.954	71	4.9	3.25
0116-018386	237.80	2.49	0.954	71	4.9	3.25
0116-018387	237.80	2.49	0.954	71	4.9	3.25
0116-018388	237.80	2.49	0.954	71	4.9	3.25
0116-018389	237.80	2.49	0.954	71	4.9	3.25
0116-018390	237.80	2.49	0.954	71	4.9	3.25

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018391	237.80	2.49	0.954	71	4.9	3.25
0116-018392	237.80	2.50	0.954	71	4.9	3.25
0116-018393	240.00	2.50	0.952	73	3.0	2.96
0116-018394	240.00	2.50	0.952	73	3.0	2.96
0116-018395	240.00	2.50	0.952	73	3.0	2.96
0116-018396	240.00	2.50	0.952	73	3.0	2.96
0116-018397	240.00	2.50	0.952	73	3.0	2.96
0116-018407	229.67	2.66	0.952	61	1.7	1.31
0116-018408	229.67	2.66	0.952	61	1.7	1.31
0116-018409	229.67	2.66	0.952	61	1.7	1.31
0116-018410	229.67	2.66	0.952	61	1.7	1.31
0116-018415	235.33	2.70	0.954	70	5.1	4.67
0116-018416	235.33	2.70	0.954	70	5.1	4.67
0116-018417	235.33	2.70	0.954	70	5.1	4.67
0116-018418	235.33	2.70	0.954	70	5.1	4.67
0116-018419	235.33	2.70	0.954	70	5.1	4.67
0116-018420	237.67	2.65	0.954	70	5.1	4.67
0116-018421	237.67	2.65	0.954	70	5.1	4.67
0116-018422	237.67	2.65	0.954	70	5.1	4.67
0116-018423	237.67	2.65	0.954	70	5.1	4.67
0116-018424	237.67	2.65	0.954	70	5.1	4.67
0116-018425	242.67	2.70	0.953	68	6.7	1.03
0116-018426	242.67	2.70	0.953	68	6.7	1.03
0116-018427	242.67	2.70	0.953	68	6.7	1.03
0116-018428	242.67	2.70	0.953	68	6.7	1.03
0116-018429	243.67	2.70	0.953	77	4.4	4.98
0116-018430	243.67	2.66	0.952	77	4.4	4.98
0116-018431	243.67	2.66	0.952	77	4.4	4.98
0116-018432	243.67	2.66	0.952	77	4.4	4.98
0116-018433	243.67	2.66	0.952	77	4.4	4.98
0116-018434	243.67	2.66	0.952	77	4.4	4.98
0116-018435	236.67	2.85	0.952	77	4.4	4.98
0116-018436	236.67	2.85	0.952	77	4.4	4.98
0116-018437	236.67	2.85	0.952	77	4.4	4.98
0116-018438	236.67	2.85	0.952	77	4.4	4.98
0116-018439	236.67	2.85	0.952	77	4.4	4.98

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
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QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-018440	232.00	2.60	0.954	69	3.0	4.43
0116-018441	232.00	2.60	0.954	69	3.0	4.43
0116-018442	232.00	2.60	0.954	69	3.0	4.43
0116-018443	232.00	2.60	0.954	69	3.0	4.43
0116-018444	232.00	2.60	0.954	69	3.0	4.43
0116-018445	232.67	2.75	0.954	69	3.0	4.43
0116-018446	232.67	2.75	0.954	69	3.0	4.43
0116-018447	232.67	2.75	0.954	69	3.0	4.43
0116-018448	232.67	2.75	0.954	69	3.0	4.43
0116-018449	232.67	2.75	0.954	69	3.0	4.43
0116-018450	233.33	2.64	0.952	69	5.2	2.8
0116-018451	233.33	2.64	0.952	69	5.2	2.8
0116-018452	233.33	2.64	0.952	69	5.2	2.8
0116-018453	233.33	2.64	0.952	69	5.2	2.8
0116-018454	233.33	2.64	0.952	69	5.2	2.8
0116-018455	226.00	2.63	0.952	69	5.2	2.8
0116-018456	226.00	2.63	0.952	69	5.2	2.8
0116-018461	248.33	2.69	0.950	80	2.1	2.75
0116-018462	248.33	2.69	0.950	80	2.1	2.75
0116-018463	248.33	2.69	0.950	80	2.1	2.75
0116-018464	248.33	2.69	0.950	80	2.1	2.75
0116-018465	248.33	2.69	0.950	80	2.1	2.75

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
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PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027107196	9.9	333	393	87	80	123	155	164	856	0.180	1.6
2027108116	9.7	313	374	87	78	121	162	147	826	0.180	1.8
2027108119	9.6	301	396	86	78	137	197	160	777	0.180	2.3
2027125722	9.6	316	379	85	74	119	167	156	764	0.180	2.0
2027125725	8.6	276	339	78	79	116	165	167	829	0.180	1.9
2027125733	9.6	327	388	80	77	135	165	171	865	0.180	1.7
2027125739	8.8	299	362	81	78	127	168	151	869	0.180	1.7
2027125746	9.6	338	403	77	72	131	156	174	1,003	0.180	1.8
2027125759	8.8	291	338	78	77	127	161	155	873	0.180	1.7
2027127965	9.1	345	364	69	85	145	127	167	876	0.180	1.8
2027127970	8.7	302	286	69	83	115	123	155	869	0.180	1.7
2027127984	9.7	349	359	67	77	144	153	176	809	0.180	1.7
2027127991	8.9	292	297	69	83	119	126	170	860	0.180	1.7
2027128000	9.3	315	311	68	84	138	137	161	765	0.180	1.7
2027128019	8.8	324	335	63	82	127	138	161	740	0.180	1.9
2027128023	9.5	353	354	70	78	136	144	173	778	0.180	1.6

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX Daniel Vasquez APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027128024	9.5	353	354	70	78	136	144	173	778	0.180	1.6
2027128025	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128027	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128028	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128030	8.9	334	334	69	86	129	146	163	874	0.180	1.7
2027128035	9.1	336	339	71	87	128	131	157	817	0.180	1.9
2027128037	9.3	330	351	70	87	129	136	165	922	0.180	1.9
2027128039	9.3	330	351	69	87	129	136	165	922	0.180	1.9
2027128045	9.2	360	339	72	87	126	133	167	899	0.180	1.9
2027128046	9.2	360	339	72	87	126	133	167	899	0.180	1.9
2027128048	9.2	360	339	72	87	126	133	167	899	0.180	1.9
2027128049	8.5	308	319	72	91	135	128	147	771	0.180	2.4
2027128050	8.5	308	319	72	91	135	128	147	771	0.180	2.4
2027128053	9.1	316	329	70	88	130	139	163	796	0.180	2.2
2027128055	9.1	316	329	70	88	130	139	163	796	0.180	2.2
2027128057	9.3	317	351	68	84	140	150	191	901	0.180	2.0
2027128061	8.9	308	304	66	78	126	151	154	849	0.180	1.8
2027128063	8.9	308	304	66	78	126	151	154	849	0.180	1.8
2027128065	8.8	318	331	63	77	136	137	163	871	0.180	2.0
2027128066	8.8	318	331	63	77	136	137	163	871	0.180	2.0
2027128072	8.9	313	299	70	86	126	132	156	834	0.180	2.2
2027128075	9.2	324	321	73	86	127	141	150	826	0.180	2.5
2027128077	9.4	303	316	69	89	153	153	158	864	0.180	2.1
2027128079	9.4	303	316	69	89	153	153	158	864	0.180	2.1
2027133119	9.4	303	316	69	89	153	153	158	864	0.180	2.1
2027134729	9.0	316	352	73	93	140	171	164	833	0.180	2.1
2027134731	9.0	316	352	73	93	140	171	164	833	0.180	2.1
2027134732	9.7	337	352	73	89	132	150	164	813	0.180	2.0
2027134734	9.7	337	352	73	89	132	150	164	813	0.180	2.0
2027134735	9.7	337	352	73	89	132	150	164	813	0.180	2.0
2027134739	9.0	329	325	68	85	127	145	166	876	0.180	2.0
2027134741	8.5	322	345	73	89	125	124	154	807	0.180	2.0
2027134748	9.4	342	350	71	87	132	147	182	880	0.180	1.9
2027134749	9.4	342	350	71	87	132	147	182	880	0.180	1.9
2027134750	9.4	342	350	71	87	132	147	182	880	0.180	1.9
2027142456	8.2	228	252	78	90	105	120	138	583	0.180	1.9

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX Daniel Vasquez APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027142461	9.1	258	261	72	92	116	120	140	705	0.180	2.1
2027142465	9.4	286	304	71	92	124	137	135	797	0.180	1.9
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027059214	8.4	285	289	79	79	121	156	154	845	0.180	2.6
2027108062	9.3	283	389	81	78	117	169	170	865	0.180	1.9
2027108068	8.9	281	335	82	77	115	165	140	783	0.180	1.9
2027112527	8.9	297	362	84	79	121	153	157	806	0.180	1.7
2027125716	9.1	306	348	79	73	125	149	159	911	0.180	1.7
2027125732	9.6	327	388	80	77	135	165	171	865	0.180	1.7
2027125750	8.4	276	316	74	75	116	142	161	887	0.180	1.8
2027125752	9.4	321	377	84	80	126	137	172	838	0.180	1.6
2027125757	8.8	291	338	78	77	127	161	155	873	0.180	1.7
2027125758	8.8	291	338	78	77	127	161	155	873	0.180	1.7
2027125760	9.4	285	392	85	73	101	155	168	952	0.180	1.8
2027125761	9.4	285	392	85	73	101	155	168	952	0.180	1.8
2027127962	9.3	328	321	66	87	137	122	165	845	0.180	2.4
2027127966	9.1	345	364	69	85	145	127	167	876	0.180	1.8
2027127968	9.1	345	364	69	85	145	127	167	876	0.180	1.8
2027127990	8.9	292	297	69	83	119	126	170	860	0.180	1.7
2027127993	8.3	309	308	72	89	128	133	146	760	0.180	1.9
2027127995	8.3	309	308	72	89	128	133	146	760	0.180	1.9
2027127996	8.3	308	308	72	89	127	132	146	760	0.180	1.9
2027127997	9.3	315	311	68	84	138	137	161	765	0.180	1.7
2027127998	9.3	315	311	68	84	138	137	161	765	0.180	1.7
2027128004	8.4	297	314	71	83	123	141	153	799	0.180	1.7
2027128018	8.8	324	335	63	82	127	138	161	740	0.180	1.9
2027128020	8.8	324	335	63	82	127	138	161	740	0.180	1.9
2027128021	9.5	353	354	70	78	136	144	173	778	0.180	1.6
2027128022	9.5	353	354	70	78	136	144	173	778	0.180	1.6
2027128026	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128029	8.9	334	334	69	86	129	146	163	874	0.180	1.7
2027128031	8.9	334	334	69	86	129	146	163	874	0.180	1.7
2027128032	8.9	334	334	69	86	129	146	163	874	0.180	1.7
2027128034	9.1	336	339	71	87	128	131	157	817	0.180	1.9
2027128038	9.3	330	351	70	87	129	136	165	922	0.180	1.9

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX
Daniel Vasquez
APPROVED
QUALITY ASSURANCE

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027128041	9.0	326	307	73	90	151	157	146	756	0.180	2.4
2027128042	9.0	326	307	73	90	151	157	146	756	0.180	2.4
2027128047	9.2	360	339	72	87	126	133	167	899	0.180	1.9
2027128052	8.5	308	319	72	91	135	128	147	771	0.180	2.4
2027128054	9.1	316	329	70	88	130	139	163	796	0.180	2.2
2027128056	9.1	316	339	70	88	130	139	163	796	0.180	2.2
2027128062	8.9	308	304	66	78	126	151	154	849	0.180	1.8
2027128064	8.9	308	304	66	78	126	151	154	849	0.180	1.8
2027128067	8.8	318	331	63	77	136	137	163	871	0.180	2.0
2027128071	8.9	313	299	70	86	126	132	156	834	0.180	2.2
2027128073	9.2	324	321	73	86	127	141	150	826	0.180	2.5
2027128074	9.2	324	321	73	86	127	141	150	826	0.180	2.5
2027128076	9.2	324	321	73	86	127	141	150	826	0.180	2.5
2027128078	9.4	303	316	69	89	153	153	158	864	0.180	2.1
2027134730	9.0	316	352	73	93	140	171	164	833	0.180	2.1
2027134736	9.0	329	325	68	85	127	145	166	876	0.180	2.0
2027134737	9.0	329	325	68	85	127	145	166	876	0.180	2.0
2027134738	9.0	329	325	68	85	127	145	166	876	0.180	2.0
2027134740	8.5	322	345	73	89	125	124	154	807	0.180	2.0
2027134752	8.9	321	311	71	90	156	173	149	784	0.180	2.2
2027134756	9.2	327	309	73	88	154	143	177	822	0.180	1.8
2027142462	9.1	258	261	72	92	116	120	140	705	0.180	2.1

Test	12
Specification	**95**
2027107196	112
2027108116	129
2027108119	164
2027125722	142
2027125725	135
2027125733	119
2027125739	121
2027125746	126
2027125759	122
2027127965	129
2027127970	125

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027127984	123
2027127991	121
2027128000	119
2027128019	135
2027128023	111
2027128024	111
2027128025	126
2027128027	126
2027128028	126
2027128030	133
2027128035	138
2027128037	133
2027128039	133
2027128045	139
2027128046	139
2027128048	139
2027128049	176
2027128050	176
2027128053	159
2027128055	159
2027128057	140
2027128061	127
2027128063	127
2027128065	145
2027128066	145
2027128072	162
2027128075	181
2027128077	152
2027128079	152
2027133119	152
2027134729	148
2027134731	148
2027134732	145
2027134734	145
2027134735	145
2027134739	141

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2027134741	145
2027134748	134
2027134749	134
2027134750	134
2027142456	139
2027142461	148
2027142465	139
Specification	**95**
2027059214	189
2027108062	136
2027108068	134
2027112527	121
2027125716	120
2027125732	119
2027125750	128
2027125752	116
2027125757	122
2027125758	122
2027125760	132
2027125761	132
2027127962	174
2027127966	129
2027127968	129
2027127990	121
2027127993	135
2027127995	135
2027127996	135
2027127997	119
2027127998	119
2027128004	123
2027128018	135
2027128020	135
2027128021	111
2027128022	111
2027128026	126

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-36

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027128029	125
2027128031	125
2027128032	125
2027128034	138
2027128038	133
2027128041	171
2027128042	171
2027128047	139
2027128052	176
2027128054	159
2027128056	159
2027128062	127
2027128064	127
2027128067	145
2027128071	162
2027128073	181
2027128074	181
2027128076	181
2027128078	152
2027134730	148
2027134736	141
2027134737	141
2027134738	141
2027134740	145
2027134752	157
2027134756	130
2027142462	148

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659525
PO #: 604930
Weight: 210650.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006130
Seal No: 285734

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610461

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220410	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659526
PO #: 604930
Weight: 206200.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX104236
Seal No: 285733

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610460

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220410	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-017446	2022-05-14	DPC611480	2027127645	2027127950
0116-017447	2022-05-14	DPC611480	2027127951	2027127950
0116-018312	2022-05-30	DPD610460	2027142456	2027142462
0116-018420	2022-05-31	DPD610460	2027134750	2027128026
0116-018422	2022-05-31	DPD610460	2027134750	2027128026
0116-018423	2022-05-31	DPD610460	2027134750	2027128026
0116-018431	2022-06-01	DPD610460	2027128035	2027128004
0116-018432	2022-06-01	DPD610460	2027128035	2027128004
0116-018433	2022-06-01	DPD610460	2027128035	2027128004
0116-018435	2022-06-01	DPD610460	2027128027	2027128004
0116-018438	2022-06-01	DPD610460	2027128027	2027127997
0116-018439	2022-06-01	DPD610460	2027128027	2027127997
0116-018443	2022-06-01	DPD610460	2027128066	2027125757
0116-018444	2022-06-01	DPD610460	2027128066	2027125757
0116-018456	2022-06-01	DPD610460	2027128050	2027128041
0116-021981	2022-08-29	DPF610440	2027164000	2027145397
0116-021982	2022-08-29	DPF610440	2027164000	2027145397
0116-021983	2022-08-29	DPF610440	2027164000	2027145397

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

7 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-021984	2022-08-29	DPF610440	2027164000	2027145397
0116-021985	2022-08-29	DPF610440	2027164000	2027145397
0116-021986	2022-08-29	DPF610440	2027226874	2027145396
0116-021987	2022-08-29	DPF610440	2027226874	2027145396
0116-021988	2022-08-29	DPF610440	2027226874	2027145396
0116-021989	2022-08-29	DPF610440	2027226872	2027145396
0116-021990	2022-08-29	DPF610440	2027226872	2027145396
0116-021991	2022-08-29	DPF610440	2027226872	2027145396
0116-021992	2022-08-29	DPF610440	2027226872	2027145396
0116-021993	2022-08-29	DPF610440	2027226872	2027145396
0116-021994	2022-08-29	DPF610440	2027226872	2027145396
0116-021995	2022-08-29	DPF610440	2027226344	2027204566
0116-022005	2022-08-30	DPF610440	2027226344	2027204566
0116-022006	2022-08-30	DPF610440	2027226344	2027142481
0116-022007	2022-08-30	DPF610440	2027226344	2027142481
0116-022008	2022-08-30	DPF610440	2027127980	2027142481
0116-022009	2022-08-30	DPF610440	2027127980	2027142481
0116-022011	2022-08-30	DPF610440	2027127980	2027142481
0116-022012	2022-08-30	DPF610440	2027127980	2027127977
0116-022013	2022-08-30	DPF610440	2027127980	2027127977
0116-022014	2022-08-30	DPF610440	2027127963	2027127977
0116-022015	2022-08-30	DPF610440	2027127963	2027127977
0116-022016	2022-08-30	DPF610440	2027127963	2027127977
0116-022017	2022-08-30	DPF610440	2027127963	2027127977
0116-022018	2022-08-30	DPF610440	2027127963	2027128013
0116-022019	2022-08-30	DPF610440	2027164007	2027128013
0116-022020	2022-08-30	DPF610440	2027164007	2027128013

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022021	2022-08-30	DPF610440	2027164007	2027128013
0116-022022	2022-08-30	DPF610440	2027164007	2027128013
0116-022023	2022-08-30	DPF610440	2027164007	2027127973
0116-022024	2022-08-30	DPF610440	2027164007	2027127973
0116-022025	2022-08-30	DPF610440	2027127969	2027127973
0116-022026	2022-08-30	DPF610440	2027127969	2027127973
0116-022028	2022-08-30	DPF610440	2027127969	2027127973
0116-022029	2022-08-30	DPF610440	2027127969	2027142475
0116-022030	2022-08-30	DPF610440	2027127969	2027142475
0116-022031	2022-08-30	DPF610440	2027127969	2027142475
0116-022032	2022-08-30	DPF610440	2027164001	2027142475
0116-022033	2022-08-30	DPF610440	2027164001	2027128012
0116-022034	2022-08-30	DPF610440	2027164001	2027128012
0116-022035	2022-08-30	DPF610440	2027164001	2027128012
0116-022036	2022-08-30	DPF610440	2027164001	2027128012
0116-022045	2022-08-30	DPF610440	2027127964	2027128010
0116-022046	2022-08-30	DPF610440	2027127964	2027128010
0116-022047	2022-08-30	DPF610440	2027127964	2027128010
0116-022048	2022-08-30	DPF610440	2027127964	2027128010
0116-022049	2022-08-30	DPF610440	2027127964	2027128016
0116-022050	2022-08-30	DPF610440	2027127964	2027128016
0116-022051	2022-08-30	DPF610440	2027127964	2027128016
0116-022052	2022-08-30	DPF610440	2027127964	2027128016
0116-022053	2022-08-30	DPF610440	2027127964	2027128016
0116-022054	2022-08-30	DPF610440	2027128014	2027128016
0116-022055	2022-08-30	DPF610440	2027128014	2027128009
0116-022056	2022-08-30	DPF610440	2027128014	2027128009

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

7 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022057	2022-08-30	DPF610440	2027128014	2027128009
0116-022058	2022-08-30	DPF610440	2027128014	2027128009
0116-022059	2022-08-30	DPF610440	2027128014	2027128009
0116-022060	2022-08-30	DPF610440	2027128014	2027128009
0116-022061	2022-08-30	DPF610440	2027128014	2027128009
0116-022062	2022-08-30	DPF610440	2027226343	2027128009
0116-022063	2022-08-30	DPF610440	2027226343	2027128009
0116-022064	2022-08-30	DPF610440	2027226343	2027128009
0116-022065	2022-08-30	DPF610440	2027226343	2027127983
0116-022066	2022-08-30	DPF610440	2027226343	2027127983
0116-022067	2022-08-30	DPF610440	2027128007	2027127983
0116-022068	2022-08-30	DPF610440	2027128007	2027127983
0116-022069	2022-08-31	DPF610440	2027127974	2027127983
0116-022070	2022-08-31	DPF610440	2027127974	2027127983
0116-022071	2022-08-31	DPF610440	2027127974	2027127983
0116-022072	2022-08-31	DPF610440	2027127974	2027127983
0116-022073	2022-08-31	DPF610440	2027127974	2027127983
0116-022074	2022-08-31	DPF610440	2027127974	2027127983
0116-022075	2022-08-31	DPF610440	2027127974	2027127983
0116-022076	2022-08-31	DPF610440	2027127974	2027127983
0116-022077	2022-08-31	DPF610440	2027127974	2027127983
0116-022078	2022-08-31	DPF610440	2027127974	2027127983
0116-022079	2022-08-31	DPF610440	2027127974	2027127983
0116-022080	2022-08-31	DPF610440	2027127974	2027127983
0116-022081	2022-08-31	DPF610440	2027127972	2027128011
0116-022082	2022-08-31	DPF610440	2027127972	2027128011
0116-022083	2022-08-31	DPF610440	2027127972	2027128011

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SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022084	2022-08-31	DPF610440	2027127972	2027128011
0116-022085	2022-08-31	DPF610440	2027127972	2027128011
0116-022086	2022-08-31	DPF610440	2027127972	2027128011
0116-022087	2022-08-31	DPF610440	2027127987	2027128005
0116-022088	2022-08-31	DPF610440	2027127987	2027128005
0116-022089	2022-08-31	DPF610440	2027127987	2027128005
0116-022090	2022-08-31	DPF610440	2027127987	2027128005
0116-022091	2022-08-31	DPF610440	2027127987	2027128005
0116-022092	2022-08-31	DPF610440	2027127981	2027128006
0116-022093	2022-08-31	DPF610440	2027127981	2027128006
0116-022094	2022-08-31	DPF610440	2027127981	2027128006
0116-022095	2022-08-31	DPF610440	2027127981	2027128006
0116-022096	2022-08-31	DPF610440	2027127981	2027128006
0116-022251	2022-09-04	DPF610542	2027127981	2027128006
0116-022252	2022-09-04	DPF610542	2027245623	2027238674
0116-022253	2022-09-04	DPF610542	2027245623	2027238674
0116-022254	2022-09-04	DPF610542	2027245623	2027238674
0116-022255	2022-09-04	DPF610542	2027245623	2027238674
0116-022256	2022-09-04	DPF610542	2027238678	2027238675
0116-022257	2022-09-04	DPF610542	2027238678	2027238675
0116-022258	2022-09-04	DPF610542	2027238678	2027238675
0116-022259	2022-09-04	DPF610542	2027238678	2027238675
0116-022260	2022-09-04	DPF610542	2027238678	2027238675
0116-022261	2022-09-04	DPF610542	2027238678	2027238675
0116-022262	2022-09-04	DPF610542	2027238693	2027245628
0116-022263	2022-09-04	DPF610542	2027238693	2027245628
0116-022264	2022-09-04	DPF610542	2027238693	2027245628

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022265	2022-09-04	DPF610542	2027238693	2027245628
0116-022266	2022-09-04	DPF610542	2027238693	2027245628
0116-022267	2022-09-04	DPF610542	2027238694	2027238682
0116-022268	2022-09-04	DPF610542	2027238694	2027238682
0116-022269	2022-09-04	DPF610542	2027238694	2027238682
0116-022270	2022-09-04	DPF610542	2027238694	2027238682
0116-022271	2022-09-04	DPF610542	2027238694	2027238682
0116-022272	2022-09-04	DPF610542	2027238694	2027238682
0116-022273	2022-09-04	DPF610542	2027238694	2027238682
0116-022274	2022-09-04	DPF610542	2027238691	2027245637
0116-022275	2022-09-04	DPF610542	2027238691	2027245637
0116-022276	2022-09-04	DPF610542	2027238691	2027245637
0116-022277	2022-09-04	DPF610542	2027238691	2027245637
0116-022278	2022-09-04	DPF610542	2027238691	2027245637
0116-022279	2022-09-04	DPF610542	2027245630	2027245637
0116-022280	2022-09-04	DPF610542	2027245630	2027245637
0116-022281	2022-09-04	DPF610542	2027245630	2027245637
0116-022282	2022-09-04	DPF610542	2027245630	2027245637
0116-022283	2022-09-04	DPF610542	2027245630	2027245637
0116-022284	2022-09-04	DPF610542	2027245630	2027238687
0116-022285	2022-09-04	DPF610542	2027238676	2027238687
0116-022286	2022-09-04	DPF610542	2027238676	2027238687
0116-022287	2022-09-04	DPF610542	2027238676	2027238687
0116-022288	2022-09-05	DPF610542	2027238676	2027238687
0116-022289	2022-09-05	DPF610542	2027238676	2027238687
0116-022290	2022-09-05	DPF610542	2027245634	2027238685
0116-022291	2022-09-05	DPF610542	2027245634	2027238685

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022292	2022-09-05	DPF610542	2027245634	2027238685
0116-022293	2022-09-05	DPF610542	2027245634	2027238685
0116-022294	2022-09-05	DPF610542	2027245634	2027238685
0116-022295	2022-09-05	DPF610542	2027245634	2027245629
0116-022296	2022-09-05	DPF610542	2027245636	2027245629
0116-022297	2022-09-05	DPF610542	2027245636	2027245629
0116-022298	2022-09-05	DPF610542	2027245636	2027245629
0116-022299	2022-09-05	DPF610542	2027245636	2027245629
0116-022300	2022-09-05	DPF610542	2027245636	2027245629
0116-022301	2022-09-05	DPF610542	2027245636	2027245629
0116-022302	2022-09-05	DPF610542	2027245667	2027245635
0116-022303	2022-09-05	DPF610542	2027245667	2027245635
0116-022304	2022-09-05	DPF610542	2027245667	2027245635
0116-022305	2022-09-05	DPF610542	2027245667	2027245635
0116-022306	2022-09-05	DPF610542	2027245667	2027245635
0116-022307	2022-09-05	DPF610542	2027245667	2027245635
0116-022308	2022-09-05	DPF610542	2027238671	2027238668
0116-022309	2022-09-05	DPF610542	2027238671	2027238668
0116-022310	2022-09-05	DPF610542	2027238671	2027238668
0116-022311	2022-09-05	DPF610542	2027238671	2027238668
0116-022312	2022-09-05	DPF610542	2027238671	2027238668
0116-022313	2022-09-05	DPF610542	2027238670	2027238668
0116-022314	2022-09-05	DPF610542	2027238670	2027238668
0116-022315	2022-09-05	DPF610542	2027238670	2027238668
0116-022316	2022-09-05	DPF610542	2027238670	2027238668
0116-022317	2022-09-05	DPF610542	2027238670	2027238672
0116-022318	2022-09-05	DPF610542	2027238670	2027238672

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022319	2022-09-05	DPF610542	2027245626	2027238672
0116-022320	2022-09-05	DPF610542	2027245626	2027238672
0116-022326	2022-09-05	DPF610542	2027245665	2027238635
0116-022327	2022-09-05	DPF610542	2027245665	2027238635
0116-022328	2022-09-05	DPF610542	2027245665	2027238677
0116-022329	2022-09-05	DPF610542	2027245665	2027238677
0116-022330	2022-09-05	DPF610542	2027238658	2027238677
0116-022331	2022-09-05	DPF610542	2027238658	2027238677
0116-022332	2022-09-05	DPF610542	2027238658	2027238677
0116-022333	2022-09-05	DPF610542	2027238658	2027238677
0116-022334	2022-09-05	DPF610542	2027238658	2027238665
0116-022335	2022-09-05	DPF610542	2027238673	2027238665
0116-022336	2022-09-05	DPF610542	2027238673	2027238665
0116-022339	2022-09-05	DPF610542	2027238673	2027238665
0116-022340	2022-09-05	DPF610542	2027238673	2027238665
0116-022341	2022-09-06	DPF610542	2027245624	2027238686
0116-022342	2022-09-06	DPF610542	2027245624	2027238686
0116-022343	2022-09-06	DPF610542	2027245624	2027238686
0116-022344	2022-09-06	DPF610542	2027245624	2027238686
0116-022345	2022-09-06	DPF610542	2027245624	2027238686
0116-022346	2022-09-06	DPF610542	2027245624	2027238686
0116-022347	2022-09-06	DPF610542	2027238659	2027245625
0116-022348	2022-09-06	DPF610542	2027238659	2027245625
0116-022349	2022-09-06	DPF610542	2027238659	2027245625
0116-022350	2022-09-06	DPF610542	2027238659	2027245625
0116-022351	2022-09-06	DPF610542	2027238659	2027245625
0116-022352	2022-09-06	DPF610542	2027238659	2027245625

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7 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022353	2022-09-06	DPF610542	2027238659	2027245625
0116-022354	2022-09-06	DPF610542	2027238662	2027245625
0116-022355	2022-09-06	DPF610542	2027238662	2027245625
0116-022356	2022-09-06	DPF610542	2027238662	2027245625
0116-022357	2022-09-06	DPF610542	2027238662	2027245625
0116-022358	2022-09-06	DPF610542	2027238662	2027238644
0116-022359	2022-09-06	DPF610542	2027238633	2027238644
0116-022360	2022-09-06	DPF610542	2027238633	2027238644
0116-022361	2022-09-06	DPF610542	2027238633	2027238644
0116-022362	2022-09-06	DPF610542	2027238633	2027238644
0116-022363	2022-09-06	DPF610542	2027238633	2027238644
0116-022364	2022-09-06	DPF610542	2027238633	2027238628
0116-022365	2022-09-06	DPF610542	2027238639	2027238628
0116-022366	2022-09-06	DPF610542	2027238639	2027238628
0116-022367	2022-09-06	DPF610542	2027238639	2027238628
0116-022368	2022-09-06	DPF610542	2027238639	2027238628
0116-022369	2022-09-06	DPF610542	2027238639	2027238630
0116-022370	2022-09-06	DPF610542	2027238666	2027238630
0116-022371	2022-09-06	DPF610542	2027238666	2027238630
0116-022372	2022-09-06	DPF610542	2027238666	2027238630
0116-022373	2022-09-06	DPF610542	2027238666	2027238630
0116-022375	2022-09-06	DPF610542	2027238666	2027238630
0116-022376	2022-09-06	DPF610542	2027238642	2027238638
0116-022377	2022-09-06	DPF610542	2027238642	2027238638
0116-022378	2022-09-06	DPF610542	2027238642	2027238638
0116-022379	2022-09-06	DPF610542	2027238642	2027238638
0116-022380	2022-09-06	DPF610542	2027238642	2027238638

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022381	2022-09-06	DPF610542	2027238634	2027238657
0116-022382	2022-09-06	DPF610542	2027238634	2027238657
0116-022383	2022-09-06	DPF610542	2027238634	2027238657
0116-022384	2022-09-06	DPF610542	2027238634	2027238657
0116-022385	2022-09-06	DPF610542	2027238634	2027238657
0116-022386	2022-09-06	DPF610542	2027238634	2027238657
0116-022387	2022-09-06	DPF610542	2027245658	2027254211
0116-022388	2022-09-06	DPF610542	2027245658	2027254211
0116-022389	2022-09-06	DPF610542	2027245658	2027254211
0116-022390	2022-09-06	DPF610542	2027245658	2027254211
0116-022391	2022-09-06	DPF610542	2027245658	2027254211
0116-022392	2022-09-06	DPF610542	2027245647	2027245664
0116-022393	2022-09-06	DPF610542	2027245647	2027245664
0116-022394	2022-09-06	DPF610542	2027245647	2027245664
0116-022395	2022-09-06	DPF610542	2027245647	2027245664
0116-022396	2022-09-06	DPF610542	2027245647	2027245664
0116-022397	2022-09-06	DPF610542	2027245647	2027245664
0116-022403	2022-09-07	DPF610542	2027245657	2027254210
0116-022404	2022-09-07	DPF610542	2027245657	2027254210
0116-022405	2022-09-07	DPF610542	2027245657	2027254210
0116-022406	2022-09-07	DPF610542	2027245657	2027254210
0116-022407	2022-09-07	DPF610542	2027245657	2027254210
0116-022408	2022-09-07	DPF610542	2027245668	2027254212
0116-022409	2022-09-07	DPF610542	2027245668	2027254212
0116-022410	2022-09-07	DPF610542	2027245668	2027254212
0116-022411	2022-09-07	DPF610542	2027245668	2027254212
0116-022412	2022-09-07	DPF610542	2027245668	2027254212

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022413	2022-09-07	DPF610542	2027245650	2027245648
0116-022414	2022-09-07	DPF610542	2027245650	2027245648
0116-022415	2022-09-07	DPF610542	2027245650	2027245648
0116-022416	2022-09-07	DPF610542	2027245650	2027245648
0116-022427	2022-09-07	DPF610542	2027245660	2027245661
0116-022428	2022-09-07	DPF610542	2027245660	2027245661
0116-022429	2022-09-07	DPF610542	2027245660	2027245661
0116-022430	2022-09-07	DPF610542	2027245651	2027245659
0116-022431	2022-09-07	DPF610542	2027245651	2027245659
0116-022432	2022-09-07	DPF610542	2027245651	2027245659
0116-022433	2022-09-07	DPF610542	2027245651	2027245659
0116-022434	2022-09-07	DPF610542	2027245651	2027245659
0116-022435	2022-09-07	DPF610542	2027245651	2027245649
0116-022436	2022-09-07	DPF610542	2027245651	2027245649
0116-022437	2022-09-07	DPF610542	2027245651	2027245649
0116-022438	2022-09-07	DPF610542	2027245651	2027245649
0116-022440	2022-09-07	DPF610542	2027245655	2027245649
0116-022442	2022-09-07	DPF610542	2027245655	2027245641
0116-022445	2022-09-07	DPF610542	2027245654	2027245641
0116-022446	2022-09-07	DPF610542	2027245654	2027245640
0116-022447	2022-09-07	DPF610542	2027245654	2027245640
0116-022448	2022-09-07	DPF610542	2027245654	2027245640

QUANTITY (ROLLS): 283

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7 Sep 2022

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-017446	228.67	2.78	0.949	69	4.3	5.45
0116-017447	228.67	2.78	0.949	69	4.3	5.45
0116-018312	233.10	2.68	0.954	72	2.5	2
0116-018420	237.67	2.65	0.954	70	5.1	4.67
0116-018422	237.67	2.65	0.954	70	5.1	4.67
0116-018423	237.67	2.65	0.954	70	5.1	4.67
0116-018431	243.67	2.66	0.952	77	4.4	4.98
0116-018432	243.67	2.66	0.952	77	4.4	4.98
0116-018433	243.67	2.66	0.952	77	4.4	4.98
0116-018435	236.67	2.85	0.952	77	4.4	4.98
0116-018438	236.67	2.85	0.952	77	4.4	4.98
0116-018439	236.67	2.85	0.952	77	4.4	4.98
0116-018443	232.00	2.60	0.954	69	3.0	4.43
0116-018444	232.00	2.60	0.954	69	3.0	4.43
0116-018456	226.00	2.63	0.952	69	5.2	2.8
0116-021981	225.30	2.48	0.954	61	4.4	6.06
0116-021982	225.30	2.48	0.954	61	4.4	6.06
0116-021983	225.30	2.48	0.954	61	4.4	6.06
0116-021984	225.30	2.48	0.954	61	4.4	6.06
0116-021985	225.30	2.48	0.954	61	4.4	6.06
0116-021986	231.30	2.17	0.954	61	4.4	6.06
0116-021987	231.30	2.17	0.954	61	4.4	6.06
0116-021988	231.30	2.17	0.954	61	4.4	6.06
0116-021989	231.30	2.17	0.954	61	4.4	6.06
0116-021990	231.30	2.17	0.954	61	4.4	6.06

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-021991	229.30	2.42	0.953	67	2.5	1.87
0116-021992	229.30	2.42	0.953	67	2.5	1.87
0116-021993	229.30	2.42	0.953	67	2.5	1.87
0116-021994	229.30	2.42	0.953	67	2.5	1.87
0116-021995	229.30	2.42	0.953	67	2.5	1.87
0116-022005	251.20	2.31	0.954	76	5.2	4.65
0116-022006	251.20	2.31	0.954	76	5.2	4.65
0116-022007	251.20	2.31	0.954	76	5.2	4.65
0116-022008	251.20	2.31	0.954	76	5.2	4.65
0116-022009	251.20	2.31	0.954	76	5.2	4.65
0116-022011	244.70	2.23	0.954	76	5.2	4.65
0116-022012	244.70	2.23	0.954	76	5.2	4.65
0116-022013	244.70	2.23	0.954	76	5.2	4.65
0116-022014	244.70	2.23	0.954	76	5.2	4.65
0116-022015	244.70	2.23	0.954	76	5.2	4.65
0116-022016	243.80	2.23	0.950	77	1.9	3.18
0116-022017	243.80	2.23	0.950	77	1.9	3.18
0116-022018	243.80	2.23	0.950	77	1.9	3.18
0116-022019	243.80	2.23	0.950	77	1.9	3.18
0116-022020	243.80	2.23	0.950	77	1.9	3.18
0116-022021	235.00	2.21	0.950	77	1.9	3.18
0116-022022	235.00	2.21	0.950	77	1.9	3.18
0116-022023	235.00	2.21	0.950	77	1.9	3.18
0116-022024	235.00	2.21	0.950	77	1.9	3.18
0116-022025	235.00	2.21	0.950	77	1.9	3.18
0116-022026	228.60	2.24	0.952	72	2.2	1.67
0116-022028	228.60	2.24	0.952	72	2.2	1.67
0116-022029	228.60	2.24	0.952	72	2.2	1.67
0116-022030	228.60	2.24	0.952	72	2.2	1.67
0116-022031	228.60	2.24	0.952	72	2.2	1.67
0116-022032	237.50	2.24	0.952	72	2.2	1.67
0116-022033	237.50	2.24	0.952	72	2.2	1.67
0116-022034	237.50	2.24	0.952	72	2.2	1.67
0116-022035	237.50	2.24	0.952	72	2.2	1.67
0116-022036	237.50	2.24	0.952	72	2.2	1.67
0116-022045	225.00	2.28	0.948	97	3.3	2.92

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

SOLMAX APPROVED QUALITY ASSURANCE

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022046	225.00	2.28	0.948	97	3.3	2.92
0116-022047	225.00	2.28	0.948	97	3.3	2.92
0116-022048	225.00	2.28	0.948	97	3.3	2.92
0116-022049	225.00	2.28	0.948	97	3.3	2.92
0116-022050	224.30	2.28	0.948	97	3.3	2.92
0116-022051	224.30	2.28	0.948	97	3.3	2.92
0116-022052	224.30	2.28	0.948	97	3.3	2.92
0116-022053	224.30	2.28	0.948	97	3.3	2.92
0116-022054	224.30	2.28	0.948	97	3.3	2.92
0116-022055	228.00	2.27	0.948	97	3.3	2.92
0116-022056	228.00	2.27	0.948	97	3.3	2.92
0116-022057	228.00	2.27	0.948	97	3.3	2.92
0116-022058	228.00	2.27	0.948	97	3.3	2.92
0116-022059	228.00	2.27	0.948	97	3.3	2.92
0116-022060	234.00	2.20	0.948	70	2.2	1
0116-022061	234.00	2.20	0.948	70	2.2	1
0116-022062	234.00	2.20	0.948	70	2.2	1
0116-022063	234.00	2.20	0.948	70	2.2	1
0116-022064	234.00	2.20	0.948	70	2.2	1
0116-022065	234.00	2.20	0.948	70	2.2	1
0116-022066	234.00	2.20	0.948	70	2.2	1
0116-022067	234.00	2.20	0.948	70	2.2	1
0116-022068	234.00	2.20	0.948	70	2.2	1
0116-022069	234.00	2.20	0.948	70	2.2	1
0116-022070	234.00	2.20	0.948	70	2.2	1
0116-022071	234.00	2.20	0.948	70	2.2	1
0116-022072	234.00	2.20	0.948	70	2.2	1
0116-022073	234.00	2.20	0.948	70	2.2	1
0116-022074	234.00	2.20	0.948	70	2.2	1
0116-022075	234.50	2.35	0.954	72	1.9	2.45
0116-022076	234.50	2.35	0.954	72	1.9	2.45
0116-022077	234.50	2.35	0.954	72	1.9	2.45
0116-022078	234.50	2.35	0.954	72	1.9	2.45
0116-022079	234.50	2.35	0.954	72	1.9	2.45
0116-022080	234.50	2.35	0.954	72	1.9	2.45
0116-022081	234.50	2.35	0.954	72	1.9	2.45

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022082	234.50	2.35	0.954	72	1.9	2.45
0116-022083	234.50	2.35	0.954	72	1.9	2.45
0116-022084	234.50	2.35	0.954	72	1.9	2.45
0116-022085	234.50	2.35	0.954	72	1.9	2.45
0116-022086	234.50	2.35	0.954	72	1.9	2.45
0116-022087	234.50	2.35	0.954	72	1.9	2.45
0116-022088	234.50	2.35	0.954	72	1.9	2.45
0116-022089	234.50	2.35	0.954	72	1.9	2.45
0116-022090	230.90	2.28	0.952	66	2.7	2.46
0116-022091	230.90	2.28	0.952	66	2.7	2.46
0116-022092	230.90	2.28	0.952	66	2.7	2.46
0116-022093	230.90	2.28	0.952	66	2.7	2.46
0116-022094	230.90	2.28	0.952	66	2.7	2.46
0116-022095	230.90	2.23	0.952	66	2.7	2.46
0116-022096	230.90	2.23	0.952	66	2.7	2.46
0116-022251	231.20	2.96	0.958	79	2.5	5.17
0116-022252	231.20	2.96	0.958	79	2.5	5.17
0116-022253	231.20	2.96	0.958	79	2.5	5.17
0116-022254	231.20	2.96	0.958	79	2.5	5.17
0116-022255	231.20	2.96	0.958	79	2.5	5.17
0116-022256	230.30	2.77	0.958	79	2.5	5.17
0116-022257	230.30	2.77	0.958	79	2.5	5.17
0116-022258	230.30	2.77	0.958	79	2.5	5.17
0116-022259	230.30	2.77	0.958	79	2.5	5.17
0116-022260	230.30	2.77	0.958	79	2.5	5.17
0116-022261	230.40	2.74	0.955	73	3.0	2.55
0116-022262	230.40	2.74	0.955	73	3.0	2.55
0116-022263	230.40	2.74	0.955	73	3.0	2.55
0116-022264	230.40	2.74	0.955	73	3.0	2.55
0116-022265	230.40	2.74	0.955	73	3.0	2.55
0116-022266	230.70	2.64	0.955	73	3.0	2.55
0116-022267	230.70	2.64	0.955	73	3.0	2.55
0116-022268	230.70	2.64	0.955	73	3.0	2.55
0116-022269	230.70	2.64	0.955	73	3.0	2.55
0116-022270	230.70	2.64	0.955	73	3.0	2.55
0116-022271	230.60	2.81	0.956	73	1.2	2.37

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022272	230.60	2.81	0.956	73	1.2	2.37
0116-022273	230.60	2.81	0.956	73	1.2	2.37
0116-022274	230.60	2.81	0.956	73	1.2	2.37
0116-022275	230.60	2.81	0.956	73	1.2	2.37
0116-022276	226.50	2.78	0.956	73	1.2	2.37
0116-022277	226.50	2.78	0.956	73	1.2	2.37
0116-022278	226.50	2.78	0.956	73	1.2	2.37
0116-022279	226.50	2.78	0.956	73	1.2	2.37
0116-022280	226.50	2.78	0.956	73	1.2	2.37
0116-022281	228.30	2.46	0.954	78	1.9	1.96
0116-022282	228.30	2.46	0.954	78	1.9	1.96
0116-022283	228.30	2.46	0.954	78	1.9	1.96
0116-022284	228.30	2.46	0.954	78	1.9	1.96
0116-022285	228.30	2.46	0.954	78	1.9	1.96
0116-022286	227.70	2.46	0.954	78	1.9	1.96
0116-022287	227.70	2.46	0.954	78	1.9	1.96
0116-022288	227.70	2.46	0.954	78	1.9	1.96
0116-022289	227.70	2.46	0.954	78	1.9	1.96
0116-022290	227.70	2.46	0.954	78	1.9	1.96
0116-022291	228.00	2.46	0.954	78	1.9	1.96
0116-022292	228.00	2.46	0.954	78	1.9	1.96
0116-022293	228.00	2.46	0.954	78	1.9	1.96
0116-022294	228.00	2.46	0.954	78	1.9	1.96
0116-022295	228.00	2.46	0.954	78	1.9	1.96
0116-022296	224.70	2.91	0.958	77	3.5	6.33
0116-022297	224.70	2.91	0.958	77	3.5	6.33
0116-022298	224.70	2.91	0.958	77	3.5	6.33
0116-022299	224.70	2.91	0.958	77	3.5	6.33
0116-022300	224.70	2.91	0.958	77	3.5	6.33
0116-022301	222.70	2.77	0.958	77	3.5	6.33
0116-022302	222.70	2.77	0.958	77	3.5	6.33
0116-022303	222.70	2.77	0.958	77	3.5	6.33
0116-022304	222.70	2.77	0.958	77	3.5	6.33
0116-022305	222.70	2.77	0.958	77	3.5	6.33
0116-022306	222.30	2.85	0.958	77	3.5	6.33
0116-022307	222.30	2.85	0.958	77	3.5	6.33

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022308	222.30	2.85	0.958	77	3.5	6.33
0116-022309	222.30	2.85	0.958	77	3.5	6.33
0116-022310	222.30	2.85	0.958	77	3.5	6.33
0116-022311	221.30	2.69	0.954	72	2.6	4.29
0116-022312	221.30	2.69	0.954	72	2.6	4.29
0116-022313	221.30	2.69	0.954	72	2.6	4.29
0116-022314	221.30	2.69	0.954	72	2.6	4.29
0116-022315	221.30	2.69	0.954	72	2.6	4.29
0116-022316	224.00	2.69	0.954	72	2.6	4.29
0116-022317	224.00	2.69	0.954	72	2.6	4.29
0116-022318	224.00	2.69	0.954	72	2.6	4.29
0116-022319	224.00	2.69	0.954	72	2.6	4.29
0116-022320	224.00	2.69	0.954	72	2.6	4.29
0116-022326	228.30	2.73	0.953	75	3.4	2.27
0116-022327	228.30	2.73	0.953	75	3.4	2.27
0116-022328	228.30	2.73	0.953	75	3.4	2.27
0116-022329	228.30	2.73	0.953	75	3.4	2.27
0116-022330	228.30	2.73	0.953	75	3.4	2.27
0116-022331	230.50	2.80	0.953	61	5.0	4.75
0116-022332	230.50	2.80	0.953	61	5.0	4.75
0116-022333	230.50	2.80	0.953	61	5.0	4.75
0116-022334	230.50	2.80	0.953	61	5.0	4.75
0116-022335	230.50	2.80	0.953	61	5.0	4.75
0116-022336	230.70	2.92	0.953	61	5.0	4.75
0116-022339	230.70	2.92	0.953	61	5.0	4.75
0116-022340	230.70	2.92	0.953	61	5.0	4.75
0116-022341	230.70	2.92	0.953	61	5.0	4.75
0116-022342	230.70	2.92	0.953	61	5.0	4.75
0116-022343	230.70	2.92	0.953	61	5.0	4.75
0116-022344	230.70	2.41	0.953	61	5.0	4.75
0116-022345	230.70	2.41	0.953	61	5.0	4.75
0116-022346	230.70	2.41	0.953	61	5.0	4.75
0116-022347	230.70	2.41	0.953	61	5.0	4.75
0116-022348	230.70	2.41	0.953	61	5.0	4.75
0116-022349	233.00	2.94	0.953	61	5.0	4.75
0116-022350	233.00	2.94	0.953	61	5.0	4.75

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022351	233.00	2.94	0.953	61	5.0	4.75
0116-022352	233.00	2.94	0.953	61	5.0	4.75
0116-022353	233.00	2.94	0.953	61	5.0	4.75
0116-022354	222.30	2.79	0.954	68	5.4	2.96
0116-022355	222.30	2.79	0.954	68	5.4	2.96
0116-022356	222.30	2.79	0.954	68	5.4	2.96
0116-022357	222.30	2.79	0.954	68	5.4	2.96
0116-022358	222.30	2.79	0.954	68	5.4	2.96
0116-022359	226.30	2.79	0.954	68	5.4	2.96
0116-022360	226.30	2.79	0.954	68	5.4	2.96
0116-022361	226.30	2.79	0.954	68	5.4	2.96
0116-022362	226.30	2.79	0.954	68	5.4	2.96
0116-022363	226.30	2.79	0.954	68	5.4	2.96
0116-022364	224.70	2.87	0.954	68	5.4	2.96
0116-022365	224.70	2.87	0.954	68	5.4	2.96
0116-022366	224.70	2.87	0.954	68	5.4	2.96
0116-022367	224.70	2.87	0.954	68	5.4	2.96
0116-022368	224.70	2.87	0.954	68	5.4	2.96
0116-022369	229.00	2.82	0.963	67	3.4	5.35
0116-022370	229.00	2.82	0.963	67	3.4	5.35
0116-022371	229.00	2.82	0.963	67	3.4	5.35
0116-022372	229.00	2.82	0.963	67	3.4	5.35
0116-022373	229.00	2.82	0.963	67	3.4	5.35
0116-022375	219.30	2.81	0.963	67	3.4	5.35
0116-022376	219.30	2.81	0.963	67	3.4	5.35
0116-022377	219.30	2.81	0.963	67	3.4	5.35
0116-022378	219.30	2.81	0.963	67	3.4	5.35
0116-022379	219.30	2.81	0.963	67	3.4	5.35
0116-022380	226.30	2.95	0.963	67	3.4	5.35
0116-022381	226.30	2.95	0.963	67	3.4	5.35
0116-022382	226.30	2.95	0.963	67	3.4	5.35
0116-022383	226.30	2.95	0.963	67	3.4	5.35
0116-022384	226.30	2.95	0.963	67	3.4	5.35
0116-022385	225.30	2.97	0.956	66	3.7	2.04
0116-022386	225.30	2.97	0.956	66	3.7	2.04
0116-022387	225.30	2.97	0.956	66	3.7	2.04

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022388	225.30	2.97	0.956	66	3.7	2.04
0116-022389	225.30	2.97	0.956	66	3.7	2.04
0116-022390	232.30	2.92	0.956	66	3.7	2.04
0116-022391	232.30	2.92	0.956	66	3.7	2.04
0116-022392	232.30	2.92	0.956	66	3.7	2.04
0116-022393	232.30	2.92	0.956	66	3.7	2.04
0116-022394	232.30	2.92	0.956	66	3.7	2.04
0116-022395	226.30	2.62	0.956	66	3.7	2.04
0116-022396	226.30	2.62	0.956	66	3.7	2.04
0116-022397	226.30	2.62	0.956	66	3.7	2.04
0116-022403	240.70	2.92	0.950	79	2.3	2.07
0116-022404	240.70	2.92	0.950	79	2.3	2.07
0116-022405	240.70	2.92	0.950	79	2.3	2.07
0116-022406	240.70	2.92	0.950	79	2.3	2.07
0116-022407	241.30	2.92	0.950	79	2.3	2.07
0116-022408	241.30	2.92	0.950	79	2.3	2.07
0116-022409	241.30	2.92	0.950	79	2.3	2.07
0116-022410	241.30	2.92	0.950	79	2.3	2.07
0116-022411	241.30	2.92	0.950	79	2.3	2.07
0116-022412	237.00	2.92	0.950	79	2.3	2.07
0116-022413	237.00	2.92	0.950	79	2.3	2.07
0116-022414	237.00	2.92	0.950	79	2.3	2.07
0116-022415	237.00	2.92	0.950	79	2.3	2.07
0116-022416	237.00	2.92	0.950	79	2.3	2.07
0116-022427	233.70	2.68	0.952	77	2.4	2.9
0116-022428	233.70	2.68	0.952	77	2.4	2.9
0116-022429	233.70	2.68	0.952	77	2.4	2.9
0116-022430	233.70	2.68	0.952	77	2.4	2.9
0116-022431	233.70	2.68	0.952	77	2.4	2.9
0116-022432	238.70	2.69	0.955	72	2.4	2.69
0116-022433	238.70	2.69	0.955	72	2.4	2.69
0116-022434	238.70	2.69	0.955	72	2.4	2.69
0116-022435	238.70	2.69	0.955	72	2.4	2.69
0116-022436	238.70	2.69	0.955	72	2.4	2.69
0116-022437	236.30	2.72	0.955	72	2.4	2.69
0116-022438	236.30	2.72	0.955	72	2.4	2.69

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022440	236.30	2.72	0.955	72	2.4	2.69
0116-022442	236.30	2.72	0.955	72	2.4	2.69
0116-022445	237.30	2.68	0.955	72	2.4	2.69
0116-022446	237.30	2.68	0.955	72	2.4	2.69
0116-022447	237.30	2.68	0.955	72	2.4	2.69
0116-022448	237.30	2.68	0.955	72	2.4	2.69

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2

FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec⁻¹
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.0**
2027226343	8.4	282	305	83	90	115	154	158	721	0.180	1.8
2027226344	8.4	282	305	83	90	115	154	158	721	0.180	1.8

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
Specification	**95**
2027226343	138
2027226344	176

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - Transmissivity



PROJECT NUMBER: 856
REFERENCE NUMBER: SO-092691

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Test Method	Frequency		Unit
	Transmissivity	ASTM D4716	1/540,000	ft²	*(m²/sec)*

Specification: Geocomposite

Roll Number	Pressure (psf)	Gradient	Net/Composite	Transmissivity Results (m²/sec)	(gal/min/ft)	Seat Time (min)	Boundary
0116-017446	10,000	0.10	Geocomposite	1.12E-04	0.54	15	Steel plates
Geonet	10,000	0.10	Geonet	5.48E-03	26.47	15	Steel plates
0116-022279	10,000	0.10	Geocomposite	1.13E-03	5.46	15	Steel plates
Geonet	10,000	0.10	Geonet	5.24E-03	25.31	15	Steel plates
0116-022446	10,000	0.10	Geocomposite	6.48E-04	3.13	15	Steel plates
Geonet	10,000	0.10	Geonet	5.31E-03	25.65	15	Steel plates

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027127645	8.6	339	310	66	84	143	140	160	775	0.180	1.8
2027127951	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127963	9.3	328	321	66	87	137	122	165	845	0.180	2.4
2027127964	9.3	328	321	66	87	137	122	165	845	0.180	2.4
2027127969	8.7	302	286	68	78	115	123	155	869	0.180	1.7
2027127972	8.7	302	286	68	78	115	123	155	869	0.180	1.7
2027127974	8.7	298	315	69	80	116	128	146	852	0.180	1.7
2027127980	8.9	309	309	69	86	129	131	169	880	0.180	1.8
2027127981	9.7	349	359	67	77	144	153	176	809	0.180	1.7
2027127987	9.6	331	345	69	81	149	145	190	879	0.180	1.6
2027128007	8.6	315	342	72	84	126	141	149	744	0.180	2.0
2027128014	9.3	324	343	66	79	134	135	174	853	0.180	1.6
2027128027	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128035	9.1	336	339	71	87	128	131	157	817	0.180	1.9
2027128050	8.5	308	319	72	91	135	128	147	771	0.180	2.4
2027128066	8.8	318	331	63	77	136	137	163	871	0.180	2.0
2027134750	9.4	342	350	71	87	132	147	182	880	0.180	1.9
2027142456	8.2	228	252	78	90	105	120	138	583	0.180	1.9
2027164000	9.5	285	347	85	79	120	155	158	785	0.180	2.2
2027164001	9.5	285	347	85	79	120	155	158	785	0.180	2.2

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027164007	8.6	286	332	80	83	143	185	138	804	0.180	2.1
2027226872	9.3	328	374	88	86	132	162	168	857	0.180	1.9
2027226874	9.3	328	374	88	86	132	162	168	857	0.180	1.9
2027238633	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238634	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238639	8.4	241	346	94	84	108	180	145	694	0.180	2.5
2027238642	9.0	225	290	84	91	98	144	147	819	0.180	1.9
2027238658	9.3	257	366	83	86	116	165	159	833	0.180	1.7
2027238659	9.3	257	366	83	86	116	165	159	833	0.180	1.7
2027238662	9.1	244	369	82	86	108	155	164	763	0.180	2.0
2027238666	9.0	264	377	87	89	120	172	176	763	0.180	1.8
2027238670	9.5	294	398	87	85	121	160	167	812	0.180	1.9
2027238671	9.5	294	398	87	85	121	160	167	812	0.180	1.9
2027238673	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238676	8.8	264	360	78	87	122	159	176	795	0.180	2.1
2027238678	8.8	264	360	78	87	122	159	176	795	0.180	2.1
2027238691	8.6	257	344	86	88	101	161	142	774	0.180	2.1
2027238693	9.6	269	395	85	89	115	176	176	888	0.180	2.0
2027238694	9.6	269	395	85	89	115	176	176	888	0.180	2.0
2027245623	8.8	262	326	77	77	108	130	159	799	0.180	1.8
2027245624	8.8	262	326	77	77	108	130	159	799	0.180	1.8
2027245626	9.2	262	336	74	78	118	160	146	860	0.180	1.6
2027245630	8.8	279	356	75	75	111	152	164	818	0.180	1.7
2027245634	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245636	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245647	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245650	9.0	278	348	81	81	109	139	153	765	0.180	2.1
2027245651	9.0	278	348	81	81	109	139	153	765	0.180	2.1
2027245654	8.6	285	326	69	74	128	156	165	832	0.180	1.8
2027245655	8.6	285	326	69	74	128	156	165	832	0.180	1.8
2027245657	8.6	285	326	69	74	128	156	165	832	0.180	1.8
2027245658	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245660	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245665	9.3	304	321	80	81	106	132	159	726	0.180	1.8
2027245667	8.8	274	325	79	78	120	137	150	765	0.180	2.0
2027245668	8.8	274	325	79	78	120	137	150	765	0.180	2.0

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Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027125757	8.8	291	338	78	77	127	161	155	873	0.180	1.7
2027127950	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127973	8.7	298	315	69	80	116	128	146	852	0.180	1.7
2027127977	8.9	309	309	69	86	129	131	169	880	0.180	1.8
2027127983	9.7	349	359	67	77	144	153	176	809	0.180	1.7
2027127997	9.3	315	311	68	84	138	137	161	765	0.180	1.7
2027128004	8.4	297	314	71	83	123	141	153	799	0.180	1.7
2027128005	8.6	315	342	72	84	126	141	149	744	0.180	2.0
2027128006	8.6	315	342	72	84	126	141	149	744	0.180	2.0
2027128009	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128010	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128011	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128012	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128013	9.3	324	343	66	79	134	135	174	853	0.180	1.6
2027128016	9.3	324	343	66	79	134	135	174	853	0.180	1.6
2027128026	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128041	9.0	326	307	73	90	151	157	146	756	0.180	2.4
2027142462	9.1	258	261	72	92	116	120	140	705	0.180	2.1
2027142475	9.1	317	357	74	82	135	146	154	790	0.180	1.8
2027142481	8.6	312	331	73	80	131	149	154	791	0.180	1.8
2027145396	9.2	304	349	74	85	122	136	166	852	0.180	1.7
2027145397	9.2	304	349	74	85	122	136	166	852	0.180	1.7
2027204566	8.7	288	362	84	78	114	151	140	840	0.180	1.7
2027238628	8.5	259	334	93	94	103	135	170	805	0.180	2.2
2027238630	8.5	259	334	93	94	103	135	170	805	0.180	2.2
2027238635	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238638	8.4	241	346	94	84	108	180	145	694	0.180	2.5
2027238644	8.7	260	333	86	85	111	172	153	794	0.180	2.0
2027238657	9.3	257	366	83	86	116	165	159	833	0.180	1.7
2027238665	9.0	264	377	87	89	120	172	176	763	0.180	1.8
2027238668	9.5	294	398	87	85	121	160	167	812	0.180	1.9
2027238672	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238674	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238675	8.3	262	309	74	86	117	135	168	869	0.180	2.2

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027238677	8.8	264	360	78	87	122	159	176	795	0.180	2.1
2027238682	8.7	274	364	88	90	112	154	156	841	0.180	2.1
2027238685	8.8	264	336	84	87	121	174	154	843	0.180	1.9
2027238686	8.8	264	336	84	87	121	174	154	843	0.180	1.9
2027238687	8.8	264	336	84	87	121	174	154	843	0.180	1.9
2027245625	8.8	262	326	77	77	108	130	159	799	0.180	1.8
2027245628	9.2	262	336	74	78	118	160	146	860	0.180	1.6
2027245629	9.2	262	336	74	78	118	160	146	860	0.180	1.6
2027245635	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245637	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245640	9.3	294	351	80	80	138	166	160	740	0.180	1.9
2027245641	9.3	294	351	80	80	138	166	160	740	0.180	1.9
2027245648	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245649	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245659	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245661	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245664	9.3	304	321	80	81	106	132	159	726	0.180	1.8
2027254210	8.3	280	262	71	87	112	127	158	726	0.180	2.0
2027254211	8.3	280	262	71	87	112	126	138	664	0.180	2.0
2027254212	9.6	331	346	70	86	141	142	182	775	0.180	1.7

Test	12
Specification	**95**
2027127645	125
2027127951	138
2027127963	174
2027127964	174
2027127969	125
2027127972	125
2027127974	120
2027127980	132
2027127981	123
2027127987	117
2027128007	142
2027128014	115
2027128027	126

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027128035	138
2027128050	176
2027128066	145
2027134750	134
2027142456	139
2027164000	160
2027164001	160
2027164007	152
2027226872	134
2027226874	134
2027238633	165
2027238634	165
2027238639	181
2027238642	140
2027238658	121
2027238659	121
2027238662	142
2027238666	127
2027238670	136
2027238671	136
2027238673	157
2027238676	150
2027238678	150
2027238691	150
2027238693	143
2027238694	143
2027245623	126
2027245624	126
2027245626	117
2027245630	121
2027245634	114
2027245636	114
2027245647	164
2027245650	153
2027245651	153
2027245654	125

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2027245655	125
2027245657	125
2027245658	119
2027245660	119
2027245665	130
2027245667	143
2027245668	143
Specification	**95**
2027125757	122
2027127950	138
2027127973	120
2027127977	132
2027127983	123
2027127997	119
2027128004	123
2027128005	142
2027128006	142
2027128009	112
2027128010	112
2027128011	112
2027128012	112
2027128013	115
2027128016	115
2027128026	126
2027128041	171
2027142462	148
2027142475	130
2027142481	126
2027145396	118
2027145397	118
2027204566	124
2027238628	158
2027238630	158
2027238635	165
2027238638	181

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-38

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027238644	143
2027238657	121
2027238665	127
2027238668	136
2027238672	157
2027238674	157
2027238675	157
2027238677	150
2027238682	150
2027238685	134
2027238686	134
2027238687	134
2027245625	126
2027245628	117
2027245629	117
2027245635	114
2027245637	114
2027245640	135
2027245641	135
2027245648	164
2027245649	164
2027245659	119
2027245661	119
2027245664	130
2027254210	144
2027254211	144
2027254212	123

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 04/06/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80650300
PO #: 604930
Weight: 206050.000 LB
Ship Date: 04/06/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006129
Seal No: 285330

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC611480

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9538	g/cm3
Production date		20220401	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659526
PO #: 604930
Weight: 206200.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX104236
Seal No: 285733

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610460

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220410	

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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 06/19/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

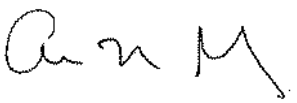
Delivery #: 80697951
PO #: 605347
Weight: 206050.000 LB
Ship Date: 06/19/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006270
Seal No: 292194

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPF610440

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9549	g/cm3
Production date		20220610	

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QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 06/19/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80697955
PO #: 605347
Weight: 206150.000 LB
Ship Date: 06/19/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX007089
Seal No: 298302

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPF610542

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220611	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-017446	2022-05-14	DPC611480	2027127645	2027127950
0116-017447	2022-05-14	DPC611480	2027127951	2027127950
0116-018312	2022-05-30	DPD610460	2027142456	2027142462
0116-018420	2022-05-31	DPD610460	2027134750	2027128026
0116-018422	2022-05-31	DPD610460	2027134750	2027128026
0116-018423	2022-05-31	DPD610460	2027134750	2027128026
0116-018431	2022-06-01	DPD610460	2027128035	2027128004
0116-018432	2022-06-01	DPD610460	2027128035	2027128004
0116-018433	2022-06-01	DPD610460	2027128035	2027128004
0116-018435	2022-06-01	DPD610460	2027128027	2027128004
0116-018438	2022-06-01	DPD610460	2027128027	2027127997
0116-018439	2022-06-01	DPD610460	2027128027	2027127997
0116-018443	2022-06-01	DPD610460	2027128066	2027125757
0116-018444	2022-06-01	DPD610460	2027128066	2027125757
0116-018456	2022-06-01	DPD610460	2027128050	2027128041
0116-021981	2022-08-29	DPF610440	2027164000	2027145397
0116-021982	2022-08-29	DPF610440	2027164000	2027145397
0116-021983	2022-08-29	DPF610440	2027164000	2027145397

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19 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-021984	2022-08-29	DPF610440	2027164000	2027145397
0116-021985	2022-08-29	DPF610440	2027164000	2027145397
0116-021986	2022-08-29	DPF610440	2027226874	2027145396
0116-021987	2022-08-29	DPF610440	2027226874	2027145396
0116-021988	2022-08-29	DPF610440	2027226874	2027145396
0116-021989	2022-08-29	DPF610440	2027226872	2027145396
0116-021990	2022-08-29	DPF610440	2027226872	2027145396
0116-021991	2022-08-29	DPF610440	2027226872	2027145396
0116-021992	2022-08-29	DPF610440	2027226872	2027145396
0116-021993	2022-08-29	DPF610440	2027226872	2027145396
0116-021994	2022-08-29	DPF610440	2027226872	2027145396
0116-021995	2022-08-29	DPF610440	2027226344	2027204566
0116-022005	2022-08-30	DPF610440	2027226344	2027204566
0116-022006	2022-08-30	DPF610440	2027226344	2027142481
0116-022007	2022-08-30	DPF610440	2027226344	2027142481
0116-022008	2022-08-30	DPF610440	2027127980	2027142481
0116-022009	2022-08-30	DPF610440	2027127980	2027142481
0116-022011	2022-08-30	DPF610440	2027127980	2027142481
0116-022012	2022-08-30	DPF610440	2027127980	2027127977
0116-022013	2022-08-30	DPF610440	2027127980	2027127977
0116-022014	2022-08-30	DPF610440	2027127963	2027127977
0116-022015	2022-08-30	DPF610440	2027127963	2027127977
0116-022016	2022-08-30	DPF610440	2027127963	2027127977
0116-022017	2022-08-30	DPF610440	2027127963	2027127977
0116-022018	2022-08-30	DPF610440	2027127963	2027128013
0116-022019	2022-08-30	DPF610440	2027164007	2027128013
0116-022020	2022-08-30	DPF610440	2027164007	2027128013

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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19 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022021	2022-08-30	DPF610440	2027164007	2027128013
0116-022022	2022-08-30	DPF610440	2027164007	2027128013
0116-022023	2022-08-30	DPF610440	2027164007	2027127973
0116-022024	2022-08-30	DPF610440	2027164007	2027127973
0116-022025	2022-08-30	DPF610440	2027127969	2027127973
0116-022026	2022-08-30	DPF610440	2027127969	2027127973
0116-022028	2022-08-30	DPF610440	2027127969	2027127973
0116-022029	2022-08-30	DPF610440	2027127969	2027142475
0116-022030	2022-08-30	DPF610440	2027127969	2027142475
0116-022031	2022-08-30	DPF610440	2027127969	2027142475
0116-022032	2022-08-30	DPF610440	2027164001	2027142475
0116-022033	2022-08-30	DPF610440	2027164001	2027128012
0116-022034	2022-08-30	DPF610440	2027164001	2027128012
0116-022035	2022-08-30	DPF610440	2027164001	2027128012
0116-022036	2022-08-30	DPF610440	2027164001	2027128012
0116-022045	2022-08-30	DPF610440	2027127964	2027128010
0116-022046	2022-08-30	DPF610440	2027127964	2027128010
0116-022047	2022-08-30	DPF610440	2027127964	2027128010
0116-022048	2022-08-30	DPF610440	2027127964	2027128010
0116-022049	2022-08-30	DPF610440	2027127964	2027128016
0116-022050	2022-08-30	DPF610440	2027127964	2027128016
0116-022051	2022-08-30	DPF610440	2027127964	2027128016
0116-022052	2022-08-30	DPF610440	2027127964	2027128016
0116-022053	2022-08-30	DPF610440	2027127964	2027128016
0116-022054	2022-08-30	DPF610440	2027128014	2027128016
0116-022055	2022-08-30	DPF610440	2027128014	2027128009
0116-022056	2022-08-30	DPF610440	2027128014	2027128009

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19 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022057	2022-08-30	DPF610440	2027128014	2027128009
0116-022058	2022-08-30	DPF610440	2027128014	2027128009
0116-022059	2022-08-30	DPF610440	2027128014	2027128009
0116-022060	2022-08-30	DPF610440	2027128014	2027128009
0116-022061	2022-08-30	DPF610440	2027128014	2027128009
0116-022062	2022-08-30	DPF610440	2027226343	2027128009
0116-022063	2022-08-30	DPF610440	2027226343	2027128009
0116-022064	2022-08-30	DPF610440	2027226343	2027128009
0116-022065	2022-08-30	DPF610440	2027226343	2027127983
0116-022066	2022-08-30	DPF610440	2027226343	2027127983
0116-022067	2022-08-30	DPF610440	2027128007	2027127983
0116-022068	2022-08-30	DPF610440	2027128007	2027127983
0116-022069	2022-08-31	DPF610440	2027127974	2027127983
0116-022070	2022-08-31	DPF610440	2027127974	2027127983
0116-022071	2022-08-31	DPF610440	2027127974	2027127983
0116-022072	2022-08-31	DPF610440	2027127974	2027127983
0116-022073	2022-08-31	DPF610440	2027127974	2027127983
0116-022074	2022-08-31	DPF610440	2027127974	2027127983
0116-022075	2022-08-31	DPF610440	2027127974	2027127983
0116-022076	2022-08-31	DPF610440	2027127974	2027127983
0116-022077	2022-08-31	DPF610440	2027127974	2027127983
0116-022078	2022-08-31	DPF610440	2027127974	2027127983
0116-022079	2022-08-31	DPF610440	2027127974	2027127983
0116-022080	2022-08-31	DPF610440	2027127974	2027127983
0116-022081	2022-08-31	DPF610440	2027127972	2027128011
0116-022082	2022-08-31	DPF610440	2027127972	2027128011
0116-022083	2022-08-31	DPF610440	2027127972	2027128011

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19 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022084	2022-08-31	DPF610440	2027127972	2027128011
0116-022085	2022-08-31	DPF610440	2027127972	2027128011
0116-022086	2022-08-31	DPF610440	2027127972	2027128011
0116-022087	2022-08-31	DPF610440	2027127987	2027128005
0116-022088	2022-08-31	DPF610440	2027127987	2027128005
0116-022089	2022-08-31	DPF610440	2027127987	2027128005
0116-022090	2022-08-31	DPF610440	2027127987	2027128005
0116-022091	2022-08-31	DPF610440	2027127987	2027128005
0116-022092	2022-08-31	DPF610440	2027127981	2027128006
0116-022093	2022-08-31	DPF610440	2027127981	2027128006
0116-022094	2022-08-31	DPF610440	2027127981	2027128006
0116-022095	2022-08-31	DPF610440	2027127981	2027128006
0116-022096	2022-08-31	DPF610440	2027127981	2027128006
0116-022251	2022-09-04	DPF610542	2027127981	2027128006
0116-022252	2022-09-04	DPF610542	2027245623	2027238674
0116-022253	2022-09-04	DPF610542	2027245623	2027238674
0116-022254	2022-09-04	DPF610542	2027245623	2027238674
0116-022255	2022-09-04	DPF610542	2027245623	2027238674
0116-022256	2022-09-04	DPF610542	2027238678	2027238675
0116-022257	2022-09-04	DPF610542	2027238678	2027238675
0116-022258	2022-09-04	DPF610542	2027238678	2027238675
0116-022259	2022-09-04	DPF610542	2027238678	2027238675
0116-022260	2022-09-04	DPF610542	2027238678	2027238675
0116-022261	2022-09-04	DPF610542	2027238678	2027238675
0116-022262	2022-09-04	DPF610542	2027238693	2027245628
0116-022263	2022-09-04	DPF610542	2027238693	2027245628
0116-022264	2022-09-04	DPF610542	2027238693	2027245628

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19 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022265	2022-09-04	DPF610542	2027238693	2027245628
0116-022266	2022-09-04	DPF610542	2027238693	2027245628
0116-022267	2022-09-04	DPF610542	2027238694	2027238682
0116-022268	2022-09-04	DPF610542	2027238694	2027238682
0116-022269	2022-09-04	DPF610542	2027238694	2027238682
0116-022270	2022-09-04	DPF610542	2027238694	2027238682
0116-022271	2022-09-04	DPF610542	2027238694	2027238682
0116-022272	2022-09-04	DPF610542	2027238694	2027238682
0116-022273	2022-09-04	DPF610542	2027238694	2027238682
0116-022274	2022-09-04	DPF610542	2027238691	2027245637
0116-022275	2022-09-04	DPF610542	2027238691	2027245637
0116-022276	2022-09-04	DPF610542	2027238691	2027245637
0116-022277	2022-09-04	DPF610542	2027238691	2027245637
0116-022278	2022-09-04	DPF610542	2027238691	2027245637
0116-022279	2022-09-04	DPF610542	2027245630	2027245637
0116-022280	2022-09-04	DPF610542	2027245630	2027245637
0116-022281	2022-09-04	DPF610542	2027245630	2027245637
0116-022282	2022-09-04	DPF610542	2027245630	2027245637
0116-022283	2022-09-04	DPF610542	2027245630	2027245637
0116-022284	2022-09-04	DPF610542	2027245630	2027238687
0116-022285	2022-09-04	DPF610542	2027238676	2027238687
0116-022286	2022-09-04	DPF610542	2027238676	2027238687
0116-022287	2022-09-04	DPF610542	2027238676	2027238687
0116-022288	2022-09-05	DPF610542	2027238676	2027238687
0116-022289	2022-09-05	DPF610542	2027238676	2027238687
0116-022290	2022-09-05	DPF610542	2027245634	2027238685
0116-022291	2022-09-05	DPF610542	2027245634	2027238685

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19 Sep 2022

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022292	2022-09-05	DPF610542	2027245634	2027238685
0116-022293	2022-09-05	DPF610542	2027245634	2027238685
0116-022294	2022-09-05	DPF610542	2027245634	2027238685
0116-022295	2022-09-05	DPF610542	2027245634	2027245629
0116-022296	2022-09-05	DPF610542	2027245636	2027245629
0116-022297	2022-09-05	DPF610542	2027245636	2027245629
0116-022298	2022-09-05	DPF610542	2027245636	2027245629
0116-022299	2022-09-05	DPF610542	2027245636	2027245629
0116-022300	2022-09-05	DPF610542	2027245636	2027245629
0116-022301	2022-09-05	DPF610542	2027245636	2027245629
0116-022302	2022-09-05	DPF610542	2027245667	2027245635
0116-022303	2022-09-05	DPF610542	2027245667	2027245635
0116-022304	2022-09-05	DPF610542	2027245667	2027245635
0116-022305	2022-09-05	DPF610542	2027245667	2027245635
0116-022306	2022-09-05	DPF610542	2027245667	2027245635
0116-022307	2022-09-05	DPF610542	2027245667	2027245635
0116-022308	2022-09-05	DPF610542	2027238671	2027238668
0116-022309	2022-09-05	DPF610542	2027238671	2027238668
0116-022310	2022-09-05	DPF610542	2027238671	2027238668
0116-022311	2022-09-05	DPF610542	2027238671	2027238668
0116-022312	2022-09-05	DPF610542	2027238671	2027238668
0116-022313	2022-09-05	DPF610542	2027238670	2027238668
0116-022314	2022-09-05	DPF610542	2027238670	2027238668
0116-022315	2022-09-05	DPF610542	2027238670	2027238668
0116-022316	2022-09-05	DPF610542	2027238670	2027238668
0116-022317	2022-09-05	DPF610542	2027238670	2027238672
0116-022318	2022-09-05	DPF610542	2027238670	2027238672

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022319	2022-09-05	DPF610542	2027245626	2027238672
0116-022320	2022-09-05	DPF610542	2027245626	2027238672
0116-022326	2022-09-05	DPF610542	2027245665	2027238635
0116-022327	2022-09-05	DPF610542	2027245665	2027238635
0116-022328	2022-09-05	DPF610542	2027245665	2027238677
0116-022329	2022-09-05	DPF610542	2027245665	2027238677
0116-022330	2022-09-05	DPF610542	2027238658	2027238677
0116-022331	2022-09-05	DPF610542	2027238658	2027238677
0116-022332	2022-09-05	DPF610542	2027238658	2027238677
0116-022333	2022-09-05	DPF610542	2027238658	2027238677
0116-022334	2022-09-05	DPF610542	2027238658	2027238665
0116-022335	2022-09-05	DPF610542	2027238673	2027238665
0116-022336	2022-09-05	DPF610542	2027238673	2027238665
0116-022339	2022-09-05	DPF610542	2027238673	2027238665
0116-022340	2022-09-05	DPF610542	2027238673	2027238665
0116-022341	2022-09-06	DPF610542	2027245624	2027238686
0116-022342	2022-09-06	DPF610542	2027245624	2027238686
0116-022343	2022-09-06	DPF610542	2027245624	2027238686
0116-022344	2022-09-06	DPF610542	2027245624	2027238686
0116-022345	2022-09-06	DPF610542	2027245624	2027238686
0116-022346	2022-09-06	DPF610542	2027245624	2027238686
0116-022347	2022-09-06	DPF610542	2027238659	2027245625
0116-022348	2022-09-06	DPF610542	2027238659	2027245625
0116-022349	2022-09-06	DPF610542	2027238659	2027245625
0116-022350	2022-09-06	DPF610542	2027238659	2027245625
0116-022351	2022-09-06	DPF610542	2027238659	2027245625
0116-022352	2022-09-06	DPF610542	2027238659	2027245625

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022353	2022-09-06	DPF610542	2027238659	2027245625
0116-022354	2022-09-06	DPF610542	2027238662	2027245625
0116-022355	2022-09-06	DPF610542	2027238662	2027245625
0116-022356	2022-09-06	DPF610542	2027238662	2027245625
0116-022357	2022-09-06	DPF610542	2027238662	2027245625
0116-022358	2022-09-06	DPF610542	2027238662	2027238644
0116-022359	2022-09-06	DPF610542	2027238633	2027238644
0116-022360	2022-09-06	DPF610542	2027238633	2027238644
0116-022361	2022-09-06	DPF610542	2027238633	2027238644
0116-022362	2022-09-06	DPF610542	2027238633	2027238644
0116-022363	2022-09-06	DPF610542	2027238633	2027238644
0116-022364	2022-09-06	DPF610542	2027238633	2027238628
0116-022365	2022-09-06	DPF610542	2027238639	2027238628
0116-022366	2022-09-06	DPF610542	2027238639	2027238628
0116-022367	2022-09-06	DPF610542	2027238639	2027238628
0116-022368	2022-09-06	DPF610542	2027238639	2027238628
0116-022369	2022-09-06	DPF610542	2027238639	2027238630
0116-022370	2022-09-06	DPF610542	2027238666	2027238630
0116-022371	2022-09-06	DPF610542	2027238666	2027238630
0116-022372	2022-09-06	DPF610542	2027238666	2027238630
0116-022373	2022-09-06	DPF610542	2027238666	2027238630
0116-022375	2022-09-06	DPF610542	2027238666	2027238630
0116-022376	2022-09-06	DPF610542	2027238642	2027238638
0116-022377	2022-09-06	DPF610542	2027238642	2027238638
0116-022378	2022-09-06	DPF610542	2027238642	2027238638
0116-022379	2022-09-06	DPF610542	2027238642	2027238638
0116-022380	2022-09-06	DPF610542	2027238642	2027238638

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SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022381	2022-09-06	DPF610542	2027238634	2027238657
0116-022382	2022-09-06	DPF610542	2027238634	2027238657
0116-022383	2022-09-06	DPF610542	2027238634	2027238657
0116-022384	2022-09-06	DPF610542	2027238634	2027238657
0116-022385	2022-09-06	DPF610542	2027238634	2027238657
0116-022386	2022-09-06	DPF610542	2027238634	2027238657
0116-022387	2022-09-06	DPF610542	2027245658	2027254211
0116-022388	2022-09-06	DPF610542	2027245658	2027254211
0116-022389	2022-09-06	DPF610542	2027245658	2027254211
0116-022390	2022-09-06	DPF610542	2027245658	2027254211
0116-022391	2022-09-06	DPF610542	2027245658	2027254211
0116-022392	2022-09-06	DPF610542	2027245647	2027245664
0116-022393	2022-09-06	DPF610542	2027245647	2027245664
0116-022394	2022-09-06	DPF610542	2027245647	2027245664
0116-022395	2022-09-06	DPF610542	2027245647	2027245664
0116-022396	2022-09-06	DPF610542	2027245647	2027245664
0116-022397	2022-09-06	DPF610542	2027245647	2027245664
0116-022403	2022-09-07	DPF610542	2027245657	2027254210
0116-022404	2022-09-07	DPF610542	2027245657	2027254210
0116-022405	2022-09-07	DPF610542	2027245657	2027254210
0116-022406	2022-09-07	DPF610542	2027245657	2027254210
0116-022407	2022-09-07	DPF610542	2027245657	2027254210
0116-022408	2022-09-07	DPF610542	2027245668	2027254212
0116-022409	2022-09-07	DPF610542	2027245668	2027254212
0116-022410	2022-09-07	DPF610542	2027245668	2027254212
0116-022411	2022-09-07	DPF610542	2027245668	2027254212
0116-022412	2022-09-07	DPF610542	2027245668	2027254212

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022413	2022-09-07	DPF610542	2027245650	2027245648
0116-022414	2022-09-07	DPF610542	2027245650	2027245648
0116-022415	2022-09-07	DPF610542	2027245650	2027245648
0116-022416	2022-09-07	DPF610542	2027245650	2027245648
0116-022427	2022-09-07	DPF610542	2027245660	2027245661
0116-022428	2022-09-07	DPF610542	2027245660	2027245661
0116-022429	2022-09-07	DPF610542	2027245660	2027245661
0116-022430	2022-09-07	DPF610542	2027245651	2027245659
0116-022431	2022-09-07	DPF610542	2027245651	2027245659
0116-022432	2022-09-07	DPF610542	2027245651	2027245659
0116-022433	2022-09-07	DPF610542	2027245651	2027245659
0116-022434	2022-09-07	DPF610542	2027245651	2027245659
0116-022435	2022-09-07	DPF610542	2027245651	2027245649
0116-022436	2022-09-07	DPF610542	2027245651	2027245649
0116-022437	2022-09-07	DPF610542	2027245651	2027245649
0116-022438	2022-09-07	DPF610542	2027245651	2027245649
0116-022440	2022-09-07	DPF610542	2027245655	2027245649
0116-022442	2022-09-07	DPF610542	2027245655	2027245641
0116-022445	2022-09-07	DPF610542	2027245654	2027245641
0116-022446	2022-09-07	DPF610542	2027245654	2027245640
0116-022447	2022-09-07	DPF610542	2027245654	2027245640
0116-022448	2022-09-07	DPF610542	2027245654	2027245640
0116-022449	2022-09-07	DPF610542	2027245654	2027245640
0116-022450	2022-09-07	DPF610542	2027245654	2027245640
0116-022451	2022-09-07	DPF610542	2027245653	2027245640
0116-022453	2022-09-07	DPF610542	2027245653	2027245638
0116-022454	2022-09-07	DPF610542	2027245653	2027245638

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022455	2022-09-07	DPF610542	2027245653	2027245638	
0116-022458	2022-09-07	DPF610542	2027245646	2027245669	
0116-022459	2022-09-07	DPF610542	2027245646	2027245669	
0116-022462	2022-09-07	DPF610542	2027245633	2027245669	
0116-022463	2022-09-07	DPF610542	2027245633	2027245669	
0116-022464	2022-09-07	DPF610542	2027245633	2027245669	
0116-022467	2022-09-08	DPF610542	2027245633	2027245669	
0116-022473	2022-09-08	DPF610542	2027245639	2027245663	
0116-022474	2022-09-08	DPF610542	2027245639	2027245663	
0116-022475	2022-09-08	DPF610542	2027245639	2027245663	
0116-022476	2022-09-08	DPF610542	2027245639	2027245663	
0116-022477	2022-09-08	DPF610542	2027245632	2027245643	
0116-022478	2022-09-08	DPF610542	2027245632	2027245643	
0116-022479	2022-09-08	DPF610542	2027245632	2027245643	
0116-022480	2022-09-08	DPF610542	2027245632	2027245643	
0116-022481	2022-09-08	DPF610542	2027245632	2027245643	
0116-022482	2022-09-08	DPF610542	2027244848	2027245643	
0116-022483	2022-09-08	DPF610542	2027244848	2027254225	
0116-022484	2022-09-08	DPF610542	2027244848	2027254225	
0116-022485	2022-09-08	DPF610542	2027244848	2027254225	
0116-022486	2022-09-08	DPF610542	2027244848	2027254225	
0116-022487	2022-09-08	DPF610542	2027244848	2027254225	
0116-022493	2022-09-08	DPF610542	2027245615	2027254224	
0116-022494	2022-09-08	DPF610542	2027245615	2027254224	
0116-022495	2022-09-08	DPF610542	2027245615	2027254224	
0116-022496	2022-09-08	DPF610542	2027245615	2027254224	
0116-022497	2022-09-08	DPF610542	2027245615	2027254224	

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022498	2022-09-08	DPF610542	2027245615	2027255387
0116-022499	2022-09-08	DPF610542	2027255368	2027255387
0116-022500	2022-09-08	DPF610542	2027255368	2027255387
0116-022501	2022-09-08	DPF610542	2027255368	2027255387
0116-022502	2022-09-08	DPF610542	2027255368	2027255387
0116-022503	2022-09-08	DPF610542	2027255368	2027255387
0116-022504	2022-09-08	DPF610542	2027245666	2027255388
0116-022505	2022-09-08	DPF610542	2027245666	2027255388
0116-022506	2022-09-08	DPF610542	2027245666	2027255388
0116-022507	2022-09-08	DPF610542	2027245666	2027255388
0116-022508	2022-09-08	DPF610542	2027245666	2027255388
0116-022509	2022-09-08	DPF610542	2027245666	2027245644
0116-022510	2022-09-08	DPF610542	2027255376	2027245644
0116-022511	2022-09-08	DPF610542	2027255376	2027245644
0116-022512	2022-09-08	DPF610542	2027255376	2027245644
0116-022513	2022-09-08	DPF610542	2027255376	2027245644
0116-022514	2022-09-08	DPF610542	2027255376	2027245644
0116-022515	2022-09-08	DPF610542	2027255374	2027255370
0116-022516	2022-09-08	DPF610542	2027255374	2027255370
0116-022517	2022-09-08	DPF610542	2027255374	2027255370
0116-022518	2022-09-08	DPF610542	2027255374	2027255370
0116-022519	2022-09-08	DPF610542	2027255374	2027255370
0116-022520	2022-09-08	DPF610542	2027255374	2027255370
0116-022521	2022-09-08	DPF610542	2027255374	2027255370
0116-022522	2022-09-08	DPF610542	2027255384	2027255377
0116-022523	2022-09-08	DPF610542	2027255384	2027255377
0116-022524	2022-09-08	DPF610542	2027255384	2027255377

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022525	2022-09-08	DPF610542	2027255384	2027255377	
0116-022526	2022-09-08	DPF610542	2027255384	2027255377	
0116-022527	2022-09-08	DPF610542	2027255383	2027255386	
0116-022528	2022-09-08	DPF610542	2027255383	2027255386	
0116-022529	2022-09-08	DPF610542	2027255383	2027255386	
0116-022530	2022-09-08	DPF610542	2027255383	2027255386	
0116-022531	2022-09-08	DPF610542	2027255383	2027255386	
0116-022532	2022-09-08	DPF610542	2027255383	2027255386	
0116-022533	2022-09-08	DPF610542	2027238650	2027255385	
0116-022534	2022-09-09	DPF610542	2027238650	2027255385	
0116-022535	2022-09-09	DPF610542	2027238650	2027255385	
0116-022536	2022-09-09	DPF610542	2027238650	2027255385	
0116-022537	2022-09-09	DPF610542	2027238650	2027255385	
0116-022538	2022-09-09	DPF610542	2027238650	2027255385	
0116-022539	2022-09-09	DPF610542	2027238650	2027255380	
0116-022540	2022-09-09	DPF610542	2027238650	2027255380	
0116-022541	2022-09-09	DPF610542	2027238650	2027255380	
0116-022542	2022-09-09	DPF610542	2027238650	2027255380	
0116-022543	2022-09-09	DPF610542	2027255365	2027255380	
0116-022544	2022-09-09	DPF610542	2027255365	2027245609	
0116-022545	2022-09-09	DPF610542	2027255365	2027245609	
0116-022546	2022-09-09	DPF610542	2027255365	2027245609	
0116-022547	2022-09-09	DPF610542	2027255365	2027245609	
0116-022548	2022-09-09	DPF610542	2027238617	2027245609	
0116-022549	2022-09-09	DPF610542	2027238617	2027245609	
0116-022550	2022-09-09	DPF610542	2027238617	2027245605	
0116-022551	2022-09-09	DPF610542	2027238617	2027245605	

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022552	2022-09-09	DPF610542	2027238617	2027245605
0116-022553	2022-09-09	DPF610542	2027238617	2027245605
0116-022554	2022-09-09	DPF610542	2027238617	2027245605
0116-022555	2022-09-09	DPF610542	2027238617	2027245605
0116-022556	2022-09-09	DPF610542	2027238617	2027245605
0116-022557	2022-09-09	DPF610542	2027238617	2027245605
0116-022558	2022-09-09	DPF610542	2027238619	2027255372
0116-022559	2022-09-09	DPF610542	2027238619	2027255372
0116-022560	2022-09-09	DPF610542	2027238619	2027255372
0116-022561	2022-09-09	DPF610542	2027238619	2027255372
0116-022562	2022-09-09	DPF610542	2027238619	2027255372
0116-022563	2022-09-09	DPF610542	2027238620	2027255378
0116-022564	2022-09-09	DPF610542	2027238620	2027255378
0116-022565	2022-09-09	DPF610542	2027238620	2027255378
0116-022566	2022-09-09	DPF610542	2027238620	2027255378
0116-022567	2022-09-09	DPF610542	2027238620	2027255378
0116-022568	2022-09-09	DPF610542	2027238620	2027255378
0116-022569	2022-09-09	DPF610542	2027238618	2027255382
0116-022570	2022-09-09	DPF610542	2027238618	2027255382
0116-022571	2022-09-09	DPF610542	2027238618	2027255382
0116-022572	2022-09-09	DPF610542	2027255366	2027202670
0116-022573	2022-09-09	DPF610542	2027255366	2027202670
0116-022574	2022-09-09	DPF610542	2027255366	2027202670
0116-022575	2022-09-09	DPF610542	2027255366	2027202670
0116-022576	2022-09-09	DPF610542	2027255366	2027202670
0116-022577	2022-09-09	DPF610542	2027202650	2027255350
0116-022578	2022-09-09	DPF610542	2027202650	2027255350

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-022579	2022-09-09	DPF610542	2027202650	2027255350
0116-022585	2022-09-09	DPF610542	2027202650	2027255350
0116-022586	2022-09-09	DPF610542	2027202650	2027255350
0116-022587	2022-09-09	DPF610542	2027202650	2027255350
0116-022588	2022-09-09	DPF610542	2027238632	2027238631
0116-022589	2022-09-09	DPF610542	2027238632	2027238631
0116-022590	2022-09-09	DPF610542	2027238632	2027238631
0116-022591	2022-09-09	DPF610542	2027238632	2027238631
0116-022592	2022-09-09	DPF610542	2027238632	2027238631
0116-022593	2022-09-09	DPF610542	2027238632	2027238631
0116-022594	2022-09-09	DPF610542	2027238632	2027238631
0116-022595	2022-09-09	DPF610542	2027238623	2027238629
0116-022596	2022-09-09	DPF610542	2027238623	2027238629
0116-022597	2022-09-09	DPF610542	2027238623	2027238629

QUANTITY (ROLLS): 410

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19 Sep 2022

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cc
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-017446	228.67	2.78	0.949	69	4.3	5.45
0116-017447	228.67	2.78	0.949	69	4.3	5.45
0116-018312	233.10	2.68	0.954	72	2.5	2
0116-018420	237.67	2.65	0.954	70	5.1	4.67
0116-018422	237.67	2.65	0.954	70	5.1	4.67
0116-018423	237.67	2.65	0.954	70	5.1	4.67
0116-018431	243.67	2.66	0.952	77	4.4	4.98
0116-018432	243.67	2.66	0.952	77	4.4	4.98
0116-018433	243.67	2.66	0.952	77	4.4	4.98
0116-018435	236.67	2.85	0.952	77	4.4	4.98
0116-018438	236.67	2.85	0.952	77	4.4	4.98
0116-018439	236.67	2.85	0.952	77	4.4	4.98
0116-018443	232.00	2.60	0.954	69	3.0	4.43
0116-018444	232.00	2.60	0.954	69	3.0	4.43
0116-018456	226.00	2.63	0.952	69	5.2	2.8
0116-021981	225.30	2.48	0.954	61	4.4	6.06
0116-021982	225.30	2.48	0.954	61	4.4	6.06
0116-021983	225.30	2.48	0.954	61	4.4	6.06
0116-021984	225.30	2.48	0.954	61	4.4	6.06
0116-021985	225.30	2.48	0.954	61	4.4	6.06
0116-021986	231.30	2.17	0.954	61	4.4	6.06
0116-021987	231.30	2.17	0.954	61	4.4	6.06
0116-021988	231.30	2.17	0.954	61	4.4	6.06
0116-021989	231.30	2.17	0.954	61	4.4	6.06
0116-021990	231.30	2.17	0.954	61	4.4	6.06

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-021991	229.30	2.42	0.953	67	2.5	1.87
0116-021992	229.30	2.42	0.953	67	2.5	1.87
0116-021993	229.30	2.42	0.953	67	2.5	1.87
0116-021994	229.30	2.42	0.953	67	2.5	1.87
0116-021995	229.30	2.42	0.953	67	2.5	1.87
0116-022005	251.20	2.31	0.954	76	5.2	4.65
0116-022006	251.20	2.31	0.954	76	5.2	4.65
0116-022007	251.20	2.31	0.954	76	5.2	4.65
0116-022008	251.20	2.31	0.954	76	5.2	4.65
0116-022009	251.20	2.31	0.954	76	5.2	4.65
0116-022011	244.70	2.23	0.954	76	5.2	4.65
0116-022012	244.70	2.23	0.954	76	5.2	4.65
0116-022013	244.70	2.23	0.954	76	5.2	4.65
0116-022014	244.70	2.23	0.954	76	5.2	4.65
0116-022015	244.70	2.23	0.954	76	5.2	4.65
0116-022016	243.80	2.23	0.950	77	1.9	3.18
0116-022017	243.80	2.23	0.950	77	1.9	3.18
0116-022018	243.80	2.23	0.950	77	1.9	3.18
0116-022019	243.80	2.23	0.950	77	1.9	3.18
0116-022020	243.80	2.23	0.950	77	1.9	3.18
0116-022021	235.00	2.21	0.950	77	1.9	3.18
0116-022022	235.00	2.21	0.950	77	1.9	3.18
0116-022023	235.00	2.21	0.950	77	1.9	3.18
0116-022024	235.00	2.21	0.950	77	1.9	3.18
0116-022025	235.00	2.21	0.950	77	1.9	3.18
0116-022026	228.60	2.24	0.952	72	2.2	1.67
0116-022028	228.60	2.24	0.952	72	2.2	1.67
0116-022029	228.60	2.24	0.952	72	2.2	1.67
0116-022030	228.60	2.24	0.952	72	2.2	1.67
0116-022031	228.60	2.24	0.952	72	2.2	1.67
0116-022032	237.50	2.24	0.952	72	2.2	1.67
0116-022033	237.50	2.24	0.952	72	2.2	1.67
0116-022034	237.50	2.24	0.952	72	2.2	1.67
0116-022035	237.50	2.24	0.952	72	2.2	1.67
0116-022036	237.50	2.24	0.952	72	2.2	1.67
0116-022045	225.00	2.28	0.948	97	3.3	2.92

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022046	225.00	2.28	0.948	97	3.3	2.92
0116-022047	225.00	2.28	0.948	97	3.3	2.92
0116-022048	225.00	2.28	0.948	97	3.3	2.92
0116-022049	225.00	2.28	0.948	97	3.3	2.92
0116-022050	224.30	2.28	0.948	97	3.3	2.92
0116-022051	224.30	2.28	0.948	97	3.3	2.92
0116-022052	224.30	2.28	0.948	97	3.3	2.92
0116-022053	224.30	2.28	0.948	97	3.3	2.92
0116-022054	224.30	2.28	0.948	97	3.3	2.92
0116-022055	228.00	2.27	0.948	97	3.3	2.92
0116-022056	228.00	2.27	0.948	97	3.3	2.92
0116-022057	228.00	2.27	0.948	97	3.3	2.92
0116-022058	228.00	2.27	0.948	97	3.3	2.92
0116-022059	228.00	2.27	0.948	97	3.3	2.92
0116-022060	234.00	2.20	0.948	70	2.2	1
0116-022061	234.00	2.20	0.948	70	2.2	1
0116-022062	234.00	2.20	0.948	70	2.2	1
0116-022063	234.00	2.20	0.948	70	2.2	1
0116-022064	234.00	2.20	0.948	70	2.2	1
0116-022065	234.00	2.20	0.948	70	2.2	1
0116-022066	234.00	2.20	0.948	70	2.2	1
0116-022067	234.00	2.20	0.948	70	2.2	1
0116-022068	234.00	2.20	0.948	70	2.2	1
0116-022069	234.00	2.20	0.948	70	2.2	1
0116-022070	234.00	2.20	0.948	70	2.2	1
0116-022071	234.00	2.20	0.948	70	2.2	1
0116-022072	234.00	2.20	0.948	70	2.2	1
0116-022073	234.00	2.20	0.948	70	2.2	1
0116-022074	234.00	2.20	0.948	70	2.2	1
0116-022075	234.50	2.35	0.954	72	1.9	2.45
0116-022076	234.50	2.35	0.954	72	1.9	2.45
0116-022077	234.50	2.35	0.954	72	1.9	2.45
0116-022078	234.50	2.35	0.954	72	1.9	2.45
0116-022079	234.50	2.35	0.954	72	1.9	2.45
0116-022080	234.50	2.35	0.954	72	1.9	2.45
0116-022081	234.50	2.35	0.954	72	1.9	2.45

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022082	234.50	2.35	0.954	72	1.9	2.45
0116-022083	234.50	2.35	0.954	72	1.9	2.45
0116-022084	234.50	2.35	0.954	72	1.9	2.45
0116-022085	234.50	2.35	0.954	72	1.9	2.45
0116-022086	234.50	2.35	0.954	72	1.9	2.45
0116-022087	234.50	2.35	0.954	72	1.9	2.45
0116-022088	234.50	2.35	0.954	72	1.9	2.45
0116-022089	234.50	2.35	0.954	72	1.9	2.45
0116-022090	230.90	2.28	0.952	66	2.7	2.46
0116-022091	230.90	2.28	0.952	66	2.7	2.46
0116-022092	230.90	2.28	0.952	66	2.7	2.46
0116-022093	230.90	2.28	0.952	66	2.7	2.46
0116-022094	230.90	2.28	0.952	66	2.7	2.46
0116-022095	230.90	2.23	0.952	66	2.7	2.46
0116-022096	230.90	2.23	0.952	66	2.7	2.46
0116-022251	231.20	2.96	0.958	79	2.5	5.17
0116-022252	231.20	2.96	0.958	79	2.5	5.17
0116-022253	231.20	2.96	0.958	79	2.5	5.17
0116-022254	231.20	2.96	0.958	79	2.5	5.17
0116-022255	231.20	2.96	0.958	79	2.5	5.17
0116-022256	230.30	2.77	0.958	79	2.5	5.17
0116-022257	230.30	2.77	0.958	79	2.5	5.17
0116-022258	230.30	2.77	0.958	79	2.5	5.17
0116-022259	230.30	2.77	0.958	79	2.5	5.17
0116-022260	230.30	2.77	0.958	79	2.5	5.17
0116-022261	230.40	2.74	0.955	73	3.0	2.55
0116-022262	230.40	2.74	0.955	73	3.0	2.55
0116-022263	230.40	2.74	0.955	73	3.0	2.55
0116-022264	230.40	2.74	0.955	73	3.0	2.55
0116-022265	230.40	2.74	0.955	73	3.0	2.55
0116-022266	230.70	2.64	0.955	73	3.0	2.55
0116-022267	230.70	2.64	0.955	73	3.0	2.55
0116-022268	230.70	2.64	0.955	73	3.0	2.55
0116-022269	230.70	2.64	0.955	73	3.0	2.55
0116-022270	230.70	2.64	0.955	73	3.0	2.55
0116-022271	230.60	2.81	0.956	73	1.2	2.37

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TEST RESULTS - ROLLS

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PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022272	230.60	2.81	0.956	73	1.2	2.37
0116-022273	230.60	2.81	0.956	73	1.2	2.37
0116-022274	230.60	2.81	0.956	73	1.2	2.37
0116-022275	230.60	2.81	0.956	73	1.2	2.37
0116-022276	226.50	2.78	0.956	73	1.2	2.37
0116-022277	226.50	2.78	0.956	73	1.2	2.37
0116-022278	226.50	2.78	0.956	73	1.2	2.37
0116-022279	226.50	2.78	0.956	73	1.2	2.37
0116-022280	226.50	2.78	0.956	73	1.2	2.37
0116-022281	228.30	2.46	0.954	78	1.9	1.96
0116-022282	228.30	2.46	0.954	78	1.9	1.96
0116-022283	228.30	2.46	0.954	78	1.9	1.96
0116-022284	228.30	2.46	0.954	78	1.9	1.96
0116-022285	228.30	2.46	0.954	78	1.9	1.96
0116-022286	227.70	2.46	0.954	78	1.9	1.96
0116-022287	227.70	2.46	0.954	78	1.9	1.96
0116-022288	227.70	2.46	0.954	78	1.9	1.96
0116-022289	227.70	2.46	0.954	78	1.9	1.96
0116-022290	227.70	2.46	0.954	78	1.9	1.96
0116-022291	228.00	2.46	0.954	78	1.9	1.96
0116-022292	228.00	2.46	0.954	78	1.9	1.96
0116-022293	228.00	2.46	0.954	78	1.9	1.96
0116-022294	228.00	2.46	0.954	78	1.9	1.96
0116-022295	228.00	2.46	0.954	78	1.9	1.96
0116-022296	224.70	2.91	0.958	77	3.5	6.33
0116-022297	224.70	2.91	0.958	77	3.5	6.33
0116-022298	224.70	2.91	0.958	77	3.5	6.33
0116-022299	224.70	2.91	0.958	77	3.5	6.33
0116-022300	224.70	2.91	0.958	77	3.5	6.33
0116-022301	222.70	2.77	0.958	77	3.5	6.33
0116-022302	222.70	2.77	0.958	77	3.5	6.33
0116-022303	222.70	2.77	0.958	77	3.5	6.33
0116-022304	222.70	2.77	0.958	77	3.5	6.33
0116-022305	222.70	2.77	0.958	77	3.5	6.33
0116-022306	222.30	2.85	0.958	77	3.5	6.33
0116-022307	222.30	2.85	0.958	77	3.5	6.33

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022308	222.30	2.85	0.958	77	3.5	6.33
0116-022309	222.30	2.85	0.958	77	3.5	6.33
0116-022310	222.30	2.85	0.958	77	3.5	6.33
0116-022311	221.30	2.69	0.954	72	2.6	4.29
0116-022312	221.30	2.69	0.954	72	2.6	4.29
0116-022313	221.30	2.69	0.954	72	2.6	4.29
0116-022314	221.30	2.69	0.954	72	2.6	4.29
0116-022315	221.30	2.69	0.954	72	2.6	4.29
0116-022316	224.00	2.69	0.954	72	2.6	4.29
0116-022317	224.00	2.69	0.954	72	2.6	4.29
0116-022318	224.00	2.69	0.954	72	2.6	4.29
0116-022319	224.00	2.69	0.954	72	2.6	4.29
0116-022320	224.00	2.69	0.954	72	2.6	4.29
0116-022326	228.30	2.73	0.953	75	3.4	2.27
0116-022327	228.30	2.73	0.953	75	3.4	2.27
0116-022328	228.30	2.73	0.953	75	3.4	2.27
0116-022329	228.30	2.73	0.953	75	3.4	2.27
0116-022330	228.30	2.73	0.953	75	3.4	2.27
0116-022331	230.50	2.80	0.953	61	5.0	4.75
0116-022332	230.50	2.80	0.953	61	5.0	4.75
0116-022333	230.50	2.80	0.953	61	5.0	4.75
0116-022334	230.50	2.80	0.953	61	5.0	4.75
0116-022335	230.50	2.80	0.953	61	5.0	4.75
0116-022336	230.70	2.92	0.953	61	5.0	4.75
0116-022339	230.70	2.92	0.953	61	5.0	4.75
0116-022340	230.70	2.92	0.953	61	5.0	4.75
0116-022341	230.70	2.92	0.953	61	5.0	4.75
0116-022342	230.70	2.92	0.953	61	5.0	4.75
0116-022343	230.70	2.92	0.953	61	5.0	4.75
0116-022344	230.70	2.41	0.953	61	5.0	4.75
0116-022345	230.70	2.41	0.953	61	5.0	4.75
0116-022346	230.70	2.41	0.953	61	5.0	4.75
0116-022347	230.70	2.41	0.953	61	5.0	4.75
0116-022348	230.70	2.41	0.953	61	5.0	4.75
0116-022349	233.00	2.94	0.953	61	5.0	4.75
0116-022350	233.00	2.94	0.953	61	5.0	4.75

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022351	233.00	2.94	0.953	61	5.0	4.75
0116-022352	233.00	2.94	0.953	61	5.0	4.75
0116-022353	233.00	2.94	0.953	61	5.0	4.75
0116-022354	222.30	2.79	0.954	68	5.4	2.96
0116-022355	222.30	2.79	0.954	68	5.4	2.96
0116-022356	222.30	2.79	0.954	68	5.4	2.96
0116-022357	222.30	2.79	0.954	68	5.4	2.96
0116-022358	222.30	2.79	0.954	68	5.4	2.96
0116-022359	226.30	2.79	0.954	68	5.4	2.96
0116-022360	226.30	2.79	0.954	68	5.4	2.96
0116-022361	226.30	2.79	0.954	68	5.4	2.96
0116-022362	226.30	2.79	0.954	68	5.4	2.96
0116-022363	226.30	2.79	0.954	68	5.4	2.96
0116-022364	224.70	2.87	0.954	68	5.4	2.96
0116-022365	224.70	2.87	0.954	68	5.4	2.96
0116-022366	224.70	2.87	0.954	68	5.4	2.96
0116-022367	224.70	2.87	0.954	68	5.4	2.96
0116-022368	224.70	2.87	0.954	68	5.4	2.96
0116-022369	229.00	2.82	0.963	67	3.4	5.35
0116-022370	229.00	2.82	0.963	67	3.4	5.35
0116-022371	229.00	2.82	0.963	67	3.4	5.35
0116-022372	229.00	2.82	0.963	67	3.4	5.35
0116-022373	229.00	2.82	0.963	67	3.4	5.35
0116-022375	219.30	2.81	0.963	67	3.4	5.35
0116-022376	219.30	2.81	0.963	67	3.4	5.35
0116-022377	219.30	2.81	0.963	67	3.4	5.35
0116-022378	219.30	2.81	0.963	67	3.4	5.35
0116-022379	219.30	2.81	0.963	67	3.4	5.35
0116-022380	226.30	2.95	0.963	67	3.4	5.35
0116-022381	226.30	2.95	0.963	67	3.4	5.35
0116-022382	226.30	2.95	0.963	67	3.4	5.35
0116-022383	226.30	2.95	0.963	67	3.4	5.35
0116-022384	226.30	2.95	0.963	67	3.4	5.35
0116-022385	225.30	2.97	0.956	66	3.7	2.04
0116-022386	225.30	2.97	0.956	66	3.7	2.04
0116-022387	225.30	2.97	0.956	66	3.7	2.04

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022388	225.30	2.97	0.956	66	3.7	2.04
0116-022389	225.30	2.97	0.956	66	3.7	2.04
0116-022390	232.30	2.92	0.956	66	3.7	2.04
0116-022391	232.30	2.92	0.956	66	3.7	2.04
0116-022392	232.30	2.92	0.956	66	3.7	2.04
0116-022393	232.30	2.92	0.956	66	3.7	2.04
0116-022394	232.30	2.92	0.956	66	3.7	2.04
0116-022395	226.30	2.62	0.956	66	3.7	2.04
0116-022396	226.30	2.62	0.956	66	3.7	2.04
0116-022397	226.30	2.62	0.956	66	3.7	2.04
0116-022403	240.70	2.92	0.950	79	2.3	2.07
0116-022404	240.70	2.92	0.950	79	2.3	2.07
0116-022405	240.70	2.92	0.950	79	2.3	2.07
0116-022406	240.70	2.92	0.950	79	2.3	2.07
0116-022407	241.30	2.92	0.950	79	2.3	2.07
0116-022408	241.30	2.92	0.950	79	2.3	2.07
0116-022409	241.30	2.92	0.950	79	2.3	2.07
0116-022410	241.30	2.92	0.950	79	2.3	2.07
0116-022411	241.30	2.92	0.950	79	2.3	2.07
0116-022412	237.00	2.92	0.950	79	2.3	2.07
0116-022413	237.00	2.92	0.950	79	2.3	2.07
0116-022414	237.00	2.92	0.950	79	2.3	2.07
0116-022415	237.00	2.92	0.950	79	2.3	2.07
0116-022416	237.00	2.92	0.950	79	2.3	2.07
0116-022427	233.70	2.68	0.952	77	2.4	2.9
0116-022428	233.70	2.68	0.952	77	2.4	2.9
0116-022429	233.70	2.68	0.952	77	2.4	2.9
0116-022430	233.70	2.68	0.952	77	2.4	2.9
0116-022431	233.70	2.68	0.952	77	2.4	2.9
0116-022432	238.70	2.69	0.955	72	2.4	2.69
0116-022433	238.70	2.69	0.955	72	2.4	2.69
0116-022434	238.70	2.69	0.955	72	2.4	2.69
0116-022435	238.70	2.69	0.955	72	2.4	2.69
0116-022436	238.70	2.69	0.955	72	2.4	2.69
0116-022437	236.30	2.72	0.955	72	2.4	2.69
0116-022438	236.30	2.72	0.955	72	2.4	2.69

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022440	236.30	2.72	0.955	72	2.4	2.69
0116-022442	236.30	2.72	0.955	72	2.4	2.69
0116-022445	237.30	2.68	0.955	72	2.4	2.69
0116-022446	237.30	2.68	0.955	72	2.4	2.69
0116-022447	237.30	2.68	0.955	72	2.4	2.69
0116-022448	237.30	2.68	0.955	72	2.4	2.69
0116-022449	237.30	2.68	0.955	72	2.4	2.69
0116-022450	237.00	2.79	0.955	68	3.0	3.78
0116-022451	237.00	2.79	0.955	68	3.0	3.78
0116-022453	237.00	2.79	0.955	68	3.0	3.78
0116-022454	237.00	2.79	0.955	68	3.0	3.78
0116-022455	237.00	2.79	0.955	68	3.0	3.78
0116-022458	241.00	2.79	0.955	68	3.0	3.78
0116-022459	241.00	2.79	0.955	68	3.0	3.78
0116-022462	241.00	2.79	0.955	68	3.0	3.78
0116-022463	241.00	2.79	0.955	68	3.0	3.78
0116-022464	241.00	2.79	0.955	68	3.0	3.78
0116-022467	241.30	4.40	0.955	68	3.0	3.78
0116-022473	225.00	2.89	0.953	78	4.1	3.02
0116-022474	225.00	2.89	0.953	78	4.1	3.02
0116-022475	225.00	2.89	0.953	78	4.1	3.02
0116-022476	225.00	2.89	0.953	78	4.1	3.02
0116-022477	225.00	2.89	0.953	78	4.1	3.02
0116-022478	234.00	2.89	0.953	78	4.1	3.02
0116-022479	234.00	2.89	0.953	78	4.1	3.02
0116-022480	234.00	2.89	0.953	78	4.1	3.02
0116-022481	234.00	2.89	0.953	78	4.1	3.02
0116-022482	234.00	2.89	0.953	78	4.1	3.02
0116-022483	232.70	2.84	0.953	78	4.1	3.02
0116-022484	232.70	2.84	0.953	78	4.1	3.02
0116-022485	232.70	2.84	0.953	78	4.1	3.02
0116-022486	232.70	2.84	0.953	78	4.1	3.02
0116-022487	232.70	2.84	0.953	78	4.1	3.02
0116-022493	220.30	2.79	0.953	71	3.9	5.22
0116-022494	220.30	2.79	0.953	71	3.9	5.22
0116-022495	220.30	2.79	0.953	71	3.9	5.22

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022496	220.30	2.79	0.953	71	3.9	5.22
0116-022497	220.30	2.79	0.953	71	3.9	5.22
0116-022498	226.30	2.77	0.953	71	3.9	5.22
0116-022499	226.30	2.77	0.953	71	3.9	5.22
0116-022500	226.30	2.77	0.953	71	3.9	5.22
0116-022501	226.30	2.77	0.953	71	3.9	5.22
0116-022502	226.30	2.77	0.953	71	3.9	5.22
0116-022503	226.20	2.80	0.955	71	2.5	3.43
0116-022504	226.20	2.80	0.955	71	2.5	3.43
0116-022505	226.20	2.80	0.955	71	2.5	3.43
0116-022506	226.20	2.80	0.955	71	2.5	3.43
0116-022507	226.20	2.80	0.955	71	2.5	3.43
0116-022508	230.80	2.82	0.955	71	2.5	3.43
0116-022509	230.80	2.82	0.955	71	2.5	3.43
0116-022510	230.80	2.82	0.955	71	2.5	3.43
0116-022511	230.80	2.82	0.955	71	2.5	3.43
0116-022512	230.80	2.82	0.955	71	2.5	3.43
0116-022513	228.20	2.78	0.955	71	2.5	3.43
0116-022514	228.20	2.78	0.955	71	2.5	3.43
0116-022515	228.20	2.78	0.955	71	2.5	3.43
0116-022516	228.20	2.78	0.955	71	2.5	3.43
0116-022517	228.20	2.78	0.955	71	2.5	3.43
0116-022518	227.00	2.78	0.956	71	3.7	2.52
0116-022519	227.00	2.78	0.956	71	3.7	2.52
0116-022520	227.00	2.78	0.956	71	3.7	2.52
0116-022521	227.00	2.78	0.956	71	3.7	2.52
0116-022522	227.00	2.78	0.956	71	3.7	2.52
0116-022523	223.80	2.84	0.956	71	3.7	2.52
0116-022524	223.80	2.84	0.956	71	3.7	2.52
0116-022525	223.80	2.84	0.956	71	3.7	2.52
0116-022526	223.80	2.84	0.956	71	3.7	2.52
0116-022527	223.80	2.84	0.956	71	3.7	2.52
0116-022528	225.70	2.64	0.956	71	3.7	2.52
0116-022529	225.70	2.64	0.956	71	3.7	2.52
0116-022530	225.70	2.64	0.956	71	3.7	2.52
0116-022531	225.70	2.64	0.956	71	3.7	2.52

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022532	225.70	2.64	0.956	71	3.7	2.52
0116-022533	226.50	2.72	0.953	69	1.1	1.13
0116-022534	226.50	2.72	0.953	69	1.1	1.13
0116-022535	226.50	2.72	0.953	69	1.1	1.13
0116-022536	226.50	2.72	0.953	69	1.1	1.13
0116-022537	226.50	2.72	0.953	69	1.1	1.13
0116-022538	226.50	2.72	0.953	69	1.1	1.13
0116-022539	226.50	2.72	0.953	69	1.1	1.13
0116-022540	226.50	2.72	0.953	69	1.1	1.13
0116-022541	226.50	2.72	0.953	69	1.1	1.13
0116-022542	226.50	2.72	0.953	69	1.1	1.13
0116-022543	226.50	2.72	0.953	69	1.1	1.13
0116-022544	226.50	2.72	0.953	69	1.1	1.13
0116-022545	226.50	2.72	0.953	69	1.1	1.13
0116-022546	226.50	2.72	0.953	69	1.1	1.13
0116-022547	226.50	2.72	0.953	69	1.1	1.13
0116-022548	225.50	2.21	0.952	68	1.4	4.05
0116-022549	225.50	2.21	0.952	68	1.4	4.05
0116-022550	225.50	2.21	0.952	68	1.4	4.05
0116-022551	225.50	2.21	0.952	68	1.4	4.05
0116-022552	225.50	2.21	0.952	68	1.4	4.05
0116-022553	225.50	2.21	0.952	68	1.4	4.05
0116-022554	225.50	2.21	0.952	68	1.4	4.05
0116-022555	225.50	2.21	0.952	68	1.4	4.05
0116-022556	225.50	2.21	0.952	68	1.4	4.05
0116-022557	225.50	2.21	0.952	68	1.4	4.05
0116-022558	225.50	2.21	0.952	68	1.4	4.05
0116-022559	225.50	2.21	0.952	68	1.4	4.05
0116-022560	225.50	2.21	0.952	68	1.4	4.05
0116-022561	225.50	2.21	0.952	68	1.4	4.05
0116-022562	225.50	2.21	0.952	68	1.4	4.05
0116-022563	226.60	2.40	0.952	67	1.6	3.77
0116-022564	226.60	2.40	0.952	67	1.6	3.77
0116-022565	226.60	2.40	0.952	67	1.6	3.77
0116-022566	226.60	2.40	0.952	67	1.6	3.77
0116-022567	226.60	2.40	0.952	67	1.6	3.77

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-022568	226.60	2.40	0.952	67	1.6	3.77
0116-022569	226.60	2.40	0.952	67	1.6	3.77
0116-022570	226.60	2.40	0.952	67	1.6	3.77
0116-022571	226.60	2.40	0.952	67	1.6	3.77
0116-022572	226.60	2.40	0.952	67	1.6	3.77
0116-022573	227.20	2.40	0.952	67	1.6	3.77
0116-022574	227.20	2.40	0.952	67	1.6	3.77
0116-022575	227.20	2.40	0.952	67	1.6	3.77
0116-022576	227.20	2.40	0.952	67	1.6	3.77
0116-022577	227.20	2.40	0.952	67	1.6	3.77
0116-022578	228.80	2.75	0.955	70	1.8	1.76
0116-022579	228.80	2.75	0.955	70	1.8	1.76
0116-022585	227.60	2.77	0.954	70	2.8	4.21
0116-022586	227.60	2.77	0.954	70	2.8	4.21
0116-022587	227.60	2.77	0.954	70	2.8	4.21
0116-022588	227.60	2.77	0.954	70	2.8	4.21
0116-022589	227.60	2.77	0.954	70	2.8	4.21
0116-022590	227.60	2.80	0.954	70	2.8	4.21
0116-022591	227.60	2.80	0.954	70	2.8	4.21
0116-022592	227.60	2.80	0.954	70	2.8	4.21
0116-022593	227.60	2.80	0.954	70	2.8	4.21
0116-022594	227.60	2.80	0.954	70	2.8	4.21
0116-022595	227.80	2.75	0.954	70	2.8	4.21
0116-022596	227.80	2.75	0.954	70	2.8	4.21
0116-022597	227.80	2.75	0.954	70	2.8	4.21

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - Transmissivity

PROJECT NUMBER: 856
REFERENCE NUMBER: SO-092691

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven
Cal.

Test	Property	Test Method	Frequency		Unit
	Transmissivity	ASTM D4716	1/540,000	ft²	*(m²/sec)*

Specification: Geocomposite

Roll Number	Pressure (psf)	Gradient	Net/Composite	Transmissivity Results (m²/sec)	(gal/min/ft)	Seat Time (min)	Boundary
0116-017446	10,000	0.10	Geocomposite	1.20E-04	0.58	15	Steel plates
Geonet	10,000	0.10	Geonet	5.48E-03	26.47	15	Steel plates
0116-021990	10,000	0.10	Geocomposite	1.39E-04	0.67	15	Steel plates
Geonet	10,000	0.10	Geonet	6.29E-03	30.39	15	Steel plates
0116-022029	10,000	0.10	Geocomposite	7.06E-04	3.41	15	Steel plates
Geonet	10,000	0.10	Geonet	5.81E-03	28.07	15	Steel plates
0116-022075	10,000	0.10	Geocomposite	2.72E-04	1.31	15	Steel plates
Geonet	10,000	0.10	Geonet	5.05E-03	24.40	15	Steel plates
0116-022251	10,000	0.10	Geocomposite	1.13E-03	5.46	15	Steel plates
Geonet	10,000	0.10	Geonet	5.24E-03	25.31	15	Steel plates
0116-022312	10,000	0.10	Geocomposite	8.09E-04	3.91	15	Steel plates
Geonet	10,000	0.10	Geonet	5.69E-05	0.27	15	Steel plates
0116-022464	10,000	0.10	Geocomposite	6.48E-04	3.13	15	Steel plates
Geonet	10,000	0.10	Geonet	5.31E-03	25.65	15	Steel plates
0116-022553	10,000	0.10	Geocomposite	2.28E-04	1.10	15	Steel plates
Geonet	10,000	0.10	Geonet	3.66E-03	17.68	15	Steel plates

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec⁻¹
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027226343	8.4	282	305	83	90	115	154	144	721	0.180	1.8
2027226344	8.4	282	305	83	90	115	154	144	721	0.180	1.8

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft²	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec⁻¹
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	**12**
Specification	**95**
2027226343	123
2027226344	123

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft^2	oz/yd^2
	Grab Tensile Properties (min. avg)		ASTM D4632	1/90,000 ft^2	
2	Strength (MD)				lbf
3	Strength (TD)				lbf
4	Elongation (MD)				%
5	Elongation (TD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft^2	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft^2	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft^2	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft^2	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft^2	mm
11	Permittivity		ASTM D4491	1/540,000 ft^2	sec^{-1}
12	Water Flow Rate		ASTM D4491	1/540,000 ft^2	gpm/ft^2

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027127645	8.6	339	310	66	84	143	140	160	775	0.180	1.8
2027127951	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127963	9.3	328	321	66	87	137	122	165	845	0.180	2.4
2027127964	9.3	328	321	66	87	137	122	165	845	0.180	2.4
2027127969	8.7	302	286	68	78	115	123	155	869	0.180	1.7
2027127972	8.7	302	286	68	78	115	123	155	869	0.180	1.7
2027127974	8.7	298	315	69	80	116	128	146	852	0.180	1.7
2027127980	8.9	309	309	69	86	129	131	169	880	0.180	1.8
2027127981	9.7	349	359	67	77	144	153	176	809	0.180	1.7
2027127987	9.6	331	345	69	81	149	145	190	879	0.180	1.6
2027128007	8.6	315	342	72	84	126	141	149	744	0.180	2.0
2027128014	9.3	324	343	66	79	134	135	174	853	0.180	1.6
2027128027	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128035	9.1	336	339	71	87	128	131	157	817	0.180	1.9
2027128050	8.5	308	319	72	91	135	128	147	771	0.180	2.4
2027128066	8.8	318	331	63	77	136	137	163	871	0.180	2.0
2027134750	9.4	342	350	71	87	132	147	182	880	0.180	1.9
2027142456	8.2	228	252	78	90	105	120	138	583	0.180	1.9
2027164000	9.5	285	347	85	79	120	155	158	785	0.180	2.2
2027164001	9.5	285	347	85	79	120	155	158	785	0.180	2.2

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027164007	8.6	286	332	80	83	143	185	138	804	0.180	2.1
2027202650	8.6	288	342	77	76	115	173	168	871	0.180	1.9
2027226872	9.3	328	374	88	86	132	162	168	857	0.180	1.9
2027226874	9.3	328	374	88	86	132	162	168	857	0.180	1.9
2027238617	8.6	233	325	94	92	110	164	136	687	0.180	2.5
2027238618	8.6	233	325	94	92	110	164	136	687	0.180	2.5
2027238619	8.6	233	325	94	92	110	164	136	687	0.180	2.5
2027238620	8.7	240	348	87	93	107	162	142	752	0.180	2.5
2027238623	8.7	240	348	87	93	107	162	142	752	0.180	2.5
2027238632	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238633	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238634	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238639	8.4	241	346	94	84	108	180	145	694	0.180	2.5
2027238642	9.0	225	290	84	91	98	144	147	819	0.180	1.9
2027238650	9.4	260	366	89	90	114	180	165	888	0.180	1.7
2027238658	9.3	257	366	83	86	116	165	159	833	0.180	1.7
2027238659	9.3	257	366	83	86	116	165	159	833	0.180	1.7
2027238662	9.1	244	369	82	86	108	155	164	763	0.180	2.0
2027238666	9.0	264	377	87	89	120	172	176	763	0.180	1.8
2027238670	9.5	294	398	87	85	121	160	167	812	0.180	1.9
2027238671	9.5	294	398	87	85	121	160	167	812	0.180	1.9
2027238673	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238676	8.8	264	360	78	87	122	159	176	795	0.180	2.1
2027238678	8.8	264	360	78	87	122	159	176	795	0.180	2.1
2027238691	8.6	257	344	86	88	101	161	142	774	0.180	2.1
2027238693	9.6	269	395	85	89	115	176	176	888	0.180	2.0
2027238694	9.6	269	395	85	89	115	176	176	888	0.180	2.0
2027244848	8.5	269	323	81	78	108	130	136	826	0.180	1.9
2027245615	9.6	292	355	78	78	118	144	162	767	0.180	1.7
2027245623	8.8	262	326	77	77	108	130	159	799	0.180	1.8
2027245624	8.8	262	326	77	77	108	130	159	799	0.180	1.8
2027245626	9.2	262	336	74	78	118	160	146	860	0.180	1.6
2027245630	8.8	279	356	75	75	111	152	164	818	0.180	1.7
2027245632	8.8	279	356	75	75	111	152	164	818	0.180	1.7
2027245633	8.8	279	356	75	75	111	152	164	818	0.180	1.7
2027245634	8.7	270	330	76	79	101	131	153	810	0.180	1.6

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027245636	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245639	9.3	294	351	80	80	138	166	160	740	0.180	1.9
2027245646	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245647	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245650	9.0	278	348	81	81	109	139	153	765	0.180	2.1
2027245651	9.0	278	348	81	81	109	139	153	765	0.180	2.1
2027245653	9.0	278	348	81	81	109	139	153	765	0.180	2.1
2027245654	8.6	285	326	69	74	128	156	165	832	0.180	1.8
2027245655	8.6	285	326	69	74	128	156	165	832	0.180	1.8
2027245657	8.6	285	326	69	74	128	156	165	832	0.180	1.8
2027245658	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245660	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245665	9.3	304	321	80	81	106	132	159	726	0.180	1.8
2027245666	8.8	274	325	79	78	120	137	150	765	0.180	2.0
2027245667	8.8	274	325	79	78	120	137	150	765	0.180	2.0
2027245668	8.8	274	325	79	78	120	137	150	765	0.180	2.0
2027255365	9.5	318	335	75	87	130	134	166	834	0.180	1.8
2027255366	9.5	318	335	75	87	130	134	166	834	0.180	1.8
2027255368	9.6	325	364	76	85	114	150	162	906	0.180	1.6
2027255374	8.6	303	294	71	86	122	139	163	864	0.180	1.9
2027255376	8.9	285	310	73	85	115	118	158	766	0.180	1.9
2027255383	9.3	313	388	76	87	121	149	165	830	0.180	1.8
2027255384	8.3	285	313	70	82	113	121	140	826	0.180	1.8
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027125757	8.8	291	338	78	77	127	161	155	873	0.180	1.7
2027127950	9.4	355	345	69	85	148	163	162	907	0.180	1.9
2027127973	8.7	298	315	69	80	116	128	146	852	0.180	1.7
2027127977	8.9	309	309	69	86	129	131	169	880	0.180	1.8
2027127983	9.7	349	359	67	77	144	153	176	809	0.180	1.7
2027127997	9.3	315	311	68	84	138	137	161	765	0.180	1.7
2027128004	8.4	297	314	71	83	123	141	153	799	0.180	1.7
2027128005	8.6	315	342	72	84	126	141	149	744	0.180	2.0
2027128006	8.6	315	342	72	84	126	141	149	744	0.180	2.0
2027128009	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128010	9.1	318	334	74	81	139	148	165	781	0.180	1.6

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027128011	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128012	9.1	318	334	74	81	139	148	165	781	0.180	1.6
2027128013	9.3	324	343	66	79	134	135	174	853	0.180	1.6
2027128016	9.3	324	343	66	79	134	135	174	853	0.180	1.6
2027128026	9.4	338	358	68	80	145	147	164	805	0.180	1.8
2027128041	9.0	326	307	73	90	151	157	146	756	0.180	2.4
2027142462	9.1	258	261	72	92	116	120	140	705	0.180	2.1
2027142475	9.1	317	357	74	82	135	146	154	790	0.180	1.8
2027142481	8.6	312	331	73	80	131	149	154	791	0.180	1.8
2027145396	9.2	304	349	74	85	122	136	166	852	0.180	1.7
2027145397	9.2	304	349	74	85	122	136	166	852	0.180	1.7
2027202670	9.1	297	361	81	76	117	151	157	772	0.180	1.7
2027204566	8.7	288	362	84	78	114	151	140	840	0.180	1.7
2027238628	8.5	259	334	93	94	103	135	170	805	0.180	2.2
2027238629	8.5	259	334	93	94	103	135	170	805	0.180	2.2
2027238630	8.5	259	334	93	94	103	135	170	805	0.180	2.2
2027238631	8.5	259	334	93	94	103	135	170	805	0.180	2.2
2027238635	8.8	247	360	87	92	111	165	162	738	0.180	2.3
2027238638	8.4	241	346	94	84	108	180	145	694	0.180	2.5
2027238644	8.7	260	333	86	85	111	172	153	794	0.180	2.0
2027238657	9.3	257	366	83	86	116	165	159	833	0.180	1.7
2027238665	9.0	264	377	87	89	120	172	176	763	0.180	1.8
2027238668	9.5	294	398	87	85	121	160	167	812	0.180	1.9
2027238672	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238674	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238675	8.3	262	309	74	86	117	135	168	869	0.180	2.2
2027238677	8.8	264	360	78	87	122	159	176	795	0.180	2.1
2027238682	8.7	274	364	88	90	112	154	156	841	0.180	2.1
2027238685	8.8	264	336	84	87	121	174	154	843	0.180	1.9
2027238686	8.8	264	336	84	87	121	174	154	843	0.180	1.9
2027238687	8.8	264	336	84	87	121	174	154	843	0.180	1.9
2027245605	9.0	282	354	83	78	102	142	160	758	0.180	1.7
2027245609	8.4	255	315	80	80	99	134	146	669	0.180	1.9
2027245625	8.8	262	326	77	77	108	130	159	799	0.180	1.8
2027245628	9.2	262	336	74	78	118	160	146	860	0.180	1.6
2027245629	9.2	262	336	74	78	118	160	146	860	0.180	1.6

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027245635	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245637	8.7	270	330	76	79	101	131	153	810	0.180	1.6
2027245638	9.3	294	351	80	80	138	166	160	740	0.180	1.9
2027245640	9.3	294	351	80	80	138	166	160	740	0.180	1.9
2027245641	9.3	294	351	80	80	138	166	160	740	0.180	1.9
2027245643	9.0	286	357	76	83	138	159	169	786	0.180	2.1
2027245644	9.0	286	357	76	83	138	159	169	786	0.180	2.1
2027245648	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245649	9.2	299	340	83	80	121	167	172	782	0.180	2.3
2027245659	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245661	9.0	283	351	79	80	112	142	157	854	0.180	1.7
2027245663	9.3	304	321	80	81	106	132	159	726	0.180	1.8
2027245664	9.3	304	321	80	81	106	132	159	726	0.180	1.8
2027245669	8.8	274	325	79	78	120	137	150	765	0.180	2.0
2027254210	8.3	280	262	71	87	112	127	158	726	0.180	2.0
2027254211	8.3	280	262	71	87	112	126	138	664	0.180	2.0
2027254212	9.6	331	346	70	86	141	142	182	775	0.180	1.7
2027254224	10.0	346	354	68	85	164	164	159	900	0.180	2.0
2027254225	10.0	346	354	68	85	164	164	159	900	0.180	2.0
2027255350	9.1	308	346	75	85	122	161	177	879	0.180	1.7
2027255370	9.6	325	364	76	85	114	150	162	906	0.180	1.6
2027255372	8.6	303	294	71	86	122	139	163	864	0.180	1.9
2027255377	8.9	285	310	73	85	115	118	158	766	0.180	1.9
2027255378	8.9	285	310	73	85	115	118	158	766	0.180	1.9
2027255380	9.3	313	388	76	87	121	149	165	830	0.180	1.8
2027255382	9.3	313	388	76	87	121	149	165	830	0.180	1.8
2027255385	8.3	285	313	70	82	113	121	140	826	0.180	1.8
2027255386	8.3	285	313	70	82	113	121	140	826	0.180	1.8
2027255387	8.3	285	313	70	82	113	121	140	826	0.180	1.8
2027255388	9.4	305	326	73	83	120	135	170	801	0.180	1.8

Test	12
Specification	**95**
2027127645	125
2027127951	138
2027127963	174

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027127964	174
2027127969	125
2027127972	125
2027127974	120
2027127980	132
2027127981	123
2027127987	117
2027128007	142
2027128014	115
2027128027	126
2027128035	138
2027128050	176
2027128066	145
2027134750	134
2027142456	139
2027164000	160
2027164001	160
2027164007	152
2027202650	135
2027226872	134
2027226874	134
2027238617	178
2027238618	178
2027238619	178
2027238620	183
2027238623	183
2027238632	165
2027238633	165
2027238634	165
2027238639	181
2027238642	140
2027238650	123
2027238658	121
2027238659	121
2027238662	142
2027238666	127

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027238670	136
2027238671	136
2027238673	157
2027238676	150
2027238678	150
2027238691	150
2027238693	143
2027238694	143
2027244848	139
2027245615	124
2027245623	126
2027245624	126
2027245626	117
2027245630	121
2027245632	121
2027245633	121
2027245634	114
2027245636	114
2027245639	135
2027245646	164
2027245647	164
2027245650	153
2027245651	153
2027245653	153
2027245654	125
2027245655	125
2027245657	125
2027245658	119
2027245660	119
2027245665	130
2027245666	143
2027245667	143
2027245668	143
2027255365	127
2027255366	127
2027255368	115

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	**12**
2027255374	138
2027255376	138
2027255383	131
2027255384	128
Specification	**95**
2027125757	122
2027127950	138
2027127973	120
2027127977	132
2027127983	123
2027127997	119
2027128004	123
2027128005	142
2027128006	142
2027128009	112
2027128010	112
2027128011	112
2027128012	112
2027128013	115
2027128016	115
2027128026	126
2027128041	171
2027142462	148
2027142475	130
2027142481	126
2027145396	118
2027145397	118
2027202670	118
2027204566	124
2027238628	158
2027238629	158
2027238630	158
2027238631	158
2027238635	165
2027238638	181

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MANUFACTURING QUALITY CONTROL

TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027238644	143
2027238657	121
2027238665	127
2027238668	136
2027238672	157
2027238674	157
2027238675	157
2027238677	150
2027238682	150
2027238685	134
2027238686	134
2027238687	134
2027245605	124
2027245609	140
2027245625	126
2027245628	117
2027245629	117
2027245635	114
2027245637	114
2027245638	135
2027245640	135
2027245641	135
2027245643	148
2027245644	148
2027245648	164
2027245649	164
2027245659	119
2027245661	119
2027245663	130
2027245664	130
2027245669	143
2027254210	144
2027254211	144
2027254212	123
2027254224	142
2027254225	142

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TEST RESULTS - ROLLS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-39

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027255350	120
2027255370	115
2027255372	138
2027255377	138
2027255378	138
2027255380	131
2027255382	131
2027255385	128
2027255386	128
2027255387	128
2027255388	126

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

CoA Date: 04/06/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80650300
PO #: 604930
Weight: 206050.000 LB
Ship Date: 04/06/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006129
Seal No: 285330

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPC611480

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9538	g/cm3
Production date		20220401	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
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AMANDA ROBY
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 04/21/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80659526
PO #: 604930
Weight: 206200.000 LB
Ship Date: 04/21/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX104236
Seal No: 285733

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPD610460

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.35	g/10min
Density	D1505	0.9545	g/cm3
Production date		20220410	

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QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 06/19/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80697951
PO #: 605347
Weight: 206050.000 LB
Ship Date: 06/19/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX006270
Seal No: 292194

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPF610440

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9549	g/cm3
Production date		20220610	

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CoA Date: 06/19/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Hickman
Fax:

Delivery #: 80697955
PO #: 605347
Weight: 206150.000 LB
Ship Date: 06/19/2022
Package: BULK
Mode: Hopper Car
Car #: HLTX007089
Seal No: 298302

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPF610542

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20220611	

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For CoA questions contact Leslie Dziamara at +1-832-813-4806

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106375-24067-2				
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.				
0116-029766	2023-02-07	DPN610600	2027370936	2027370934
0116-029767	2023-02-07	DPN610600	2027370936	2027370934
0116-029768	2023-02-07	DPN610600	2027370936	2027370934
0116-029769	2023-02-07	DPN610600	2027370936	2027370934
0116-029770	2023-02-07	DPN610600	2027370936	2027370934
0116-029771	2023-02-07	DPN610600	2027370936	2027347948
0116-029772	2023-02-07	DPN610600	2027370936	2027347948
0116-029773	2023-02-07	DPN610600	2027370936	2027347948
0116-029774	2023-02-07	DPN610600	2027370936	2027347948
0116-029775	2023-02-07	DPN610600	2027370936	2027347948
0116-029776	2023-02-07	DPN610600	2027370936	2027347948
0116-029777	2023-02-07	DPN610600	2027341686	2027341684
0116-029778	2023-02-07	DPN610600	2027341686	2027341684
0116-029779	2023-02-07	DPN610600	2027341686	2027341684
0116-029780	2023-02-07	DPN610600	2027341686	2027341684
0116-029781	2023-02-07	DPN610600	2027341686	2027341684
0116-029782	2023-02-07	DPN610600	2027347968	2027341687
0116-029783	2023-02-07	DPN610600	2027383454	2027341687

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029784	2023-02-07	DPN610600	2027383454	2027341687
0116-029785	2023-02-07	DPN610600	2027383454	2027341687
0116-029786	2023-02-07	DPN610600	2027383454	2027341687
0116-029787	2023-02-07	DPN610600	2027383454	2027341687
0116-029788	2023-02-07	DPN610600	2027383459	2027383463
0116-029789	2023-02-07	DPN610600	2027383459	2027383463
0116-029790	2023-02-07	DPN610600	2027383459	2027383463
0116-029791	2023-02-07	DPN610600	2027383459	2027383463
0116-029792	2023-02-07	DPN610600	2027383459	2027383463
0116-029793	2023-02-07	DPN610600	2027383459	2027383463
0116-029794	2023-02-07	DPN610600	2027383459	2027383463
0116-029795	2023-02-07	DPN610600	2027383456	2027383466
0116-029796	2023-02-07	DPN610600	2027383456	2027383466
0116-029797	2023-02-07	DPN610600	2027383456	2027383466
0116-029798	2023-02-07	DPN610600	2027383456	2027383466
0116-029799	2023-02-07	DPN610600	2027383456	2027383466
0116-029800	2023-02-07	DPN610600	2027382998	2027383462
0116-029801	2023-02-07	DPN610600	2027382998	2027383462
0116-029802	2023-02-07	DPN610600	2027382998	2027383462
0116-029803	2023-02-07	DPN610600	2027382998	2027383462
0116-029804	2023-02-07	DPN610600	2027382998	2027383462
0116-029805	2023-02-07	DPN610600	2027382998	2027383462
0116-029806	2023-02-07	DPN610600	2027382993	2027383451
0116-029807	2023-02-07	DPN610600	2027382993	2027383451
0116-029808	2023-02-07	DPN610600	2027382993	2027383451
0116-029820	2023-02-08	DPN610600	2027382993	2027383451
0116-029821	2023-02-08	DPN610600	2027382996	2027341634

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029822	2023-02-08	DPN610600	2027382996	2027341634
0116-029823	2023-02-08	DPN610600	2027382996	2027341634
0116-029824	2023-02-08	DPN610600	2027382996	2027341634
0116-029825	2023-02-08	DPN610600	2027382996	2027341634
0116-029827	2023-02-08	DPN610600	2027382988	2027370941
0116-029828	2023-02-08	DPN610600	2027382988	2027370941
0116-029829	2023-02-08	DPN610600	2027382988	2027370941
0116-029830	2023-02-08	DPN610600	2027382988	2027370941
0116-029831	2023-02-08	DPN610600	2027382988	2027370941
0116-029832	2023-02-08	DPN610600	2027383452	2027382985
0116-029833	2023-02-08	DPN610600	2027383452	2027382985
0116-029834	2023-02-08	DPN610592	2027383452	2027382985
0116-029835	2023-02-08	DPN610592	2027383452	2027382985
0116-029836	2023-02-08	DPN610592	2027383452	2027382985
0116-029837	2023-02-08	DPN610592	2027383452	2027382985
0116-029838	2023-02-08	DPN610592	2027383452	2027382989
0116-029839	2023-02-08	DPN610592	2027383452	2027382989
0116-029840	2023-02-08	DPN610592	2027383452	2027382989
0116-029841	2023-02-08	DPN610592	2027383452	2027382989
0116-029842	2023-02-08	DPN610592	2027383452	2027382989
0116-029843	2023-02-08	DPN610592	2027383452	2027382989
0116-029844	2023-02-08	DPN610592	2027383452	2027382989
0116-029845	2023-02-08	DPN610592	2027383452	2027382989
0116-029846	2023-02-08	DPN610592	2027383452	2027382989
0116-029847	2023-02-08	DPN610592	2027383452	2027382989
0116-029848	2023-02-08	DPN610592	2027383452	2027382989
0116-029849	2023-02-08	DPN610592	2027383452	2027382989

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22 Feb 2023

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029850	2023-02-08	DPN610592	2027383452	2027382972
0116-029851	2023-02-08	DPN610592	2027383452	2027382972
0116-029852	2023-02-08	DPN610592	2027383452	2027382972
0116-029853	2023-02-08	DPN610592	2027383452	2027382972
0116-029854	2023-02-08	DPN610592	2027383452	2027382972
0116-029855	2023-02-08	DPN610592	2027383452	2027382972
0116-029856	2023-02-08	DPN610592	2027383452	2027382997
0116-029857	2023-02-08	DPN610592	2027383452	2027382997
0116-029858	2023-02-08	DPN610592	2027383452	2027382997
0116-029859	2023-02-08	DPN610592	2027383452	2027382997
0116-029860	2023-02-08	DPN610592	2027383452	2027382997
0116-029861	2023-02-08	DPN610592	2027383469	2027382997
0116-029862	2023-02-08	DPN610592	2027383469	2027383458
0116-029863	2023-02-08	DPN610592	2027383469	2027383458
0116-029864	2023-02-08	DPN610592	2027383469	2027383458
0116-029865	2023-02-08	DPN610592	2027383469	2027383458
0116-029866	2023-02-08	DPN610592	2027382983	2027383458
0116-029867	2023-02-08	DPN610592	2027382983	2027383458
0116-029868	2023-02-08	DPN610592	2027382983	2027382975
0116-029869	2023-02-08	DPN610592	2027382983	2027382975
0116-029870	2023-02-08	DPN610592	2027382983	2027382975
0116-029877	2023-02-08	DPN610592	2027383464	2027382975
0116-029878	2023-02-08	DPN610592	2027383464	2027382977
0116-029879	2023-02-08	DPN610592	2027383464	2027382977
0116-029880	2023-02-09	DPN610592	2027383464	2027382977
0116-029881	2023-02-09	DPN610592	2027383464	2027382977
0116-029882	2023-02-09	DPN610592	2027383464	2027382977

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22 Feb 2023

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029883	2023-02-09	DPN610592	2027383508	2027382977
0116-029884	2023-02-09	DPN610592	2027383508	2027382968
0116-029885	2023-02-09	DPN610592	2027383508	2027382968
0116-029886	2023-02-09	DPN610592	2027383508	2027382968
0116-029887	2023-02-09	DPN610592	2027383508	2027382968
0116-029888	2023-02-09	DPN610592	2027370935	2027382968
0116-029889	2023-02-09	DPN610592	2027370935	2027382968
0116-029890	2023-02-09	DPN610592	2027370935	2027382967
0116-029891	2023-02-09	DPN610592	2027370935	2027382967
0116-029892	2023-02-09	DPN610592	2027370935	2027382967
0116-029893	2023-02-09	DPN610592	2027370935	2027382967
0116-029894	2023-02-09	DPN610592	2027382981	2027382967
0116-029895	2023-02-09	DPN610592	2027382981	2027383465
0116-029896	2023-02-09	DPN610592	2027382981	2027383465
0116-029897	2023-02-09	DPN610592	2027382981	2027383465
0116-029898	2023-02-09	DPN610592	2027382981	2027383465
0116-029899	2023-02-09	DPN610592	2027382966	2027383465
0116-029900	2023-02-09	DPN610592	2027382966	2027370937
0116-029901	2023-02-09	DPN610592	2027382966	2027370937
0116-029902	2023-02-09	DPN610592	2027382966	2027370937
0116-029903	2023-02-09	DPN610592	2027382966	2027370937
0116-029904	2023-02-09	DPN610592	2027382966	2027370937
0116-029905	2023-02-09	DPN610592	2027383460	2027382978
0116-029906	2023-02-09	DPN610592	2027383460	2027382978
0116-029907	2023-02-09	DPN610592	2027383460	2027382978
0116-029908	2023-02-09	DPN610592	2027383460	2027382978
0116-029909	2023-02-09	DPN610592	2027383460	2027382978

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Solmax Geosynthetics LLC
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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029915	2023-02-09	DPN610592	2027238651	2027382978
0116-029916	2023-02-09	DPN610592	2027238651	2027382978
0116-029917	2023-02-09	DPN610592	2027238651	2027387795
0116-029918	2023-02-09	DPN610592	2027387796	2027387795
0116-029919	2023-02-09	DPN610592	2027387796	2027387795
0116-029920	2023-02-09	DPN610592	2027387796	2027387795
0116-029921	2023-02-09	DPN610592	2027387796	2027387795
0116-029922	2023-02-09	DPN610592	2027387796	2027387795
0116-029923	2023-02-09	DPN610592	2027387796	2027387795
0116-029924	2023-02-09	DPN610592	2027387796	2027387795
0116-029925	2023-02-09	DPN610592	2027387796	2027387795
0116-029926	2023-02-09	DPN610592	2027383496	2027382986
0116-029927	2023-02-09	DPN610592	2027383496	2027382986
0116-029928	2023-02-09	DPN610592	2027383496	2027382986
0116-029929	2023-02-09	DPN610592	2027383496	2027382986
0116-029930	2023-02-09	DPN610592	2027383496	2027382986
0116-029931	2023-02-09	DPN610592	2027383455	2027387797
0116-029932	2023-02-09	DPN610592	2027383455	2027387797
0116-029933	2023-02-09	DPN610592	2027383455	2027387797
0116-029934	2023-02-09	DPN610592	2027383455	2027387797
0116-029935	2023-02-09	DPN610592	2027383455	2027387797
0116-029936	2023-02-09	DPN610592	2027383455	2027387797
0116-029937	2023-02-09	DPN610592	2027387790	2027382987
0116-029938	2023-02-09	DPN610592	2027387790	2027382987
0116-029939	2023-02-09	DPN610592	2027387790	2027382987
0116-029940	2023-02-09	DPN610592	2027387790	2027382987
0116-029941	2023-02-09	DPN610592	2027387790	2027382987

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029942	2023-02-09	DPN610592	2027387799	2027387804
0116-029943	2023-02-09	DPN610592	2027387799	2027387804
0116-029944	2023-02-09	DPN610592	2027387799	2027387804
0116-029945	2023-02-09	DPN610592	2027387799	2027387804
0116-029946	2023-02-09	DPN610592	2027387799	2027387804
0116-029947	2023-02-09	DPN610592	2027387799	2027387804
0116-029948	2023-02-09	DPN610592	2027387809	2027387812
0116-029949	2023-02-09	DPN610592	2027387809	2027387812
0116-029950	2023-02-09	DPN610592	2027387809	2027387812
0116-029951	2023-02-09	DPN610592	2027387809	2027387812
0116-029952	2023-02-09	DPN610592	2027387809	2027387812
0116-029953	2023-02-09	DPN610592	2027387809	2027382991
0116-029954	2023-02-09	DPN610592	2027387809	2027382991
0116-029955	2023-02-10	DPN610592	2027387809	2027382991
0116-029956	2023-02-10	DPN610592	2027387809	2027382991
0116-029957	2023-02-10	DPN610592	2027387809	2027382991
0116-029958	2023-02-10	DPN610592	2027387809	2027382991
0116-029959	2023-02-10	DPN610592	2027387786	2027387798
0116-029960	2023-02-10	DPN610592	2027387786	2027387798
0116-029961	2023-02-10	DPN610592	2027387786	2027387798
0116-029962	2023-02-10	DPN610592	2027387786	2027387798
0116-029963	2023-02-10	DPN610592	2027387786	2027387798
0116-029964	2023-02-10	DPN610592	2027387785	2027387811
0116-029965	2023-02-10	DPN610592	2027387785	2027387811
0116-029966	2023-02-10	DPN610592	2027387785	2027387811
0116-029967	2023-02-10	DPN610592	2027387785	2027387811
0116-029994	2023-02-10	DPN610592	2027387785	2027387811

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SALES ORDER: SO-092691

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-029995	2023-02-10	DPN610592	2027387785	2027387794	
0116-029996	2023-02-10	DPN610592	2027387813	2027387794	
0116-029997	2023-02-10	DPN610592	2027387813	2027387794	
0116-029998	2023-02-10	DPN610592	2027387813	2027387794	
0116-029999	2023-02-10	DPN610592	2027387813	2027387794	
0116-030005	2023-02-11	DPN610592	2027387813	2027387794	
0116-030006	2023-02-11	DPN610592	2027387813	2027387794	
0116-030007	2023-02-11	DPN610592	2027387813	2027387794	
0116-030008	2023-02-11	DPN610592	2027387813	2027387814	
0116-030009	2023-02-11	DPN610592	2027387813	2027387814	
0116-030010	2023-02-11	DPN610592	2027387813	2027387814	
0116-030011	2023-02-11	DPN610592	2027387813	2027387814	
0116-030012	2023-02-11	DPN610592	2027387813	2027387814	
0116-030013	2023-02-11	DPN610592	2027387813	2027387814	
0116-030014	2023-02-11	DPN610592	2027382982	2027383457	
0116-030015	2023-02-11	DPN610592	2027382982	2027383457	
0116-030016	2023-02-11	DPN610592	2027382982	2027383457	
0116-030017	2023-02-11	DPN610592	2027382982	2027383457	
0116-030018	2023-02-11	DPN610592	2027382982	2027383457	
0116-030019	2023-02-11	DPN610592	2027382984	2027383457	
0116-030020	2023-02-11	DPN610592	2027382984	2027383461	
0116-030021	2023-02-11	DPN610592	2027382984	2027383461	
0116-030022	2023-02-11	DPN610592	2027382984	2027383461	
0116-030023	2023-02-11	DPN610592	2027382984	2027383461	
0116-030024	2023-02-11	DPN610592	2027382984	2027383461	
0116-030025	2023-02-11	DPN610592	2027382974	2027382999	
0116-030026	2023-02-11	DPN610592	2027382974	2027382999	

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030027	2023-02-11	DPN610592	2027382974	2027382999
0116-030028	2023-02-11	DPN610592	2027382974	2027382999
0116-030029	2023-02-11	DPN610592	2027382974	2027382999
0116-030030	2023-02-11	DPN610592	2027382973	2027382999
0116-030031	2023-02-11	DPN610592	2027382973	2027387789
0116-030032	2023-02-11	DPN610592	2027382973	2027387789
0116-030033	2023-02-11	DPN610592	2027382973	2027387789
0116-030034	2023-02-11	DPN610592	2027382973	2027387789
0116-030035	2023-02-11	DPN610592	2027382973	2027387789
0116-030036	2023-02-11	DPN610592	2027382971	2027387789
0116-030037	2023-02-11	DPN610592	2027382971	2027387788
0116-030038	2023-02-11	DPN610592	2027382971	2027387788
0116-030039	2023-02-11	DPN610592	2027382971	2027387788
0116-030040	2023-02-11	DPN610592	2027382971	2027387788
0116-030041	2023-02-11	DPN610592	2027382969	2027387788
0116-030042	2023-02-11	DPN610592	2027382969	2027387788
0116-030043	2023-02-11	DPN610592	2027382969	2027387793
0116-030044	2023-02-11	DPN610592	2027382969	2027387793
0116-030045	2023-02-11	DPN610592	2027382969	2027387793
0116-030046	2023-02-11	DPN610592	2027382969	2027387793
0116-030047	2023-02-11	DPN610592	2027387818	2027387793
0116-030048	2023-02-11	DPN610592	2027387818	2027387793
0116-030049	2023-02-11	DPN610592	2027387818	2027387808
0116-030050	2023-02-11	DPN610592	2027387818	2027387808
0116-030051	2023-02-11	DPN610592	2027387818	2027387808
0116-030052	2023-02-11	DPN610592	2027387815	2027387808
0116-030053	2023-02-11	DPN610592	2027387815	2027387808

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030054	2023-02-11	DPN610592	2027387815	2027387832
0116-030055	2023-02-11	DPN610592	2027387815	2027387832
0116-030056	2023-02-11	DPN610592	2027387815	2027387832
0116-030057	2023-02-11	DPN610592	2027387815	2027387832
0116-030058	2023-02-11	DPN610592	2027383490	2027387832
0116-030059	2023-02-11	DPN610592	2027383490	2027387832
0116-030060	2023-02-11	DPN610592	2027383490	2027387807
0116-030061	2023-02-11	DPN610592	2027383490	2027387807
0116-030062	2023-02-11	DPN610592	2027383490	2027387807
0116-030063	2023-02-11	DPN610592	2027387777	2027387807
0116-030064	2023-02-11	DPN610592	2027387777	2027387807
0116-030065	2023-02-11	DPN610592	2027387777	2027387807
0116-030066	2023-02-11	DPN610592	2027387777	2027387816
0116-030067	2023-02-11	DPN610592	2027387777	2027387816
0116-030068	2023-02-11	DPN610592	2027387777	2027387816
0116-030069	2023-02-11	DPN610592	2027387837	2027387816
0116-030070	2023-02-11	DPN610592	2027387837	2027387816
0116-030071	2023-02-11	DPN610592	2027387837	2027387816
0116-030072	2023-02-11	DPN610592	2027387837	2027387817
0116-030073	2023-02-12	DPN610592	2027387837	2027387817
0116-030074	2023-02-12	DPN610592	2027383487	2027387817
0116-030075	2023-02-12	DPN610592	2027383487	2027387817
0116-030076	2023-02-12	DPN610592	2027383487	2027387817
0116-030077	2023-02-12	DPN610592	2027383487	2027387803
0116-030078	2023-02-12	DPN610592	2027383487	2027387803
0116-030079	2023-02-12	DPN610592	2027383487	2027387803
0116-030080	2023-02-12	DPN610592	2027387783	2027387803

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030081	2023-02-12	DPN610592	2027387783	2027387803
0116-030082	2023-02-12	DPN610592	2027387783	2027387803
0116-030083	2023-02-12	DPN610592	2027387783	2027387806
0116-030084	2023-02-12	DPN610592	2027387783	2027387806
0116-030085	2023-02-12	DPN610592	2027387802	2027387806
0116-030086	2023-02-12	DPN610592	2027387802	2027387806
0116-030087	2023-02-12	DPN610592	2027387802	2027387806
0116-030088	2023-02-12	DPN610592	2027387802	2027387806
0116-030089	2023-02-12	DPN610592	2027387802	2027383503
0116-030090	2023-02-12	DPN610592	2027387802	2027383503
0116-030091	2023-02-12	DPN610592	2027383515	2027383503
0116-030092	2023-02-12	DPN610592	2027383515	2027383503
0116-030093	2023-02-12	DPN610592	2027383515	2027383503
0116-030094	2023-02-12	DPN610592	2027383515	2027387781
0116-030095	2023-02-12	DPN610592	2027383515	2027387781
0116-030096	2023-02-12	DPN610592	2027387784	2027387781
0116-030097	2023-02-12	DPN610592	2027387784	2027387781
0116-030098	2023-02-12	DPN610592	2027387784	2027387781
0116-030099	2023-02-12	DPN610592	2027387784	2027387781
0116-030100	2023-02-12	DPN610592	2027387784	2027387805
0116-030101	2023-02-12	DPN610592	2027387784	2027387805
0116-030102	2023-02-12	DPN610592	2027383488	2027387805
0116-030103	2023-02-12	DPN610592	2027383488	2027387805
0116-030104	2023-02-12	DPN610592	2027383488	2027387805
0116-030105	2023-02-12	DPN610592	2027383488	2027383514
0116-030106	2023-02-12	DPN610592	2027383488	2027383514
0116-030107	2023-02-12	DPN610592	2027387774	2027383514

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PROJECT NUMBER: 856

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030108	2023-02-12	DPN610592	2027387774	2027383514
0116-030109	2023-02-12	DPN610592	2027387774	2027383514
0116-030110	2023-02-12	DPN610592	2027387774	2027383514
0116-030111	2023-02-12	DPN610592	2027387774	2027387782
0116-030112	2023-02-12	DPN610592	2027387774	2027387782
0116-030113	2023-02-12	DPN610592	2027387776	2027387782
0116-030114	2023-02-12	DPN610592	2027387776	2027387782
0116-030115	2023-02-12	DPN610592	2027387776	2027387782
0116-030116	2023-02-12	DPN610592	2027387776	2027387782
0116-030117	2023-02-12	DPN610592	2027387776	2027383513
0116-030118	2023-02-12	DPN610592	2027387776	2027383513
0116-030119	2023-02-12	DPN610592	2027387772	2027383513
0116-030120	2023-02-12	DPN610592	2027387772	2027383513
0116-030121	2023-02-12	DPN610592	2027387772	2027383513
0116-030122	2023-02-12	DPN610592	2027387772	2027383513
0116-030123	2023-02-12	DPN610592	2027387772	2027387779
0116-030124	2023-02-12	DPN610592	2027387772	2027387779
0116-030125	2023-02-12	DPN610592	2027387770	2027387779
0116-030126	2023-02-12	DPN610592	2027387770	2027387779
0116-030127	2023-02-12	DPN610592	2027387770	2027387779
0116-030128	2023-02-12	DPN610592	2027387770	2027387779
0116-030129	2023-02-12	DPN610592	2027387770	2027383489
0116-030130	2023-02-12	DPN610592	2027387770	2027383489
0116-030131	2023-02-12	DPN610592	2027382990	2027383489
0116-030132	2023-02-12	DPN610592	2027382990	2027383489
0116-030133	2023-02-12	DPN610592	2027382990	2027383489
0116-030142	2023-02-12	PPN620520	2027382990	2027383485

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PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030143	2023-02-12	PPN620520	2027382990	2027383485
0116-030144	2023-02-12	PPN620520	2027382990	2027383485
0116-030145	2023-02-12	PPN620520	2027383518	2027383485
0116-030146	2023-02-12	PPN620520	2027383518	2027383485
0116-030147	2023-02-12	PPN620520	2027383518	2027383485
0116-030148	2023-02-12	PPN620520	2027383518	2027383472
0116-030149	2023-02-13	PPN620520	2027383518	2027383472
0116-030150	2023-02-13	PPN620520	2027387768	2027383472
0116-030151	2023-02-13	PPN620520	2027387768	2027383472
0116-030152	2023-02-13	PPN620520	2027387768	2027383472
0116-030153	2023-02-13	PPN620520	2027387768	2027383472
0116-030154	2023-02-13	PPN620520	2027387768	2027387771
0116-030155	2023-02-13	PPN620520	2027387768	2027387771
0116-030156	2023-02-13	PPN620520	2027387775	2027387771
0116-030157	2023-02-13	PPN620520	2027387775	2027387771
0116-030158	2023-02-13	PPN620520	2027387775	2027387771
0116-030159	2023-02-13	PPN620520	2027387775	2027383510
0116-030160	2023-02-13	PPN620520	2027387775	2027383510
0116-030161	2023-02-13	PPN620520	2027383501	2027383510
0116-030162	2023-02-13	PPN620520	2027383501	2027383510
0116-030163	2023-02-13	PPN620520	2027383501	2027383510
0116-030164	2023-02-13	PPN620520	2027383501	2027383510
0116-030165	2023-02-13	PPN620520	2027383501	2027383509
0116-030166	2023-02-13	PPN620520	2027383501	2027383509
0116-030167	2023-02-13	PPN620520	2027383511	2027383509
0116-030168	2023-02-13	PPN620520	2027383511	2027383509
0116-030169	2023-02-13	PPN620520	2027383511	2027383509

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030170	2023-02-13	PPN620520	2027383511	2027387801
0116-030171	2023-02-13	PPN620520	2027383511	2027387801
0116-030172	2023-02-13	PPN620520	2027387778	2027387801
0116-030173	2023-02-13	PPN620520	2027387778	2027387801
0116-030174	2023-02-13	PPN620520	2027387778	2027387801
0116-030175	2023-02-13	PPN620520	2027387778	2027387801
0116-030176	2023-02-13	PPN620520	2027387778	2027383500
0116-030177	2023-02-13	PPN620520	2027387778	2027383500
0116-030178	2023-02-13	PPN620520	2027383512	2027383500
0116-030179	2023-02-13	PPN620520	2027383512	2027383500
0116-030180	2023-02-13	PPN620520	2027383512	2027383500
0116-030181	2023-02-13	PPN620520	2027383512	2027164052
0116-030182	2023-02-13	PPN620520	2027383512	2027164052
0116-030183	2023-02-13	PPN620520	2027387829	2027164052
0116-030184	2023-02-13	PPN620520	2027387829	2027387823
0116-030185	2023-02-13	PPN620520	2027387829	2027387823
0116-030186	2023-02-13	PPN620520	2027387829	2027387823
0116-030187	2023-02-13	PPN620520	2027387829	2027387823
0116-030188	2023-02-13	PPN620520	2027387829	2027387823
0116-030189	2023-02-13	PPN620520	2027383498	2027387823
0116-030190	2023-02-13	PPN620520	2027383498	2027387825
0116-030195	2023-02-13	PPN620520	2027383498	2027387825
0116-030196	2023-02-13	PPN620520	2027383498	2027387825
0116-030197	2023-02-13	PPN620520	2027383498	2027387825
0116-030198	2023-02-13	PPN620520	2027383498	2027387825
0116-030199	2023-02-13	PPN620520	2027387836	2027387825
0116-030200	2023-02-13	PPN620520	2027387836	2027387838

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22 Feb 2023

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030201	2023-02-13	PPN620520	2027387836	2027387838
0116-030202	2023-02-13	PPN620520	2027387836	2027387838
0116-030203	2023-02-13	PPN620520	2027387836	2027387838
0116-030204	2023-02-13	PPN620520	2027387836	2027387838
0116-030205	2023-02-13	PPN620520	2027387839	2027387838
0116-030206	2023-02-13	PPN620520	2027387839	2027387824
0116-030207	2023-02-13	PPN620520	2027387839	2027387824
0116-030208	2023-02-13	PPN620520	2027387839	2027387824
0116-030209	2023-02-13	PPN620520	2027387839	2027387824
0116-030210	2023-02-13	PPN620520	2027387839	2027387824
0116-030211	2023-02-13	PPN620520	2027387826	2027387824
0116-030212	2023-02-13	PPN620520	2027387826	2027387827
0116-030213	2023-02-13	PPN620520	2027387826	2027387827
0116-030214	2023-02-13	PPN620520	2027387826	2027387827
0116-030215	2023-02-13	PPN620520	2027387826	2027387827
0116-030218	2023-02-13	PPN620520	2027383477	2027387828
0116-030219	2023-02-13	PPN620520	2027383477	2027387828
0116-030220	2023-02-13	PPN620520	2027383477	2027387828
0116-030221	2023-02-13	PPN620520	2027383477	2027387828
0116-030222	2023-02-13	PPN620520	2027383477	2027387828
0116-030223	2023-02-14	PPN620520	2027383476	2027387828
0116-030224	2023-02-14	PPN620520	2027383476	2027387828
0116-030225	2023-02-14	PPN620520	2027383476	2027382976
0116-030226	2023-02-14	PPN620520	2027383476	2027382976
0116-030227	2023-02-14	PPN620520	2027383476	2027382976
0116-030228	2023-02-14	PPN620520	2027383476	2027382976
0116-030229	2023-02-14	PPN620520	2027387833	2027382976

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030230	2023-02-14	PPN620520	2027387833	2027387830
0116-030231	2023-02-14	PPN620520	2027387833	2027387830
0116-030232	2023-02-14	PPN620520	2027387833	2027387830
0116-030233	2023-02-14	PPN620520	2027387833	2027387830
0116-030234	2023-02-14	PPN620520	2027382960	2027387830
0116-030236	2023-02-14	PPN620520	2027382960	2027387835
0116-030237	2023-02-14	PPN620520	2027382960	2027387835
0116-030238	2023-02-14	PPN620520	2027382960	2027387835
0116-030239	2023-02-14	PPN620520	2027382960	2027387835
0116-030240	2023-02-14	PPN620520	2027382960	2027387835
0116-030241	2023-02-14	PPN620520	2027382960	2027387792
0116-030242	2023-02-14	PPN620520	2027383497	2027387792
0116-030243	2023-02-14	PPN620520	2027383497	2027387792
0116-030244	2023-02-14	PPN620520	2027383497	2027387792
0116-030245	2023-02-14	PPN620520	2027383497	2027387792
0116-030246	2023-02-14	PPN620520	2027383497	2027387792
0116-030247	2023-02-14	PPN620520	2027382963	2027382970
0116-030248	2023-02-14	PPN620520	2027382963	2027382970
0116-030249	2023-02-14	PPN620520	2027382963	2027382970
0116-030250	2023-02-14	PPN620520	2027382963	2027382970
0116-030251	2023-02-14	PPN620520	2027382963	2027382970
0116-030252	2023-02-14	PPN620520	2027382963	2027382962
0116-030253	2023-02-14	PPN620520	2027383504	2027382962
0116-030254	2023-02-14	PPN620520	2027383504	2027382962
0116-030255	2023-02-14	PPN620520	2027383504	2027382962
0116-030256	2023-02-14	PPN620520	2027383504	2027382962
0116-030257	2023-02-14	PPN620520	2027383504	2027382962

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030258	2023-02-14	PPN620520	2027383504	2027387831
0116-030259	2023-02-14	PPN620520	2027383504	2027387831
0116-030260	2023-02-14	PPN620520	2027382964	2027387831
0116-030261	2023-02-14	PPN620520	2027382964	2027387831
0116-030262	2023-02-14	PPN620520	2027382964	2027387831
0116-030263	2023-02-14	PPN620520	2027382964	2027387831
0116-030265	2023-02-14	PPN620520	2027383507	2027382961
0116-030266	2023-02-14	PPN620520	2027383507	2027382961
0116-030267	2023-02-14	PPN620520	2027383507	2027382961
0116-030268	2023-02-14	PPN620520	2027383507	2027382961
0116-030269	2023-02-14	PPN620520	2027383507	2027382961
0116-030270	2023-02-14	PPN620520	2027383507	2027382994
0116-030271	2023-02-14	PPN620520	2027383495	2027382994
0116-030272	2023-02-14	PPN620520	2027383495	2027382994
0116-030273	2023-02-14	PPN620520	2027383495	2027382994
0116-030274	2023-02-14	PPN620520	2027383495	2027382994
0116-030275	2023-02-14	PPN620520	2027383495	2027382994
0116-030276	2023-02-14	PPN620520	2027383516	2027383502
0116-030277	2023-02-14	PPN620520	2027383516	2027383502
0116-030278	2023-02-14	PPN620520	2027383516	2027383502
0116-030279	2023-02-14	PPN620520	2027383516	2027383502
0116-030280	2023-02-14	PPN620520	2027383516	2027383502
0116-030281	2023-02-14	PPN620520	2027383516	2027382965
0116-030282	2023-02-14	PPN620520	2027383493	2027382965
0116-030283	2023-02-14	PPN620520	2027383493	2027382965
0116-030284	2023-02-14	PPN620520	2027383493	2027382965
0116-030285	2023-02-14	PPN620520	2027383493	2027382965

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030286	2023-02-14	PPN620520	2027383493	2027382965
0116-030287	2023-02-14	PPN620520	2027383493	2027382965
0116-030288	2023-02-14	PPN620520	2027387773	2027383474
0116-030289	2023-02-14	PPN620520	2027387773	2027383474
0116-030290	2023-02-14	PPN620520	2027387773	2027383474
0116-030291	2023-02-14	PPN620520	2027387773	2027383474
0116-030292	2023-02-14	PPN620520	2027387773	2027383474
0116-030293	2023-02-14	PPN620520	2027391286	2027391288
0116-030294	2023-02-14	PPN620520	2027391286	2027391288
0116-030295	2023-02-14	PPN620520	2027391286	2027391288
0116-030296	2023-02-14	PPN620520	2027391286	2027391288
0116-030297	2023-02-14	PPN620520	2027391286	2027391288
0116-030298	2023-02-14	PPN620520	2027391286	2027391288
0116-030299	2023-02-14	PPN620520	2027387840	2027383475
0116-030300	2023-02-14	PPN620520	2027387840	2027383475
0116-030301	2023-02-14	PPN620520	2027387840	2027383475
0116-030302	2023-02-15	PPN620520	2027387840	2027383475
0116-030303	2023-02-15	PPN620520	2027387840	2027383475
0116-030304	2023-02-15	PPN620520	2027391280	2027391278
0116-030305	2023-02-15	PPN620520	2027391280	2027391278
0116-030306	2023-02-15	PPN620520	2027391280	2027391278
0116-030307	2023-02-15	PPN620520	2027391280	2027391278
0116-030308	2023-02-15	PPN620520	2027391280	2027391278
0116-030309	2023-02-15	PPN620520	2027391280	2027391278
0116-030310	2023-02-15	PPN620520	2027383517	2027383519
0116-030311	2023-02-15	PPN620520	2027383517	2027383519
0116-030312	2023-02-15	PPN620520	2027383517	2027383519

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22 Feb 2023

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030313	2023-02-15	PPN620520	2027383517	2027383519
0116-030314	2023-02-15	PPN620520	2027383517	2027383519
0116-030315	2023-02-15	PPN620520	2027387769	2027387834
0116-030316	2023-02-15	PPN620520	2027387769	2027387834
0116-030317	2023-02-15	PPN620520	2027387769	2027387834
0116-030318	2023-02-15	PPN620520	2027387769	2027387834
0116-030319	2023-02-15	PPN620520	2027387769	2027387834
0116-030320	2023-02-15	PPN620520	2027387769	2027387834
0116-030321	2023-02-15	PPN620520	2027383482	2027383505
0116-030322	2023-02-15	PPN620520	2027383482	2027383505
0116-030323	2023-02-15	PPN620520	2027383482	2027383505
0116-030324	2023-02-15	PPN620520	2027383482	2027383505
0116-030325	2023-02-15	PPN620520	2027383482	2027383505
0116-030326	2023-02-15	PPN620520	2027391287	2027387767
0116-030327	2023-02-15	PPN620520	2027391287	2027387767
0116-030328	2023-02-15	PPN620520	2027391287	2027387767
0116-030329	2023-02-15	PPN620520	2027391287	2027387767
0116-030330	2023-02-15	PPN620520	2027391287	2027387767
0116-030331	2023-02-15	PPN620520	2027391287	2027387767
0116-030332	2023-02-15	PPN620520	2027391406	2027391297
0116-030333	2023-02-15	PPN620520	2027391406	2027391297
0116-030334	2023-02-15	PPN620520	2027391406	2027391297
0116-030335	2023-02-15	PPN620520	2027391406	2027391297
0116-030336	2023-02-15	PPN620520	2027391406	2027391297
0116-030337	2023-02-15	PPN620520	2027391406	2027391297
0116-030338	2023-02-15	PPN620520	2027391413	2027391410
0116-030339	2023-02-15	PPN620520	2027391413	2027391410

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME: GIBBONS CREEK SITE A & F LF

0116-030340	2023-02-15	PPN620520	2027391413	2027391410
0116-030341	2023-02-15	PPN620520	2027391413	2027391410
0116-030342	2023-02-15	PPN620520	2027391413	2027391410
0116-030343	2023-02-15	PPN620520	2027391411	2027391407
0116-030344	2023-02-15	PPN620520	2027391411	2027391407
0116-030345	2023-02-15	PPN620520	2027391411	2027391407
0116-030346	2023-02-15	PPN620520	2027391411	2027391407

QUANTITY (ROLLS): 511

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Rolls Unit
1	Thickness (min. avg.)		ASTM D5199	1/50,000 ft²	mils
2	Carbon Black Content		ASTM D4218	1/50,000 ft²	%
3	Density (min.)		ASTM D792	1/50,000 ft²	g/cm³
4	Tensile Stength (MD)	MD	ASTM D7179	1/50,000 ft²	lbf/in
5	Ply Adhesion Average (min. avg.)	Top	ASTM D7005	1/50,000 ft²	lbf/in
6	Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	1/50,000 ft²	lbf/in

Test	1	2	3	4	5	6
SPECIFICATIONS	**200**	**2.0**	**0.94**	**45**	**1.0**	**1.0**
0116-029766	227.00	2.27	0.951	64	2.4	3.19
0116-029767	227.00	2.27	0.951	64	2.4	3.19
0116-029768	227.00	2.27	0.951	64	2.4	3.19
0116-029769	227.00	2.27	0.951	64	2.4	3.19
0116-029770	227.00	2.27	0.951	64	2.4	3.19
0116-029771	231.00	2.32	0.951	64	2.4	3.19
0116-029772	231.00	2.32	0.951	64	2.4	3.19
0116-029773	231.00	2.32	0.951	64	2.4	3.19
0116-029774	231.00	2.32	0.951	64	2.4	3.19
0116-029775	231.00	2.32	0.951	64	2.4	3.19
0116-029776	222.40	2.22	0.951	64	2.4	3.19
0116-029777	222.40	2.22	0.951	64	2.4	3.19
0116-029778	222.40	2.22	0.951	64	2.4	3.19
0116-029779	222.40	2.22	0.951	64	2.4	3.19
0116-029780	222.40	2.22	0.951	64	2.4	3.19
0116-029781	229.60	2.27	0.951	64	2.4	3.19
0116-029782	229.60	2.27	0.951	64	2.4	3.19
0116-029783	229.60	2.27	0.951	64	2.4	3.19
0116-029784	229.60	2.27	0.951	64	2.4	3.19
0116-029785	229.60	2.27	0.951	64	2.4	3.19
0116-029786	223.20	2.22	0.951	63	2.5	2.05
0116-029787	223.20	2.22	0.951	63	2.5	2.05

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-029788	223.20	2.22	0.951	63	2.5	2.05
0116-029789	223.20	2.22	0.951	63	2.5	2.05
0116-029790	223.20	2.22	0.951	63	2.5	2.05
0116-029791	223.00	2.34	0.951	63	2.5	2.05
0116-029792	223.00	2.34	0.951	63	2.5	2.05
0116-029793	223.00	2.34	0.951	63	2.5	2.05
0116-029794	223.00	2.34	0.951	63	2.5	2.05
0116-029795	223.00	2.34	0.951	63	2.5	2.05
0116-029796	226.80	2.45	0.954	61	2.0	4.02
0116-029797	226.80	2.45	0.954	61	2.0	4.02
0116-029798	226.80	2.45	0.954	61	2.0	4.02
0116-029799	226.80	2.45	0.954	61	2.0	4.02
0116-029800	226.80	2.45	0.954	61	2.0	4.02
0116-029801	221.00	2.52	0.954	61	2.0	4.02
0116-029802	221.00	2.52	0.954	61	2.0	4.02
0116-029803	221.00	2.52	0.954	61	2.0	4.02
0116-029804	221.00	2.52	0.954	61	2.0	4.02
0116-029805	221.00	2.52	0.954	61	2.0	4.02
0116-029806	220.60	2.53	0.957	64	3.2	4.54
0116-029807	220.60	2.53	0.957	64	3.2	4.54
0116-029808	220.60	2.53	0.957	64	3.2	4.54
0116-029820	229.70	2.56	0.951	67	4.0	4.58
0116-029821	229.70	2.56	0.951	67	4.0	4.58
0116-029822	229.70	2.56	0.951	67	4.0	4.58
0116-029823	229.70	2.56	0.951	67	4.0	4.58
0116-029824	229.70	2.56	0.951	67	4.0	4.58
0116-029825	232.30	2.76	0.951	67	4.0	4.58
0116-029827	232.30	2.76	0.951	67	4.0	4.58
0116-029828	232.30	2.76	0.951	67	4.0	4.58
0116-029829	232.30	2.76	0.951	67	4.0	4.58
0116-029830	232.30	2.76	0.951	67	4.0	4.58
0116-029831	225.30	2.57	0.955	67	3.4	5.06
0116-029832	225.30	2.57	0.955	67	3.4	5.06
0116-029833	225.30	2.57	0.955	67	3.4	5.06
0116-029834	225.30	2.57	0.955	67	3.4	5.06

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-029835	225.30	2.57	0.955	67	3.4	5.06
0116-029836	229.70	2.50	0.955	67	3.4	5.06
0116-029837	229.70	2.50	0.955	67	3.4	5.06
0116-029838	229.70	2.50	0.955	67	3.4	5.06
0116-029839	229.70	2.50	0.955	67	3.4	5.06
0116-029840	229.70	2.50	0.955	67	3.4	5.06
0116-029841	232.30	2.59	0.951	69	2.6	3.18
0116-029842	232.30	2.59	0.951	69	2.6	3.18
0116-029843	232.30	2.59	0.951	69	2.6	3.18
0116-029844	232.30	2.59	0.951	69	2.6	3.18
0116-029845	232.30	2.59	0.951	69	2.6	3.18
0116-029846	228.70	2.73	0.951	69	2.6	3.18
0116-029847	228.70	2.73	0.951	69	2.6	3.18
0116-029848	228.70	2.73	0.951	69	2.6	3.18
0116-029849	228.70	2.73	0.951	69	2.6	3.18
0116-029850	228.70	2.73	0.951	69	2.6	3.18
0116-029851	229.00	2.45	0.950	68	2.8	3.2
0116-029852	229.00	2.45	0.950	68	2.8	3.2
0116-029853	229.00	2.45	0.950	68	2.8	3.2
0116-029854	229.00	2.45	0.950	68	2.8	3.2
0116-029855	229.00	2.45	0.950	68	2.8	3.2
0116-029856	235.40	2.42	0.950	68	2.8	3.2
0116-029857	235.40	2.42	0.950	68	2.8	3.2
0116-029858	235.40	2.42	0.950	68	2.8	3.2
0116-029859	235.40	2.42	0.950	68	2.8	3.2
0116-029860	235.40	2.42	0.950	68	2.8	3.2
0116-029861	233.00	2.43	0.950	70	3.2	3.2
0116-029862	233.00	2.43	0.950	70	3.2	3.2
0116-029863	233.00	2.43	0.950	70	3.2	3.2
0116-029864	233.00	2.43	0.950	70	3.2	3.2
0116-029865	233.00	2.43	0.950	70	3.2	3.2
0116-029866	233.80	2.44	0.950	70	3.2	3.2
0116-029867	233.80	2.44	0.950	70	3.2	3.2
0116-029868	233.80	2.44	0.950	70	3.2	3.2
0116-029869	233.80	2.44	0.950	70	3.2	3.2

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-029870	233.80	2.44	0.950	70	3.2	3.2
0116-029877	231.80	2.23	0.951	68	5.0	4.24
0116-029878	231.80	2.23	0.951	68	5.0	4.24
0116-029879	231.80	2.23	0.951	68	5.0	4.24
0116-029880	231.80	2.23	0.951	68	5.0	4.24
0116-029881	231.80	2.23	0.951	68	5.0	4.24
0116-029882	220.00	2.50	0.951	68	5.0	4.24
0116-029883	220.00	2.50	0.951	68	5.0	4.24
0116-029884	220.00	2.50	0.951	68	5.0	4.24
0116-029885	220.00	2.50	0.951	68	5.0	4.24
0116-029886	220.00	2.50	0.951	68	5.0	4.24
0116-029887	227.70	2.36	0.949	63	1.9	1.56
0116-029888	227.70	2.36	0.949	63	1.9	1.56
0116-029889	227.70	2.36	0.949	63	1.9	1.56
0116-029890	227.70	2.36	0.949	63	1.9	1.56
0116-029891	227.70	2.36	0.949	63	1.9	1.56
0116-029892	241.30	2.24	0.949	63	1.9	1.56
0116-029893	241.30	2.24	0.949	63	1.9	1.56
0116-029894	241.30	2.24	0.949	63	1.9	1.56
0116-029895	241.30	2.24	0.949	63	1.9	1.56
0116-029896	241.30	2.24	0.949	63	1.9	1.56
0116-029897	231.70	2.32	0.953	69	2.8	4.7
0116-029898	231.70	2.32	0.953	69	2.8	4.7
0116-029899	231.70	2.32	0.953	69	2.8	4.7
0116-029900	231.70	2.32	0.953	69	2.8	4.7
0116-029901	231.70	2.32	0.953	69	2.8	4.7
0116-029902	233.30	2.28	0.953	69	2.8	4.7
0116-029903	233.30	2.28	0.953	69	2.8	4.7
0116-029904	233.30	2.28	0.953	69	2.8	4.7
0116-029905	233.30	2.28	0.953	69	2.8	4.7
0116-029906	233.30	2.28	0.953	69	2.8	4.7
0116-029907	233.00	2.38	0.952	70	4.2	5.75
0116-029908	233.00	2.38	0.952	70	4.2	5.75
0116-029909	233.00	2.38	0.952	70	4.2	5.75
0116-029915	225.70	2.38	0.952	67	4.2	3.37

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-029916	225.70	2.38	0.952	67	4.2	3.37
0116-029917	225.70	2.38	0.952	67	4.2	3.37
0116-029918	225.70	2.38	0.952	67	4.2	3.37
0116-029919	225.70	2.38	0.952	67	4.2	3.37
0116-029920	228.00	2.38	0.952	67	4.2	3.37
0116-029921	228.00	2.33	0.952	67	4.2	3.37
0116-029922	228.00	2.33	0.952	67	4.2	3.37
0116-029923	228.00	2.33	0.952	67	4.2	3.37
0116-029924	228.00	2.33	0.952	67	4.2	3.37
0116-029925	228.00	2.33	0.952	67	4.2	3.37
0116-029926	226.00	2.25	0.952	67	2.0	2.11
0116-029927	226.00	2.25	0.952	67	2.0	2.11
0116-029928	226.00	2.25	0.952	67	2.0	2.11
0116-029929	226.00	2.25	0.952	67	2.0	2.11
0116-029930	226.00	2.25	0.952	67	2.0	2.11
0116-029931	225.00	2.23	0.952	67	2.0	2.11
0116-029932	225.00	2.23	0.952	67	2.0	2.11
0116-029933	225.00	2.23	0.952	67	2.0	2.11
0116-029934	225.00	2.23	0.952	67	2.0	2.11
0116-029935	225.00	2.23	0.952	67	2.0	2.11
0116-029936	222.60	2.30	0.950	62	1.9	1.68
0116-029937	222.60	2.30	0.950	62	1.9	1.68
0116-029938	222.60	2.30	0.950	62	1.9	1.68
0116-029939	222.60	2.30	0.950	62	1.9	1.68
0116-029940	222.60	2.30	0.950	62	1.9	1.68
0116-029941	223.60	2.35	0.950	62	1.9	1.68
0116-029942	223.60	2.35	0.950	62	1.9	1.68
0116-029943	223.60	2.35	0.950	62	1.9	1.68
0116-029944	223.60	2.35	0.950	62	1.9	1.68
0116-029945	223.60	2.35	0.950	62	1.9	1.68
0116-029946	226.80	2.30	0.950	62	2.0	1.77
0116-029947	226.80	2.30	0.950	62	2.0	1.77
0116-029948	226.80	2.30	0.950	62	2.0	1.77
0116-029949	226.80	2.30	0.950	62	2.0	1.77
0116-029950	226.80	2.30	0.950	62	2.0	1.77

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-029951	220.40	2.36	0.950	62	2.0	1.77
0116-029952	220.40	2.36	0.950	62	2.0	1.77
0116-029953	220.40	2.36	0.950	62	2.0	1.77
0116-029954	220.40	2.36	0.950	62	2.0	1.77
0116-029955	220.40	2.36	0.950	62	2.0	1.77
0116-029956	228.00	2.54	0.954	64	2.7	4.32
0116-029957	228.00	2.54	0.954	64	2.7	4.32
0116-029958	228.00	2.54	0.954	64	2.7	4.32
0116-029959	228.00	2.54	0.954	64	2.7	4.32
0116-029960	228.00	2.54	0.954	64	2.7	4.32
0116-029961	227.20	2.52	0.954	64	2.7	4.32
0116-029962	227.20	2.52	0.954	64	2.7	4.32
0116-029963	227.20	2.52	0.954	64	2.7	4.32
0116-029964	227.20	2.52	0.954	64	2.7	4.32
0116-029965	227.20	2.52	0.954	64	2.7	4.32
0116-029966	227.20	2.51	0.953	68	3.3	4.82
0116-029967	227.20	2.51	0.953	68	3.3	4.82
0116-029994	222.40	2.32	0.951	65	3.9	3.41
0116-029995	222.40	2.32	0.951	65	3.9	3.41
0116-029996	222.40	2.32	0.951	65	3.9	3.41
0116-029997	222.40	2.32	0.951	65	3.9	3.41
0116-029998	222.40	2.32	0.951	65	3.9	3.41
0116-029999	222.20	2.39	0.951	65	3.9	3.41
0116-030005	230.60	2.42	0.954	67	3.0	2.81
0116-030006	230.60	2.42	0.954	67	3.0	2.81
0116-030007	230.60	2.42	0.954	67	3.0	2.81
0116-030008	230.60	2.42	0.954	67	3.0	2.81
0116-030009	230.60	2.42	0.954	67	3.0	2.81
0116-030010	229.00	2.44	0.954	67	3.0	2.81
0116-030011	229.00	2.44	0.954	67	3.0	2.81
0116-030012	229.00	2.44	0.954	67	3.0	2.81
0116-030013	229.00	2.44	0.954	67	3.0	2.81
0116-030014	229.00	2.44	0.954	67	3.0	2.81
0116-030015	229.00	2.48	0.953	66	2.0	1.92
0116-030016	229.00	2.48	0.953	66	2.0	1.92

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030017	229.00	2.48	0.953	66	2.0	1.92
0116-030018	229.00	2.48	0.953	66	2.0	1.92
0116-030019	229.00	2.48	0.953	66	2.0	1.92
0116-030020	228.40	2.45	0.954	66	2.0	1.92
0116-030021	228.40	2.45	0.954	66	2.0	1.92
0116-030022	228.40	2.45	0.954	66	2.0	1.92
0116-030023	228.40	2.45	0.954	66	2.0	1.92
0116-030024	228.40	2.45	0.954	66	2.0	1.92
0116-030025	228.80	2.45	0.953	66	2.9	2.45
0116-030026	228.80	2.45	0.953	66	2.9	2.45
0116-030027	228.80	2.45	0.953	66	2.9	2.45
0116-030028	228.80	2.45	0.953	66	2.9	2.45
0116-030029	228.80	2.45	0.953	66	2.9	2.45
0116-030030	222.60	2.41	0.953	66	2.9	2.45
0116-030031	222.60	2.41	0.953	66	2.9	2.45
0116-030032	222.60	2.41	0.953	66	2.9	2.45
0116-030033	222.60	2.41	0.953	66	2.9	2.45
0116-030034	222.60	2.41	0.953	66	2.9	2.45
0116-030035	229.20	2.43	0.958	60	1.3	2.61
0116-030036	229.20	2.43	0.958	60	1.3	2.61
0116-030037	229.20	2.43	0.958	60	1.3	2.61
0116-030038	229.20	2.43	0.958	60	1.3	2.61
0116-030039	229.20	2.43	0.958	60	1.3	2.61
0116-030040	226.00	2.41	0.958	60	1.3	2.61
0116-030041	226.00	2.41	0.958	60	1.3	2.61
0116-030042	226.00	2.41	0.958	60	1.3	2.61
0116-030043	226.00	2.41	0.958	60	1.3	2.61
0116-030044	226.00	2.41	0.958	60	1.3	2.61
0116-030045	225.40	2.31	0.959	69	1.4	2.28
0116-030046	225.40	2.31	0.959	69	1.4	2.28
0116-030047	225.40	2.31	0.959	69	1.4	2.28
0116-030048	225.40	2.31	0.959	69	1.4	2.28
0116-030049	225.40	2.31	0.959	69	1.4	2.28
0116-030050	226.00	2.48	0.959	69	1.4	2.28
0116-030051	226.00	2.48	0.959	69	1.4	2.28

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX

MANUFACTURING QUALITY CONTROL

SOLMAX APPROVED QUALITY ASSURANCE

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030052	226.00	2.48	0.959	69	1.4	2.28
0116-030053	226.00	2.48	0.959	69	1.4	2.28
0116-030054	226.00	2.48	0.959	69	1.4	2.28
0116-030055	229.40	2.24	0.952	65	2.4	2.19
0116-030056	229.40	2.24	0.952	65	2.4	2.19
0116-030057	229.40	2.24	0.952	65	2.4	2.19
0116-030058	229.40	2.24	0.952	65	2.4	2.19
0116-030059	229.40	2.24	0.952	65	2.4	2.19
0116-030060	225.40	2.47	0.956	65	2.4	2.19
0116-030061	225.40	2.47	0.952	65	2.4	2.19
0116-030062	225.40	2.47	0.952	65	2.4	2.19
0116-030063	225.40	2.47	0.952	65	2.4	2.19
0116-030064	225.40	2.47	0.952	65	2.4	2.19
0116-030065	219.40	2.38	0.950	67	2.3	2.12
0116-030066	219.40	2.38	0.950	67	2.3	2.12
0116-030067	219.40	2.38	0.950	67	2.3	2.12
0116-030068	219.40	2.38	0.950	67	2.3	2.12
0116-030069	219.40	2.38	0.950	67	2.3	2.12
0116-030070	221.00	2.49	0.950	67	2.3	2.12
0116-030071	221.00	2.49	0.950	67	2.3	2.12
0116-030072	221.00	2.49	0.950	67	2.3	2.12
0116-030073	221.00	2.49	0.950	67	2.3	2.12
0116-030074	221.00	2.49	0.950	67	2.3	2.12
0116-030075	222.20	2.49	0.950	67	2.9	4.74
0116-030076	222.20	2.49	0.950	67	2.9	4.74
0116-030077	222.20	2.49	0.950	67	2.9	4.74
0116-030078	222.20	2.49	0.950	67	2.9	4.74
0116-030079	222.20	2.49	0.950	67	2.9	4.74
0116-030080	225.00	2.50	0.950	67	2.9	4.74
0116-030081	225.00	2.50	0.950	67	2.9	4.74
0116-030082	225.00	2.50	0.950	67	2.9	4.74
0116-030083	225.00	2.50	0.950	67	2.9	4.74
0116-030084	225.00	2.50	0.950	67	2.9	4.74
0116-030085	223.00	2.53	0.950	63	3.9	3.05
0116-030086	223.00	2.53	0.950	63	3.9	3.05

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030087	223.00	2.53	0.950	63	3.9	3.05
0116-030088	223.00	2.53	0.950	63	3.9	3.05
0116-030089	223.00	2.53	0.950	63	3.9	3.05
0116-030090	225.70	2.67	0.950	63	3.9	3.05
0116-030091	225.70	2.67	0.950	63	3.9	3.05
0116-030092	225.70	2.67	0.950	63	3.9	3.05
0116-030093	225.70	2.67	0.950	63	3.9	3.05
0116-030094	225.70	2.67	0.950	63	3.9	3.05
0116-030095	223.00	2.51	0.952	64	3.6	2.73
0116-030096	223.00	2.51	0.952	64	3.6	2.73
0116-030097	223.00	2.51	0.952	64	3.6	2.73
0116-030098	223.00	2.51	0.952	64	3.6	2.73
0116-030099	223.00	2.51	0.952	64	3.6	2.73
0116-030100	225.00	2.59	0.952	64	3.6	2.73
0116-030101	225.00	2.59	0.952	64	3.6	2.73
0116-030102	225.00	2.59	0.952	64	3.6	2.73
0116-030103	225.00	2.59	0.952	64	3.6	2.73
0116-030104	225.00	2.59	0.952	64	3.6	2.73
0116-030105	227.30	2.42	0.953	66	2.2	1.55
0116-030106	227.30	2.42	0.953	66	2.2	1.55
0116-030107	227.30	2.42	0.953	66	2.2	1.55
0116-030108	227.30	2.42	0.953	66	2.2	1.55
0116-030109	227.30	2.42	0.953	66	2.2	1.55
0116-030110	222.30	2.45	0.953	66	2.2	1.55
0116-030111	222.30	2.45	0.953	66	2.2	1.55
0116-030112	222.30	2.45	0.953	66	2.2	1.55
0116-030113	222.30	2.45	0.953	66	2.2	1.55
0116-030114	222.30	2.45	0.953	66	2.2	1.55
0116-030115	228.70	2.47	0.953	65	2.9	2.29
0116-030116	228.70	2.47	0.953	65	2.9	2.29
0116-030117	228.70	2.47	0.953	65	2.9	2.29
0116-030118	228.70	2.47	0.953	65	2.9	2.29
0116-030119	228.70	2.47	0.953	65	2.9	2.29
0116-030120	225.80	2.55	0.955	65	2.9	2.29
0116-030121	225.80	2.55	0.955	65	2.9	2.29

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030122	225.80	2.55	0.955	65	2.9	2.29
0116-030123	225.80	2.55	0.955	65	2.9	2.29
0116-030124	225.80	2.55	0.955	65	2.9	2.29
0116-030125	228.50	2.53	0.952	66	3.8	3.75
0116-030126	228.50	2.53	0.952	66	3.8	3.75
0116-030127	228.50	2.53	0.952	66	3.8	3.75
0116-030128	228.50	2.53	0.952	66	3.8	3.75
0116-030129	228.50	2.53	0.952	66	3.8	3.75
0116-030130	223.80	2.51	0.952	66	3.8	3.75
0116-030131	223.80	2.51	0.952	66	3.8	3.75
0116-030132	223.80	2.51	0.952	66	3.8	3.75
0116-030133	223.80	2.51	0.952	66	3.8	3.75
0116-030142	222.40	2.50	0.952	62	2.6	3.98
0116-030143	222.40	2.50	0.952	62	2.6	3.98
0116-030144	222.40	2.50	0.952	62	2.6	3.98
0116-030145	222.40	2.50	0.952	62	2.6	3.98
0116-030146	222.40	2.50	0.952	62	2.6	3.98
0116-030147	218.60	2.47	0.952	62	2.6	3.98
0116-030148	218.60	2.47	0.952	62	2.6	3.98
0116-030149	218.60	2.47	0.952	62	2.6	3.98
0116-030150	218.60	2.47	0.952	62	2.6	3.98
0116-030151	218.60	2.47	0.952	62	2.6	3.98
0116-030152	221.70	2.56	0.954	64	1.2	3.13
0116-030153	221.70	2.56	0.954	64	1.2	3.13
0116-030154	221.70	2.56	0.954	64	1.2	3.13
0116-030155	221.70	2.56	0.954	64	1.2	3.13
0116-030156	221.70	2.56	0.954	64	1.2	3.13
0116-030157	226.70	2.52	0.954	64	1.2	3.13
0116-030158	226.70	2.52	0.954	64	1.2	3.13
0116-030159	226.70	2.52	0.954	64	1.2	3.13
0116-030160	226.70	2.52	0.954	64	1.2	3.13
0116-030161	226.70	2.52	0.954	64	1.2	3.13
0116-030162	224.30	2.50	0.953	65	2.1	3.56
0116-030163	224.30	2.50	0.953	65	2.1	3.56
0116-030164	224.30	2.50	0.953	65	2.1	3.56

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030165	224.30	2.50	0.953	65	2.1	3.56
0116-030166	224.30	2.50	0.953	65	2.1	3.56
0116-030167	226.70	2.52	0.953	65	2.1	3.56
0116-030168	226.70	2.52	0.953	65	2.1	3.56
0116-030169	226.70	2.52	0.953	65	2.1	3.56
0116-030170	226.70	2.52	0.953	65	2.1	3.56
0116-030171	226.70	2.52	0.953	65	2.1	3.56
0116-030172	222.00	2.45	0.950	64	3.0	2.88
0116-030173	222.00	2.45	0.950	64	3.0	2.88
0116-030174	222.00	2.45	0.950	64	3.0	2.88
0116-030175	222.00	2.45	0.950	64	3.0	2.88
0116-030176	222.00	2.45	0.950	64	3.0	2.88
0116-030177	218.30	2.58	0.950	64	3.0	2.88
0116-030178	218.30	2.58	0.950	64	3.0	2.88
0116-030179	218.30	2.58	0.950	64	3.0	2.88
0116-030180	218.30	2.58	0.950	64	3.0	2.88
0116-030181	225.30	2.47	0.950	68	3.5	3.07
0116-030182	225.30	2.47	0.952	68	3.5	3.07
0116-030183	225.30	2.47	0.952	68	3.5	3.07
0116-030184	225.30	2.47	0.952	68	3.5	3.07
0116-030185	225.30	2.47	0.952	68	3.5	3.07
0116-030186	225.30	2.47	0.952	68	3.5	3.07
0116-030187	221.00	2.44	0.952	68	3.5	3.07
0116-030188	221.00	2.44	0.952	68	3.5	3.07
0116-030189	221.00	2.44	0.952	68	3.5	3.07
0116-030190	221.00	2.44	0.952	68	3.5	3.07
0116-030195	230.60	2.76	0.952	73	1.5	1.25
0116-030196	230.60	2.78	0.951	65	1.5	1.57
0116-030197	230.60	2.78	0.951	65	1.5	1.57
0116-030198	230.60	2.78	0.951	65	1.5	1.57
0116-030199	230.60	2.78	0.951	65	1.5	1.57
0116-030200	231.00	2.78	0.951	78	1.2	1.12
0116-030201	231.00	2.78	0.951	78	1.2	1.12
0116-030202	231.00	2.78	0.951	78	1.2	1.12
0116-030203	231.00	2.78	0.951	78	1.2	1.12

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030204	231.00	2.78	0.951	78	1.2	1.12
0116-030205	231.70	2.68	0.951	78	1.2	1.12
0116-030206	231.70	2.68	0.951	78	1.2	1.12
0116-030207	231.70	2.68	0.951	78	1.2	1.12
0116-030208	231.70	2.68	0.951	78	1.2	1.12
0116-030209	231.70	2.68	0.951	78	1.2	1.12
0116-030210	231.00	2.55	0.958	67	2.9	3.28
0116-030211	231.00	2.68	0.958	67	2.9	3.28
0116-030212	231.00	2.68	0.958	67	2.9	3.28
0116-030213	231.00	2.68	0.958	67	2.9	3.28
0116-030214	233.70	2.71	0.958	67	2.9	3.28
0116-030215	233.70	2.71	0.958	67	2.9	3.28
0116-030218	230.10	2.68	0.957	74	2.2	1.51
0116-030219	230.10	2.68	0.957	74	2.2	1.51
0116-030220	230.10	2.68	0.957	74	2.2	1.51
0116-030221	230.10	2.68	0.957	74	2.2	1.51
0116-030222	230.50	2.68	0.957	74	2.1	1.51
0116-030223	230.50	2.68	0.957	74	2.1	1.51
0116-030224	230.50	2.68	0.957	74	2.1	1.51
0116-030225	230.50	2.68	0.957	74	2.1	1.51
0116-030226	230.50	2.68	0.957	74	2.1	1.51
0116-030227	228.00	2.57	0.954	71	3.8	4.11
0116-030228	228.00	2.57	0.954	71	3.8	4.11
0116-030229	228.00	2.57	0.954	71	3.8	4.11
0116-030230	228.00	2.57	0.954	71	3.8	4.11
0116-030231	228.00	2.57	0.954	71	3.8	4.11
0116-030232	227.30	2.59	0.954	71	3.8	4.11
0116-030233	227.30	2.59	0.954	71	3.8	4.11
0116-030234	227.30	2.59	0.954	71	3.8	4.11
0116-030236	227.30	2.59	0.954	71	3.8	4.11
0116-030237	227.30	2.59	0.954	71	3.8	4.11
0116-030238	231.70	2.45	0.954	67	3.9	4.98
0116-030239	231.70	2.45	0.954	67	3.9	4.98
0116-030240	231.70	2.45	0.954	67	3.9	4.98
0116-030241	231.70	2.45	0.954	67	3.9	4.98

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030242	231.70	2.45	0.954	67	3.9	4.98
0116-030243	227.70	2.53	0.954	67	3.9	4.98
0116-030244	227.70	2.53	0.954	67	3.9	4.98
0116-030245	227.70	2.53	0.954	67	3.9	4.98
0116-030246	227.70	2.53	0.954	67	3.9	4.98
0116-030247	227.70	2.53	0.954	67	3.9	4.98
0116-030248	263.30	2.45	0.953	65	3.7	4.02
0116-030249	263.30	2.45	0.953	65	3.7	4.02
0116-030250	263.30	2.45	0.953	65	3.7	4.02
0116-030251	263.30	2.45	0.953	65	3.7	4.02
0116-030252	263.30	2.45	0.953	65	3.7	4.02
0116-030253	234.00	2.60	0.953	65	3.7	4.02
0116-030254	234.00	2.60	0.953	65	3.7	4.02
0116-030255	234.00	2.60	0.953	65	3.7	4.02
0116-030256	234.00	2.60	0.953	65	3.7	4.02
0116-030257	234.00	2.60	0.953	65	3.7	4.02
0116-030258	227.30	2.60	0.953	66	3.6	3.18
0116-030259	227.30	2.60	0.953	66	3.6	3.18
0116-030260	227.30	2.60	0.953	66	3.6	3.18
0116-030261	227.30	2.60	0.953	66	3.6	3.18
0116-030262	227.30	2.60	0.953	66	3.6	3.18
0116-030263	229.00	2.53	0.953	66	3.6	3.18
0116-030265	228.60	2.68	0.954	69	1.6	1.89
0116-030266	228.60	2.68	0.954	69	1.6	1.89
0116-030267	228.60	2.68	0.954	69	1.6	1.89
0116-030268	228.60	2.68	0.954	69	1.6	1.89
0116-030269	228.60	2.68	0.954	69	1.6	1.89
0116-030270	226.00	2.47	0.954	69	1.6	1.89
0116-030271	226.00	2.47	0.954	69	1.6	1.89
0116-030272	226.00	2.47	0.954	69	1.6	1.89
0116-030273	226.00	2.47	0.954	69	1.6	1.89
0116-030274	226.00	2.47	0.954	69	1.6	1.89
0116-030275	332.60	2.31	0.951	65	3.3	1.44
0116-030276	332.60	2.31	0.951	65	3.3	1.44
0116-030277	332.60	2.31	0.951	65	3.3	1.44

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030278	332.60	2.31	0.951	65	3.3	1.44
0116-030279	332.60	2.31	0.951	65	3.3	1.44
0116-030280	228.40	2.56	0.951	65	3.3	1.44
0116-030281	228.40	2.56	0.951	65	3.3	1.44
0116-030282	228.40	2.56	0.951	65	3.3	1.44
0116-030283	228.40	2.56	0.951	65	3.3	1.44
0116-030284	228.40	2.56	0.951	65	3.3	1.44
0116-030285	230.40	2.66	0.950	69	4.4	4.01
0116-030286	230.40	2.66	0.950	69	4.4	4.01
0116-030287	230.40	2.66	0.950	69	4.4	4.01
0116-030288	230.40	2.66	0.950	69	4.4	4.01
0116-030289	230.40	2.66	0.950	69	4.4	4.01
0116-030290	225.00	2.55	0.950	69	4.4	4.01
0116-030291	225.00	2.55	0.950	69	4.4	4.01
0116-030292	225.00	2.55	0.950	69	4.4	4.01
0116-030293	225.00	2.55	0.950	69	4.4	4.01
0116-030294	225.00	2.55	0.950	69	4.4	4.01
0116-030295	223.20	2.63	0.955	67	3.1	2.37
0116-030296	223.20	2.63	0.955	67	3.1	2.37
0116-030297	223.20	2.63	0.955	67	3.1	2.37
0116-030298	223.20	2.63	0.955	67	3.1	2.37
0116-030299	223.20	2.63	0.955	67	3.1	2.37
0116-030300	227.00	2.29	0.955	67	3.1	2.37
0116-030301	227.00	2.29	0.955	67	3.1	2.37
0116-030302	227.00	2.29	0.955	67	3.1	2.37
0116-030303	227.00	2.29	0.955	67	3.1	2.37
0116-030304	227.00	2.29	0.955	67	3.1	2.37
0116-030305	227.20	2.64	0.955	65	2.8	3.37
0116-030306	227.20	2.64	0.955	65	2.8	3.37
0116-030307	227.20	2.64	0.955	65	2.8	3.37
0116-030308	227.20	2.64	0.955	65	2.8	3.37
0116-030309	227.20	2.64	0.955	65	2.8	3.37
0116-030310	226.80	2.60	0.955	65	2.8	3.37
0116-030311	226.80	2.60	0.955	65	2.8	3.37
0116-030312	226.80	2.60	0.955	65	2.8	3.37

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PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6
0116-030313	226.80	2.60	0.955	65	2.8	3.37
0116-030314	226.80	2.60	0.955	65	2.8	3.37
0116-030315	226.80	2.66	0.952	67	3.7	2.48
0116-030316	226.80	2.66	0.952	67	3.7	2.48
0116-030317	226.80	2.66	0.952	67	3.7	2.48
0116-030318	226.80	2.66	0.952	67	3.7	2.48
0116-030319	226.80	2.66	0.952	67	3.7	2.48
0116-030320	228.20	2.61	0.952	67	3.7	2.48
0116-030321	228.20	2.61	0.952	67	3.7	2.48
0116-030322	228.20	2.61	0.952	67	3.7	2.48
0116-030323	228.20	2.61	0.952	67	3.7	2.48
0116-030324	228.20	2.61	0.952	67	3.7	2.48
0116-030325	227.60	2.57	0.957	66	2.4	4.26
0116-030326	227.60	2.57	0.957	66	2.4	4.26
0116-030327	227.60	2.57	0.957	66	2.4	4.26
0116-030328	227.60	2.57	0.957	66	2.4	4.26
0116-030329	227.60	2.57	0.957	66	2.4	4.26
0116-030330	228.60	2.69	0.957	66	2.4	4.26
0116-030331	228.60	2.69	0.957	66	2.4	4.26
0116-030332	228.60	2.69	0.957	66	2.4	4.26
0116-030333	228.60	2.69	0.957	66	2.4	4.26
0116-030334	228.60	2.69	0.957	66	2.4	4.26
0116-030335	227.00	2.67	0.957	69	3.9	3.07
0116-030336	227.00	2.67	0.957	69	3.9	3.07
0116-030337	227.00	2.67	0.957	69	3.9	3.07
0116-030338	227.00	2.67	0.957	69	3.9	3.07
0116-030339	227.00	2.67	0.957	69	3.9	3.07
0116-030340	218.30	2.69	0.956	60	2.5	2.64
0116-030341	218.30	2.69	0.956	60	2.5	2.64
0116-030342	218.30	2.69	0.956	60	2.5	2.64
0116-030343	218.30	2.69	0.956	60	2.5	2.64
0116-030344	218.30	2.69	0.956	60	2.5	2.64
0116-030345	220.80	2.69	0.956	60	2.5	2.64
0116-030346	224.20	2.69	0.956	60	2.7	2.61

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856
SALES ORDER: SO-092691
PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

PRODUCT: 1106375-24067-2
FabriNet 200 mil, Double Sided 8 oz/yd², Nonwoven Cal.

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	1/90,000 ft²	oz/yd²
	Grab Tensile Properties (min. avg)		ASTM D4632	90,000 ft²/8,365 m²	
2	Strength (MD)				lbf
3	Strength (CMD)				lbf
4	Elongation (MD)				%
5	Elongation (CMD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	1/90,000 ft²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	1/90,000 ft²	lbf
8	Puncture Resistance		ASTM D4833	1/90,000 ft²	lbf
9	CBR Puncture Strength		ASTM D6241	1/540,000 ft²	lbf
10	Apparent Opening Size (max.)		ASTM D4751	1/540,000 ft²	mm
11	Permittivity		ASTM D4491	1/540,000 ft²	sec⁻¹
12	Water Flow Rate		ASTM D4491	1/540,000 ft²	gpm/ft²

Test	1	2	3	4	5	6	7	8	9	10	11
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027238651	9.4	260	366	89	90	114	180	165	888	0.180	1.7
2027341686	9.6	318	335	70	84	124	132	155	797	0.180	1.8
2027347968	8.8	284	315	78	87	122	131	136	701	0.180	1.7
2027370935	9.0	312	328	80	86	124	158	147	794	0.180	2.0
2027370936	9.0	312	328	80	86	124	158	147	794	0.180	2.0
2027382960	9.1	332	322	76	94	120	126	150	711	0.180	1.9
2027382963	9.0	309	294	76	89	105	127	144	672	0.180	1.9
2027382964	9.0	309	294	76	89	105	127	144	672	0.180	1.9
2027382966	9.0	309	294	76	89	105	127	144	672	0.180	1.9
2027382969	8.8	306	293	79	92	115	153	138	641	0.180	2.3
2027382971	8.5	310	313	73	91	130	132	145	739	0.180	1.8
2027382973	8.5	310	313	73	91	130	132	145	739	0.180	1.8

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027382974	8.5	310	313	73	91	130	132	145	739	0.180	1.8
2027382981	9.2	314	342	75	89	122	122	158	822	0.180	1.7
2027382982	9.2	314	342	75	89	122	122	158	822	0.180	1.7
2027382983	8.2	300	287	80	92	105	111	151	786	0.180	1.7
2027382984	8.2	300	287	80	92	105	111	151	786	0.180	1.7
2027382988	9.5	321	330	84	98	118	140	158	664	0.180	1.8
2027382990	9.5	321	330	84	98	118	140	158	664	0.180	1.8
2027382993	9.0	315	330	81	94	124	137	159	729	0.180	1.9
2027382996	8.7	315	334	85	95	109	118	138	676	0.180	1.9
2027382998	8.7	315	334	85	95	109	118	138	676	0.180	1.9
2027383452	9.0	306	332	83	98	107	123	145	740	0.180	1.8
2027383454	8.6	301	316	75	88	112	122	142	725	0.180	1.9
2027383455	8.6	301	316	75	88	112	122	142	725	0.180	1.9
2027383456	8.6	301	316	75	88	112	122	142	725	0.180	1.9
2027383459	8.4	294	298	78	87	122	123	145	739	0.180	1.9
2027383460	8.4	294	298	78	87	122	123	145	739	0.180	1.9
2027383464	8.6	293	320	76	88	113	120	138	702	0.180	1.9
2027383469	8.9	301	327	93	89	110	131	165	784	0.180	1.9
2027383476	8.9	319	312	82	86	140	151	136	707	0.180	1.8
2027383477	8.8	321	331	78	86	126	151	144	743	0.180	1.8
2027383482	8.8	299	331	78	89	122	137	140	803	0.180	2.1
2027383487	8.8	310	324	75	86	123	135	149	712	0.180	1.8
2027383488	8.8	310	324	75	86	123	135	149	712	0.180	1.8
2027383490	9.4	343	351	73	85	119	123	155	806	0.180	2.3
2027383493	8.3	294	320	72	87	138	139	166	849	0.180	1.9
2027383495	8.3	294	320	72	87	138	139	166	849	0.180	1.9
2027383496	8.3	294	320	72	87	138	139	166	849	0.180	1.9
2027383497	8.7	304	314	77	88	113	112	146	699	0.180	1.8
2027383498	8.7	304	314	77	88	113	112	146	699	0.180	1.8

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027383501	8.8	303	322	78	87	113	116	153	728	0.180	2.0
2027383504	8.8	303	322	78	87	113	116	153	728	0.180	2.0
2027383507	9.0	290	323	76	85	136	151	153	762	0.180	2.2
2027383508	9.0	290	323	76	85	136	151	153	762	0.180	2.2
2027383511	8.7	315	277	78	89	117	122	151	667	0.180	2.5
2027383512	8.7	315	277	78	89	117	122	151	667	0.180	2.5
2027383515	8.6	286	324	76	88	105	134	142	767	0.180	2.3
2027383516	8.6	286	324	76	88	105	134	142	767	0.180	2.3
2027383517	8.3	308	337	72	85	123	146	144	744	0.180	2.2
2027383518	8.3	308	337	72	85	123	146	144	744	0.180	2.2
2027387768	8.8	286	315	74	87	120	151	143	733	0.180	2.7
2027387769	8.8	286	315	74	87	120	151	143	733	0.180	2.7
2027387770	8.5	289	332	74	88	138	145	144	744	0.180	1.8
2027387772	8.5	289	332	74	88	138	145	144	744	0.180	1.8
2027387773	8.5	289	332	74	88	138	145	144	744	0.180	1.8
2027387774	8.8	322	317	80	87	135	132	148	711	0.180	1.8
2027387775	8.8	322	317	80	87	135	132	148	711	0.180	1.8
2027387776	8.8	322	317	80	87	135	132	148	711	0.180	1.8
2027387777	8.8	322	317	80	87	135	132	148	711	0.180	1.8
2027387778	8.6	309	293	81	85	119	155	135	801	0.180	1.9
2027387783	9.2	320	353	78	88	119	155	137	777	0.180	2.4
2027387784	9.2	320	353	78	88	119	155	137	777	0.180	2.4
2027387785	9.2	320	353	78	88	119	155	137	777	0.180	2.4
2027387786	8.9	306	339	79	87	125	125	150	775	0.180	2.5
2027387790	9.4	313	342	79	90	115	132	145	845	0.180	2.2
2027387796	8.2	274	298	71	86	137	133	145	793	0.180	2.4
2027387799	8.6	283	280	75	88	126	125	137	778	0.180	1.9
2027387802	8.8	294	344	76	87	124	144	156	788	0.180	1.7
2027387809	8.6	306	334	72	84	130	134	152	787	0.180	2.0

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TEST RESULTS

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PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027387813	8.3	288	300	77	86	119	119	145	732	0.180	2.0
2027387815	8.7	310	328	78	88	115	122	162	773	0.180	1.9
2027387818	8.8	293	325	80	93	110	125	141	720	0.180	1.7
2027387826	8.7	293	315	74	87	126	133	165	698	0.180	1.8
2027387829	8.7	293	315	74	87	126	133	165	698	0.180	1.8
2027387833	8.9	311	305	76	86	126	124	153	729	0.180	2.2
2027387836	8.5	294	308	68	79	110	129	143	837	0.180	2.0
2027387837	8.5	294	308	68	79	110	129	143	837	0.180	2.0
2027387839	9.1	316	332	78	91	123	134	142	677	0.180	1.9
2027387840	9.1	316	332	78	91	123	134	142	677	0.180	1.9
2027391280	10.4	379	375	78	92	167	152	169	821	0.180	1.6
2027391286	8.8	312	305	72	90	150	128	150	704	0.180	1.9
2027391287	8.8	312	305	72	90	150	128	150	704	0.180	1.9
2027391406	8.9	287	354	73	87	134	142	167	826	0.180	1.8
2027391411	8.4	301	296	74	86	141	139	146	729	0.180	1.5
2027391413	9.1	299	325	76	90	132	152	154	793	0.180	1.6
Specification	**8**	**220**	**220**	**50**	**50**	**95**	**95**	**120**	**575**	**0.180**	**1.3**
2027164052	9.0	270	332	76	77	119	143	148	787	0.180	2.0
2027341634	9.2	326	314	64	78	123	135	164	754	0.180	1.8
2027341684	9.6	318	335	70	84	124	132	155	797	0.180	1.8
2027341687	8.8	307	304	67	84	118	113	156	824	0.180	1.7
2027347948	8.8	296	316	73	85	101	139	162	804	0.180	2.2
2027370934	9.0	312	328	80	86	124	158	147	794	0.180	2.0
2027370937	8.8	329	353	81	82	134	139	161	760	0.180	1.9
2027370941	9.5	313	359	77	84	135	142	148	775	0.180	2.1
2027382961	9.1	332	322	76	94	120	126	150	711	0.180	1.9
2027382962	9.1	332	322	76	94	120	126	150	711	0.180	1.9
2027382965	9.0	309	294	76	89	105	127	144	672	0.180	1.9

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

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PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027382967	8.8	306	293	79	92	115	153	138	641	0.180	2.3
2027382968	8.8	306	293	79	92	115	153	138	641	0.180	2.3
2027382970	8.8	306	293	79	92	115	153	138	641	0.180	2.3
2027382972	8.5	310	313	73	91	130	132	145	739	0.180	1.8
2027382975	8.8	295	318	75	89	119	134	150	772	0.180	1.8
2027382976	8.8	295	318	75	89	119	134	150	772	0.180	1.8
2027382977	8.8	295	318	75	89	119	134	150	772	0.180	1.8
2027382978	8.8	295	318	75	89	119	134	150	772	0.180	1.8
2027382985	8.2	300	287	80	92	105	111	151	786	0.180	1.7
2027382986	8.2	300	287	80	92	105	111	151	786	0.180	1.7
2027382987	9.5	321	330	84	98	118	140	158	664	0.180	1.8
2027382989	9.5	321	330	84	98	118	140	158	664	0.180	1.8
2027382991	9.0	315	330	81	94	124	137	159	729	0.180	1.9
2027382994	9.0	315	330	81	94	124	137	159	729	0.180	1.9
2027382997	8.7	315	334	85	95	109	118	138	676	0.180	1.9
2027382999	9.0	306	332	83	98	107	123	145	740	0.180	1.8
2027383451	9.0	306	332	83	98	107	123	145	740	0.180	1.8
2027383457	8.4	294	298	78	87	122	123	145	739	0.180	1.9
2027383458	8.4	294	298	78	87	122	123	145	739	0.180	1.9
2027383461	8.6	293	320	76	88	113	120	138	702	0.180	1.9
2027383462	8.6	293	320	76	88	113	120	138	702	0.180	1.9
2027383463	8.6	293	320	76	88	113	120	138	702	0.180	1.9
2027383465	8.7	294	305	77	91	116	116	141	621	0.180	1.9
2027383466	8.7	294	305	77	91	116	116	141	621	0.180	1.9
2027383472	8.9	301	327	93	89	110	131	165	784	0.180	1.9
2027383474	8.9	319	312	82	86	140	151	136	707	0.180	1.8
2027383475	8.9	319	312	82	86	140	151	136	707	0.180	1.8
2027383485	8.8	310	324	75	86	123	135	149	712	0.180	1.8
2027383489	9.4	343	351	73	85	119	123	155	806	0.180	2.3

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS

SOLMAX APPROVED QUALITY ASSURANCE

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027383500	8.7	304	314	77	88	113	112	146	699	0.180	1.8
2027383502	8.8	303	322	78	87	113	116	153	728	0.180	2.0
2027383503	8.8	303	322	78	87	113	116	153	728	0.180	2.0
2027383505	9.0	290	323	76	85	136	151	153	762	0.180	2.2
2027383509	8.7	315	277	78	89	117	122	151	667	0.180	2.5
2027383510	8.7	315	277	78	89	117	122	151	667	0.180	2.5
2027383513	8.6	286	324	76	88	105	134	142	767	0.180	2.3
2027383514	8.6	286	324	76	88	105	134	142	767	0.180	2.3
2027383519	8.3	308	337	72	85	123	146	144	744	0.180	2.2
2027387767	8.8	286	315	74	87	120	151	143	733	0.180	2.7
2027387771	8.5	289	332	74	88	138	145	144	744	0.180	1.8
2027387779	8.6	309	293	81	85	119	155	135	801	0.180	1.9
2027387781	8.6	309	293	81	85	119	155	135	801	0.180	1.9
2027387782	9.2	320	353	78	88	119	155	137	777	0.180	2.4
2027387788	8.9	306	339	79	87	125	125	150	775	0.180	2.5
2027387789	8.9	306	339	79	87	125	125	150	775	0.180	2.5
2027387792	9.4	313	342	79	90	115	132	145	845	0.180	2.2
2027387793	9.4	313	342	79	90	115	132	145	845	0.180	2.2
2027387794	8.2	274	298	71	86	137	133	145	793	0.180	2.4
2027387795	8.2	274	298	71	86	137	133	145	793	0.180	2.4
2027387797	8.2	274	298	71	86	137	133	145	793	0.180	2.4
2027387798	8.6	283	280	75	88	126	125	137	778	0.180	1.9
2027387801	8.6	283	280	75	88	126	125	137	778	0.180	1.9
2027387803	8.8	294	344	76	87	124	144	156	788	0.180	1.7
2027387804	8.8	294	344	76	87	124	144	156	788	0.180	1.7
2027387805	8.8	294	344	76	87	124	144	156	788	0.180	1.7
2027387806	8.6	306	334	72	84	130	134	152	787	0.180	2.0
2027387807	8.6	306	334	72	84	130	134	152	787	0.180	2.0
2027387808	8.6	306	334	72	84	130	134	152	787	0.180	2.0

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SOLMAX

MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	1	2	3	4	5	6	7	8	9	10	11
2027387811	8.3	288	300	77	86	119	119	145	732	0.180	2.0
2027387812	8.3	288	300	77	86	119	119	145	732	0.180	2.0
2027387814	8.7	310	328	78	88	115	122	162	773	0.180	1.9
2027387816	8.7	310	328	78	88	115	122	162	773	0.180	1.9
2027387817	8.7	310	328	78	88	115	122	162	773	0.180	1.9
2027387823	9.0	292	290	75	88	127	114	145	707	0.180	1.8
2027387824	9.0	292	290	75	88	127	114	145	707	0.180	1.8
2027387825	9.0	292	290	75	88	127	114	145	707	0.180	1.8
2027387827	8.7	293	315	74	87	126	133	165	698	0.180	1.8
2027387828	8.7	293	315	74	87	126	133	165	698	0.180	1.8
2027387830	8.9	311	305	76	86	126	124	153	729	0.180	2.2
2027387831	8.9	311	305	76	86	126	124	153	729	0.180	2.2
2027387832	8.9	311	305	76	86	126	124	153	729	0.180	2.2
2027387834	8.5	294	308	68	79	110	129	143	837	0.180	2.0
2027387835	8.5	294	308	68	79	110	129	143	837	0.180	2.0
2027387838	9.1	316	332	78	91	123	134	142	677	0.180	1.9
2027391278	10.4	379	375	78	92	167	152	169	821	0.180	1.6
2027391288	8.8	312	305	72	90	150	128	150	704	0.180	1.9
2027391297	9.0	314	359	76	85	125	141	163	841	0.180	2.0
2027391407	8.9	287	354	73	87	134	142	167	826	0.180	1.8
2027391410	8.4	301	296	74	86	141	139	146	729	0.180	1.5

Test	12
Specification	**95**
2027238651	123
2027341686	134
2027347968	127
2027370935	150
2027370936	150

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER:	856
SALES ORDER:	SO-092691
PACKING SLIP NUMBER:	Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027382960	138
2027382963	138
2027382964	138
2027382966	138
2027382969	170
2027382971	135
2027382973	135
2027382974	135
2027382981	127
2027382982	127
2027382983	123
2027382984	123
2027382988	132
2027382990	132
2027382993	141
2027382996	137
2027382998	137
2027383452	131
2027383454	140
2027383455	140
2027383456	140
2027383459	137
2027383460	137
2027383464	142
2027383469	141
2027383476	132
2027383477	130
2027383482	155
2027383487	135

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027383488	135
2027383490	167
2027383493	143
2027383495	143
2027383496	143
2027383497	135
2027383498	135
2027383501	146
2027383504	146
2027383507	161
2027383508	161
2027383511	187
2027383512	187
2027383515	170
2027383516	170
2027383517	165
2027383518	165
2027387768	197
2027387769	197
2027387770	136
2027387772	136
2027387773	136
2027387774	133
2027387775	133
2027387776	133
2027387777	133
2027387778	138
2027387783	175
2027387784	175

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027387785	175
2027387786	181
2027387790	162
2027387796	176
2027387799	139
2027387802	125
2027387809	148
2027387813	144
2027387815	142
2027387818	124
2027387826	130
2027387829	130
2027387833	160
2027387836	150
2027387837	150
2027387839	137
2027387840	137
2027391280	114
2027391286	140
2027391287	140
2027391406	131
2027391411	113
2027391413	117
Specification	**95**
2027164052	143
2027341634	135
2027341684	134
2027341687	128

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027347948	162
2027370934	150
2027370937	138
2027370941	156
2027382961	138
2027382962	138
2027382965	138
2027382967	170
2027382968	170
2027382970	170
2027382972	135
2027382975	133
2027382976	133
2027382977	133
2027382978	133
2027382985	123
2027382986	123
2027382987	132
2027382989	132
2027382991	141
2027382994	141
2027382997	137
2027382999	131
2027383451	131
2027383457	137
2027383458	137
2027383461	142
2027383462	142
2027383463	142

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027383465	139
2027383466	139
2027383472	141
2027383474	132
2027383475	132
2027383485	135
2027383489	167
2027383500	135
2027383502	146
2027383503	146
2027383505	161
2027383509	187
2027383510	187
2027383513	170
2027383514	170
2027383519	165
2027387767	197
2027387771	136
2027387779	138
2027387781	138
2027387782	175
2027387788	181
2027387789	181
2027387792	162
2027387793	162
2027387794	176
2027387795	176
2027387797	176
2027387798	139

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER: 856

SALES ORDER: SO-092691

PACKING SLIP NUMBER: Pre-SO-092691-40

PROJECT NAME : GIBBONS CREEK SITE A & F LF

Test	12
2027387801	139
2027387803	125
2027387804	125
2027387805	125
2027387806	148
2027387807	148
2027387808	148
2027387811	144
2027387812	144
2027387814	142
2027387816	142
2027387817	142
2027387823	134
2027387824	134
2027387825	134
2027387827	130
2027387828	130
2027387830	160
2027387831	160
2027387832	160
2027387834	150
2027387835	150
2027387838	137
2027391278	114
2027391288	140
2027391297	146
2027391407	131
2027391410	113

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CoA Date: 12/19/2022

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC:HOUSTON
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: JETT
Fax:

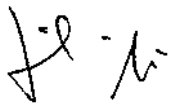
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PO #: 606560
Weight: 190300.000 LB
Ship Date: 12/19/2022
Package: BULK
Mode: Hopper Car
Car #: HCBX001256
Seal No: 297234

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPN610600

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9536	g/cm3
Production date		20221217	

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JIAHUI LI
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

CoA Date: 12/22/2022

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19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: Morales
Fax:

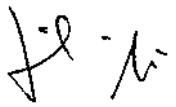
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Package: BULK
Mode: Hopper Car
Car #: HCBX001376
Seal No: 297233

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DPN610592

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9543	g/cm3
Production date		20221217	

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CoA Date: 12/16/2022

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USA

Recipient: Morales
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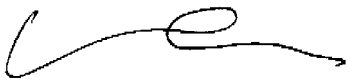
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PO #: 606560
Weight: 196500.000 LB
Ship Date: 12/16/2022
Package: BULK
Mode: Hopper Car
Car #: CHVX893030
Seal No: 307424

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: PPN620520

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.330	g/10min
Density	D1505 or D4883	0.9550	g/cm3
Production Date		12/07/2022	

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Erin Xiao
Quality Systems Coordinator

For CoA questions contact Leslie Dziamara at +1-832-813-4806

APPENDIX C

LANDFILL CAP CONSTRUCTION QUALITY CONTROL DOCUMENTS

March 29, 2024

Mr. David Vogt, P.E.
Project Manager
HDR, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248-1232

Re: Construction Quality Assurance Documentation for the Clay Infiltration Layer Component of the Gibbons Creek Steam Electric Station Site F Landfill, Gibbons Creek Mine (Carlos, Texas)

Dear Mr. Vogt:

The following information has been developed by JBS Engineering & Environmental, LLC (JBS) to document construction quality assurance (CQA) for the Site F Landfill located in Carlos, Texas. This report documents CQA activities associated with the construction of the clay infiltration portion of the final cover system installed as part of the Site F Ash Landfill Closure.

The Final Cover System (FCS) of the Site F Landfill consists of a clay infiltration layer, 40- mil LLDPE, and vegetated erosion layer. The clay infiltration layer processing and construction activities encompassed an area of approximately 84 acres and can be divided into two distinct areas based on receipt of wastes (see Figure 1):

- ***Inactive Area:*** which had an existing clay closure cap that only required reprocessing and recompaction,
- ***Active Area:*** which had continued to receive wastes and required placement of soils and construction of a clay infiltration layer.

Reprocessing/construction of the clay infiltration layer for The Site F Landfill was performed during two time periods: February 6, 2022 through April 3, 2023, and September 7, 2023 through February 23, 2024. The extended time period for closure was necessary to finalize waste placement in the Active Area.

Two earthwork contractors were used for the construction of the clay infiltration layer. Mine Safety, Inc. (MSI) was the initial earthwork contractor and provided earthwork services from February 2022 through April 2023 on the clay infiltration layer. B&C Services and their subcontractor (Burnside Infrastructure) provided earthwork services clay infiltration layer from September 2023 through February 2024. All earthwork contractors used conventional earthwork construction equipment to construct the clay infiltration layer for the Site F Landfill. Selection of the appropriate equipment was based on minimizing clod size and maximizing mechanical compaction and bonding of each lift of the infiltration layer in accordance with HDR's Construction Plans and Specifications.

CQA AND TESTING

JBS provided the CQA Monitors for documentation of construction activities. Philip Cadarette, P.G. is the professional of record and on occasion was supported by William R. Cullen, P.E. Either professional was on-site full-time during each day that infiltration construction activities were pursued. The CQA Monitor site visit activities included observation of processing and compaction methods, inspection of material types being used during construction, and oversight of sampling and testing activities of the technicians.

CME Testing & Engineering, Inc.'s (CME's) National Institute for Certification of Engineering Technologies (NICET) approved personnel provided field and laboratory testing support conducted under

the direction of the CQA Monitor(s). In addition, TRI (Austin, Texas) conducted supplemental laboratory testing (hydraulic conductivity) for the project.

SUBGRADE EVALUATION

In the Inactive Area, both earthwork contractors stripped all vegetation and exposed a minimum of 1-foot of clayey material to provide a uniform area for reprocessing of the existing clay soils. Construction equipment was used to rip the upper 12-inches moisture was added (as needed) and the clay soil was recompacted in 6-inch lifts.

In the Active Area, after landfill activities were complete, a 1-foot (minimum) layer of moistened clayey material was placed and compacted in a similar manner. The CQA Monitor visually evaluated soil placement and directed proof-rolling prior to initiation of construction activities, to provide a competent foundation for the clay infiltration layer. There were no areas of the subgrade within the excavation that exhibited excessive deflection or "pumping." A survey of the subgrade was conducted prior to clay infiltration construction.

INFILTRATION LAYER REPROCESSING AND CONSTRUCTION

Prior to the initiation of clay cap reprocessing/construction, eight initial bulk soil samples were obtained from a borrow area located north-northwest of the Site F Landfill on April 6, 2022. Two of the subsurface samples were analyzed for engineering properties (CME) and the other six for soil fertility (Thomas Turf Lab). Additionally, on June 3, 2022, five soil samples were collected from the upper tier clay layer of the Inactive Area to conduct proctor and soil classification tests. Samples were taken based on visual identification of soils and transported to the CME laboratory for analysis. Laboratory analysis of these soils was performed in accordance with the HDR's specifications to qualify these soils prior to placement. A summary of all soil test sample locations, dates and testing assignments are presented in Table 1, Attachment A. Results of the Fertility Tests are presented in Attachment B. A summary of Proctor Results and lab data sheets is presented in Attachment C.

Inactive Area: The Inactive Area covers approximately 52 acres, consisting primarily of the upper and middle tiers of the north side of the Site F landfill. The contractor(s) used conventional earthwork construction equipment to process and reconstruct the clay cap (Figure 1).

Active Area: The Active Area covers approximately 32 acres of the Site F landfill, primarily the lower southern tier (Figure 1). Materials for the subgrade and Inactive Area clay cap consisted of processed native clays that were obtained from the West and East borrow areas. The clay was processed, and moisture conditioned in compliance with HDR specifications. After the proper moisture content and clod size were attained, the cap material was compacted by multiple passes with the appropriate construction equipment. The Inactive Area infiltration layer construction proceeded in a monolithic manner in accordance with the criteria established by HDR and constructed lifts (2) were scarified, roughened, and moisture conditioned prior to placement of subsequent lifts.

CQA testing was performed based on predetermined locations (Figure 1). The testing frequencies established by HDR were used as minimum frequencies during infiltration layer reprocessing/construction. *In situ* (or field) moisture/density tests were conducted at a minimum rate of one test per 8,000 sq ft for the reprocessed lift in the Inactive Area and both 6-inch lifts in the Active Area. Based upon the infiltration area areas acreage referenced above, the Inactive Area required at least 284 test moisture/density locations, while the Active Area required a minimum of 174 field moisture/density tests be performed for each lift. The actual number of tests taken were 287 field moisture/density tests in the Inactive Area and 174 field moisture/density tests taken on each of the two lifts in the Active Area for a total of 348.

Holes that were made in the clay infiltration layer while conducting *in situ* moisture/density tests or obtaining laboratory samples were backfilled with bentonite or a mixture of bentonite-enriched soil. A

summary of the passing moisture/density tests and test locations is provided in Attachment D for both Areas.

Supplemental laboratory tests were performed in conjunction with the moisture/density tests to evaluate material consistency and infiltration layer integrity. The testing frequencies were selected in accordance with the rates established by HDR. All tests were performed in accordance with applicable ASTM standards. A total of twelve (12) standard Proctor moisture/density relationships were developed for use during the development and construction of the Site F Landfill clay infiltration layer. Atterberg limits (AL) and sieve analyses (-40 & -200 sieves) performed on representative samples of the infiltration layer soils were correlated to the appropriate Proctor values. The HDR SLQCP requires that soil classification tests (i.e., AL and sieve gradations) and hydraulic conductivity tests be performed per lift at a testing frequency of 1 per 100,000 square feet.

The hydraulic conductivity tests were performed in accordance with the procedures outlined in ASTM D 5084. The results of the laboratory testing, which were performed in support of the infiltration layer construction, are presented in summary format in Attachment E Additional documentation (i.e., hydraulic conductivity worksheets and lab classification data sheets) is also included in Attachment E. Subsequent to construction of the clay infiltration layer, the surface was graded and rolled with a smooth drum, steel roller to provide an acceptable surface for installation of the geomembrane system.

SUMMARY

The frequency of tests conducted during the evaluation exceeds those specified in the HDR SLQCP. Based upon observations at the site, the following conclusions can be made:

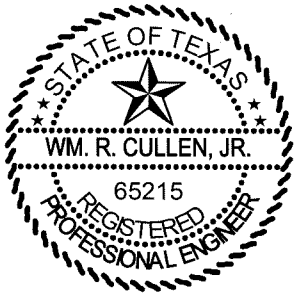
- The clay infiltration has been constructed in accordance with the requirements of the HDR Plans and Specifications.
- The soil material characteristics and field moisture/density placement requirements for the infiltration layer were met or exceeded.
- Hydraulic conductivity tests resulted in coefficients of permeability equal to/or less than 1.0E-05 cm/sec.
- Survey results confirm a compacted infiltration layer thickness of at least 1foot (Active Area).

Please contact us at (979) 485-2879 if you have any questions or need additional information concerning this matter.

Respectfully,

W. R. Cullen, P.E.
Senior Engineer

WRC:pwc
Attachment
Via E-mail



Philip W. Cadarette, P.G.
Senior Geologist

FIGURE 1

N. BORROW AREA

W. BORROW AREA

E. BORROW AREA

INACTIVE AREA

ACTIVE AREA

KEY

- REWORKED SUBGRADE– INACTIVE AREA
- TWO 6–IN LIFTS – ACTIVE AREA
- CONFIRMATION TEST LOCATION

400 0 400 FEET

PREPARED FOR:

HDR

In Situ Moisture/Density Tests and Confirmation Sample Location Map

Site F Landfill

Carlos, Texas

JBS Engineering & Environmental LLC

Registration Number F-15869

PROJ. NO.:	22011
DRAWN BY:	WBC
DATE:	03/15/2024
REV. DATE:	
SCALE:	As Shown
APPR:	WRC

FIGURE:

1

ATTACHMENT A

Table 1 – Summary of Soil Tests Collected – ID, Locations and Assigned Lab Testing

Table 1: Summary of Soil Tests Collected - ID, Locations and Assigned Lab Testing for GCERG - Site F Landfill Closure Cap

Sample I.D.	Date Collected	Site F Sample Location	Depth Collected, ft	Fertility Analysis	STD. Proctor	Att. Limits	% Pass 200 Sieve	% Passing #40 Sieve	Hyd. Cond.
SF-1	04/06/22	North Borrow-Pit 1	0 -2	√					√
SF-2	04/06/22	North Borrow-Pit 1	2 - 6		√	√	√	√	√
SF-3	04/06/22	North Borrow-Pit 2	0 - 2	√					
SF-4	04/06/22	North Borrow-Pit 2	2 - 5	√					
SF-5	04/06/22	North Borrow-Pit 3	0 - 2	√					
SF-6	04/06/22	North Borrow-Pit 4	0 - 1	√					
SF-7	04/06/22	Sludge Pond-NW corner	0 - 1	√					
SF-8	04/06/22	Sludge Pond-SE corner	0 - 1	√					
SF-9	06/03/22	North Borrow-Pit 1	1.5 - 3		√	√	√	√	√
SF-10	06/03/22	North Borrow-Pit 2	1.5 - 4		√	√	√	√	√
SF-11	06/03/22	North Borrow-Pit 3	1.3 - 3.5		√	√	√	√	√
SF-12	06/03/22	North Borrow-Pit 4	1.3 - 4		√	√	√	√	√
SF-13	06/03/22	North Borrow-Pit 5	1.5 - 3.5		√	√	√	√	√
SF-14	06/03/22	North Borrow-Pit 1	0 - 1			√	√		
SF-15	06/03/22	North Borrow-Pit 3	0 -1			√	√		

Table 1: Summary of Soil Tests Collected - ID, Locations and Assigned Lab Testing for GCERG - Site F Landfill Closure Cap

Sample I.D.	Date Collected	Site F Sample Location	Depth Collected, ft	Fertility Analysis	STD. Proctor	Att. Limits	% Pass 200 Sieve	% Passing #40 Sieve	Hyd. Cond.
SF-16	06/16/22	Grid Point E.5/15 subgrade	0 -1			√	√	√	√
SF-17	06/21/22	Grid Point J/23 subgrade	0 -1			√	√	√	√
SF-18	06/27/22	Grid Point H/17 subgrade	0 -1			√	√	√	√
SF-19	06/27/22	Grid Point L/24 subgrade	0 -1			√	√	√	√
SF-20	07/07/22	Grid Point J/19 subgrade	0 -1			√	√	√	√
SF-21	07/11/22	Grid Point N/26 subgrade	0 -1			√	√	√	√
SF-22	07/19/22	Grid Point W/9 1st Lift	0 - 0.5		√	√	√	√	√
SF-23	07/25/22	Grid Point I/15 subgrade	0 -1			√	√	√	√
SF-24	07/29/22	Grid Point M/21 subgrade	0 -1			√	√	√	√
SF-25	08/05/22	Grid Point I/11 subgrade	0 -1			√	√	√	√
SF-26	08/05/22	Grid Point L/16 subgrade	0 -1			√	√	√	√
SF-27	10/24/22	Grid Point K/11 subgrade	0 -1			√	√	√	√
SF-28	10/24/22	Grid Point N/13 subgrade	0 -1			√	√	√	√
SF-29	11/02/22	Grid Point O/16 subgrade	0 -1			√	√	√	√
SF-30	11/02/22	Grid Point O/11 subgrade	0 -1			√	√	√	√

Table 1: Summary of Soil Tests Collected - ID, Locations and Assigned Lab Testing for GCERG - Site F Landfill Closure Cap

Sample I.D.	Date Collected	Site F Sample Location	Depth Collected, ft	Fertility Analysis	STD. Proctor	Att. Limits	% Pass 200 Sieve	% Passing #40 Sieve	Hyd. Cond.
SF-31	11/17/22	Grid Point Z/14 1st Lift	0 - 0.5			√	√	√	√
SF-32	11/17/22	Grid Point X/6 1st Lift	0 - 0.5			√	√	√	√
SF-33	11/17/22	Grid Point AB/12 1st Lift	0 - 0.5			√	√	√	√
SF-34	11/17/22	Grid Point Z/9 1st Lift	0 - 0.5			√	√	√	√
SF-35	12/01/22	Grid Point P/17 subgrade	0 -1			√	√	√	√
SF-36	12/01/22	Grid Point Q/13 subgrade	0 -1			√	√	√	√
SF-37	12/01/22	Grid Point S/12 subgrade	0 -1			√	√	√	√
SF-38	12/05/22	Grid Point Q/11 subgrade	0 -1			√	√	√	√
SF-39	12/05/24	Grid Point N/8 subgrade	0 -1			√	√	√	√
SF-40	12/08/22	Grid Point Z/14 2nd Lift	0 - 0.5			√	√	√	√
SF-41	12/16/22	Grid Point X/6 2nd Lift	0 - 0.5			√	√	√	√
SF-42	12/16/22	Grid Point AB/12 2nd Lift	0 - 0.5			√	√	√	√
SF-43	12/16/22	Grid Point Z/9 2nd Lift	0 - 0.5			√	√	√	√
SF-44	01/23/23	Grid Point Q/26 2nd Lift	0 - 0.5			√	√	√	√
SF-45	01/23/23	Grid Point R/25 2nd Lift	0 - 0.5			√	√	√	√

Table 1: Summary of Soil Tests Collected - ID, Locations and Assigned Lab Testing for GCERG - Site F Landfill Closure Cap

Sample I.D.	Date Collected	Site F Sample Location	Depth Collected, ft	Fertility Analysis	STD. Proctor	Att. Limits	% Pass 200 Sieve	% Passing #40 Sieve	Hyd. Cond.
SF-46	01/23/23	Grid Point Q/11 subgrade	0 -1			√	√	√	√
SF-47	01/23/23	Grid Point S/15 2nd Lift	0 - 0.5			√	√	√	√
SF-48	03/06/23	Grid Point R/16 2nd Lift	0 - 0.5			√	√	√	√
SF-49	03/06/23	Grid Point Q/7 subgrade	0 -1			√	√	√	√
SF-50	03/06/23	Grid Point T/8 subgrade	0 -1			√	√	√	√
SF-51	09/07/23	East Burrow - Pit 1	2 -5		√	√	√	√	√
SF-52	09/07/23	East Burrow - Pit 2	2 -5			√	√	√	
SF-53	09/07/23	East Burrow - Pit 3	2 -5		√	√	√	√	√
SF-54	09/07/23	East Burrow - Pit 4	2 -5			√	√	√	
SF-55	11/15/23	Grid Point S/15 1st Lift	0 - 0.5			√	√	√	√
SF-56	11/16/23	Grid Point U/14 1st Lift	0 - 0.5		√	√	√	√	√
SF-57	11/18/23	Grid Point U/18 1st Lift	0 - 0.5			√	√	√	√
SF-58	11/18/23	Grid Point U/5 2nd Lift	0 - 0.5			√	√	√	√
SF-59	11/22/23	Grid Point U/18 2nd Lift	0 - 0.5			√	√	√	√
SF-60	12/05/23	Grid Point R/20 1st Lift	0 - 0.5			√	√	√	√

Table 1: Summary of Soil Tests Collected - ID, Locations and Assigned Lab Testing for GCERG - Site F Landfill Closure Cap

Sample I.D.	Date Collected	Site F Sample Location	Depth Collected, ft	Fertility Analysis	STD. Proctor	Att. Limits	% Pass 200 Sieve	% Passing #40 Sieve	Hyd. Cond.
SF-61	12/11/23	Grid Point S/23 1st Lift	0 - 0.5			√	√	√	√
SF-62	12/11/23	Grid Point S.5/24.5 1st Lift	0 - 0.5			√	√	√	√
SF-63	12/11/23	Grid Point V/23 1st Lift	0 - 0.5			√	√	√	√
SF-64	12/15/23	Grid Point R/20 2nd Lift	0 - 0.5			√	√	√	√
SF-65	12/15/23	Grid Point S/23 2nd Lift	0 - 0.5			√	√	√	√
SF-66	12/15/23	Grid Point V/21 2nd Lift	0 - 0.5			√	√	√	√
SF-67	02/01/24	Grid Point V/9 subgrade	0 -1			√	√	√	√
SF-68	02/01/24	Grid Point V/12 subgrade	0 -1			√	√	√	√

ATTACHMENT B

Soil Fertility Results for Proposed Topsoil Cover

Thomas Turf Services
SOIL ANALYSIS AND TURF MANAGEMENT

April 26, 2022

W.R. Cullen, P.E.
JBS Engineering & Environmental
2129 E. William J. Bryan Pkwy.
Bryan, TX 77082

Mr. Cullen:

We have completed the fertility analysis on the SF-1 Soil sample from the Gibbons Creek Electric Station Site F Landfill Closure project. This sample was collected from the Borrow Area North of Site F – Pit #1 (0-2'). The data are summarized in the following table. Except for the pH and EC, all data are in ppm (mg/kg) and most represent the plant available amounts in the soil.

Parameter	SF-1 Soil	Ideal Range
pH	4.6	6.5-7
EC (micromhos/cm)	491	<1000
Major Nutrients		
Nitrate Nitrogen	0	11-30
Available Phosphorus	5	10-40
Available Potassium	130	121-175
Cations:		
Available Calcium	1,921	460-3560
Available Magnesium	175	60-150
Available Sodium	25	N/A
Metals:		
Available Copper	0.16	1-2.4
Available Iron	70.74	7-36
Available Manganese	2.28	4-24
Available Zinc	0.24	2-6

SF-1 Soil (Borrow Area North of Site F – Pit #1 (0-2')

The SF-1 Soil had a strongly acid pH of 4.6 which is below the ideal range of 6.5-7.0 units. The soil had an electrical conductivity (EC) of 491 micromhos per cm indicating an acceptable total salt content.

The SF-1 Soil contained a very low 0 ppm nitrate nitrogen which is well below the ideal range of 11-30 ppm. The phosphorus concentration was a very low 5 ppm which is well below the ideal range of 10-40 ppm. The potassium concentration was an acceptable 130 ppm which is within the ideal range of 121-175 ppm for healthy plant growth.

The SF-1 Soil contained an acceptable 1,921 ppm calcium which is within the ideal range of 460-3,560 ppm. The soil contained a high 175 ppm available magnesium which is above the ideal range of 60-150 ppm. The sodium concentration of 25 ppm is within the safe range.

The SF-1 Soil contained a very low 0.16 ppm copper which is well below the ideal range of 1-2.4 ppm. The iron concentration of 70.74 ppm was above the ideal range of 7-36 ppm. The manganese concentration of 2.28 ppm was below the ideal range of 4-24 ppm. The zinc concentration of 0.24 ppm was well below the ideal range of 2-6 ppm.

Summary

The SF-1 Soil collected from the Borrow Area North of Site F – Pit #1 (0-2') depth had a strongly acid pH of 4.6 units which is below the ideal range of 6.5-7.0 units. The soil contained an acceptable amount of total salts.

The SF-1 Soil had acceptable concentrations of potassium, calcium and sodium. The soil was high in magnesium and iron. The soil was low in manganese, and very low in nitrate nitrogen, phosphorus, copper and zinc.

Based on the above results and the indication that the area will be planted to either bermudagrass or TxDOT mix; a pre-plant application of 1.5 lbs. of nitrogen and 1.0 lb. phosphorus per 1,000 square feet is recommended. In addition, an application of 0.2 lbs. each of copper, manganese and zinc is recommended to insure adequate micronutrients.

Due to the strongly acid pH, an application of 200 lbs. finely ground agricultural limestone per 1,000 square feet is recommended.

The fertilizer and limestone applications should be spread uniformly on the surface and tilled into the upper 4-6 inches of soil. If irrigation is available, the fertilizer should be watered in with approximately 0.2 inches of irrigation. It would be best to apply approximately half of the nitrogen in slow-release form to help minimize leaching losses.

If you have questions concerning these analyses or recommendations, please feel free to phone me directly at 979-575-5107. You may also send E-Mail to: <soiltest@thomasturf.com>. Thank you for using Thomas Turf Services, Inc.

Sincerely,

James Thomas

James C. Thomas, C.P.Ag.
G.M., Thomas Turf Services, Inc.

JCT:rgy

Enclosure: Table

File: 98062, G11316 – SF-1 Revised

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
James Thomas
1800 Mockingbird Rd
BRYAN, TX 77803

Sample received on: 4/6/2022
Printed on: 4/19/2022
Area Represented: 2 acres

Grimes County
Laboratory Number: 606393
Customer Sample ID: SF-1
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (ESTABLISHMENT)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	**4.6**	(5.8)	-	**Strongly Acid**						
Conductivity	**491**	(-)	umho/cm	**Slight**			CL*			**Fertilizer Recommended**
Nitrate-N	**0**	(-)	ppm**							**35** lbs N/acre
Phosphorus	**5**	(50)	ppm							**90** lbs P2O5/acre
Potassium	**130**	(125)	ppm							**0** lbs K20/acre
Calcium	**1,921**	(180)	ppm							**0** lbs Ca/acre
Magnesium	**175**	(50)	ppm							**0** lbs Mg/acre
Sulfur	**28**	(13)	ppm							**0** lbs S/acre
Sodium	**25**	(-)	ppm							
Iron	**70.74**	(4.25)	ppm							
Zinc	**0.24**	(0.27)	ppm							**1** lbs Zn/acre
Manganese	**2.28**	(1.00)	ppm							**0** lbs Mn/acre
Copper	**0.16**	(0.16)	ppm							**0** lbs Cu/acre
Boron										
Limestone Requirement										**1.85** tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Limestone recommendations are based on 100 ECCE liming products. Limestone applications >3 tons/acre should be made >4 months prior to crop establishment to lessen micro-nutrient availability issues.

Nitrogen: Apply an additional 40 lbs/A of nitrogen upon 75% vegetative cover.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer. 2.19j

Thomas Turf Services
SOIL ANALYSIS AND TURF MANAGEMENT

April 26, 2022

W.R. Cullen, P.E.
JBS Engineering & Environmental
2129 E. William J. Bryan Pkwy.
Bryan, TX 77082

Mr. Cullen:

We have completed the fertility analysis on the SF-3 Soil sample from the Gibbons Creek Electric Station Site F Landfill Closure project. This sample was collected from the Borrow Area North of Site F – Pit #2 (0-2'). The data are summarized in the following table. Except for the pH and EC, all data are in ppm (mg/kg) and most represent the plant available amounts in the soil.

Parameter	SF-3 Soil	Ideal Range
pH	4.2	6.5-7
EC (micromhos/cm)	160	<1000
Major Nutrients		
Nitrate Nitrogen	1	11-30
Available Phosphorus	4	10-40
Available Potassium	188	121-175
Cations:		
Available Calcium	2,310	460-3560
Available Magnesium	364	60-150
Available Sodium	380	N/A
Metals:		
Available Copper	0.16	1-2.4
Available Iron	44.14	7-36
Available Manganese	0.53	4-24
Available Zinc	1.22	2-6

SF-3 Soil (Borrow Area North of Site F – Pit #2 (0-2')

The SF-3 Soil had a strongly acid pH of 4.2 which is below the ideal range of 6.5-7.0 units. The soil had an electrical conductivity (EC) of 160 micromhos per cm indicating an acceptable total salt content.

The SF-3 Soil contained a very low 1 ppm nitrate nitrogen which is well below the ideal range of 11-30 ppm. The phosphorus concentration was a very low 4 ppm which is well below the ideal range of 10-40 ppm. The potassium concentration was a high 188 ppm which is within the ideal range of 121-175 ppm for healthy plant growth.

The SF-3 Soil contained an acceptable 2,310 ppm calcium which is within the ideal range of 460-3,560 ppm. The soil contained a very high 364 ppm available magnesium which is well above the ideal range of 60-150 ppm. The sodium concentration of 380 ppm is high and may interfere with healthy plant growth.

The SF-3 Soil contained a very low 0.16 ppm copper which is well below the ideal range of 1-2.4 ppm. The iron concentration of 44.14 ppm was above the ideal range of 7-36 ppm. The manganese concentration of 0.53 ppm was well below the ideal range of 4-24 ppm. The zinc concentration of 1.22 ppm was below the ideal range of 2-6 ppm.

Summary

The SF-3 Soil collected from the Borrow Area North of Site F – Pit #2 (0-2') had a strongly acid pH of 4.2 units which is below the ideal range of 6.5-7.0 units. The soil contained an acceptable amount of total salts.

The SF-3 Soil had an acceptable concentration of calcium. The soil was high in potassium, sodium and iron, and very high in magnesium. The soil was low in zinc, and very low in nitrate nitrogen, phosphorus, copper and manganese.

Based on the above results and the indication that the area will be planted to either bermudagrass or TxDOT mix, a pre-plant application of 1.5 lbs. of nitrogen and 2.0 lbs. phosphorus per 1,000 square feet is recommended. An application of 0.2 lbs. each copper, manganese and zinc per 1,000 square feet is also recommended to insure adequate micronutrients.

Due to the strongly acid pH, an application of 225 lbs. finely ground agricultural limestone per 1,000 square feet is recommended.

The fertilizer and limestone applications should be spread uniformly on the surface and tilled into the upper 4-6 inches of soil. If irrigation is available, the fertilizer should be watered in with approximately 0.2 inches of irrigation before planting. It would be best to apply approximately half of the nitrogen in slow-release form to help minimize leaching losses.

The high sodium content of the SF-3 soil can best be reduced by leaching using a low sodium water source. Irrigating this area with approximately 2 inches of low sodium water per week for 2-4 weeks should be sufficient to dissolve a significant amount of the sodium and wash it deeper into the soil. Once the area is planted, irrigating with a slight excess of water should continue to help move the sodium downward and away from the plant roots.

If you have questions concerning these analyses or recommendations, please feel free to phone me directly at 979-575-5107. You may also send E-Mail to: <soiltest@thomasturf.com>. Thank you for using Thomas Turf Services, Inc.

Sincerely,

James Thomas

James C. Thomas, C.P.Ag.
G.M., Thomas Turf Services, Inc.

JCT:rgy

Enclosure: Table

File: 98062, G11316 – SF-3

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
James Thomas
1800 Mockingbird Rd
BRYAN, TX 77803

Sample received on: 4/6/2022
Printed on: 4/19/2022
Area Represented: 2 acres

Grimes County
Laboratory Number: 606394
Customer Sample ID: SF-3
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (ESTABLISHMENT)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	**4.2**	(5.8)	-	**Strongly Acid**							
Conductivity	**160**	(-)	umho/cm	**None**			CL*				**Fertilizer Recommended**
Nitrate-N	**1**	(-)	ppm**								**35** lbs N/acre
Phosphorus	**4**	(50)	ppm								**95** lbs P2O5/acre
Potassium	**188**	(125)	ppm								**0** lbs K20/acre
Calcium	**2,310**	(180)	ppm								**0** lbs Ca/acre
Magnesium	**364**	(50)	ppm								**0** lbs Mg/acre
Sulfur	**755**	(13)	ppm								**0** lbs S/acre
Sodium	**380**	(-)	ppm								
Iron	**44.14**	(4.25)	ppm								
Zinc	**1.22**	(0.27)	ppm								**0** lbs Zn/acre
Manganese	**0.53**	(1.00)	ppm								**1** lbs Mn/acre
Copper	**0.16**	(0.16)	ppm								**0** lbs Cu/acre
Boron											
Limestone Requirement											**5.00** tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Limestone recommendations are based on 100 ECCE liming products. Limestone applications >3 tons/acre should be made >4 months prior to crop establishment to lessen micro-nutrient availability issues.

Nitrogen: Apply an additional 40 lbs/A of nitrogen upon 75% vegetative cover.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer. 2.19j

Thomas Turf Services
SOIL ANALYSIS AND TURF MANAGEMENT

April 26, 2022

W.R. Cullen, P.E.
JBS Engineering & Environmental
2129 E. William J. Bryan Pkwy.
Bryan, TX 77082

Mr. Cullen:

We have completed the fertility analysis on the SF-5 Soil sample from the Gibbons Creek Electric Station Site F Landfill Closure project. This sample was collected from the Borrow Area North of Site F – Pit #3 (0-2'). The data are summarized in the following table. Except for the pH and EC, all data are in ppm (mg/kg) and most represent the plant available amounts in the soil.

Parameter	SF-5 Soil	Ideal Range
pH	6.9	6.5-7
EC (micromhos/cm)	97	<1000
Major Nutrients		
Nitrate Nitrogen	1	11-30
Available Phosphorus	4	10-40
Available Potassium	140	121-175
Cations:		
Available Calcium	2,674	460-3560
Available Magnesium	353	60-150
Available Sodium	158	N/A
Metals:		
Available Copper	0.16	1-2.4
Available Iron	20.68	7-36
Available Manganese	1.80	4-24
Available Zinc	0.20	2-6

SF-5 Soil (Borrow Area North of Site F – Pit #3 (0-2')

The SF-5 Soil had a very slightly acid pH of 6.9 which is within the ideal range of 6.5-7.0 units. The soil had an electrical conductivity (EC) of 97 micromhos per cm indicating an acceptable total salt content.

The SF-5 Soil contained a very low 1 ppm nitrate nitrogen which is well below the ideal range of 11-30 ppm. The phosphorus concentration was a very low 4 ppm which is well below the ideal range of 10-40 ppm. The potassium concentration was an acceptable 140 ppm which is within the ideal range of 121-175 ppm for healthy plant growth.

The SF-5 Soil contained an acceptable 2,674 ppm calcium which is within the ideal range of 460-3,560 ppm. The soil contained a very high 353 ppm available magnesium which is well above the ideal range of 60-150 ppm. The sodium concentration of 158 ppm is within the safe range.

The SF-5 Soil contained a very low 0.16 ppm copper which is well below the ideal range of 1-2.4 ppm. The iron concentration of 20.68 ppm was within the ideal range of 7-36 ppm. The manganese concentration of 1.80 ppm was well below the ideal range of 4-24 ppm. The zinc concentration of 0.20 ppm was well below the ideal range of 2-6 ppm.

Summary

The SF-5 Soil collected from the Borrow Area North of Site F – Pit #3 (0-2') had a very slightly acid pH of 6.9 units which is within the ideal range of 6.5-7.0 units. The soil contained an acceptable amount of total salts.

The SF-5 Soil had acceptable concentrations of potassium, calcium, sodium and iron. The soil was very high in magnesium. The soil was very low in nitrate nitrogen, phosphorus, copper manganese and zinc.

Based on the above results and the indication that the area will be planted to either bermudagrass or TxDOT mix; a pre-plant application of 1.5 lbs. of nitrogen and 2.0 lb. phosphorus per 1,000 square feet is recommended. An application of 0.2 lbs. each of copper, manganese and zinc per 1,000 square feet is also recommended to insure adequate micronutrients.

The fertilizer applications should be spread uniformly on the surface and tilled into the upper 4-6 inches of soil. If irrigation is available, the fertilizer should be watered in with approximately 0.2 inches of irrigation. It would be best to apply approximately half of the nitrogen in slow-release form to help minimize leaching losses.

If you have questions concerning these analyses or recommendations, please feel free to phone me directly at 979-575-5107. You may also send E-Mail to: <soiltest@thomasturf.com>. Thank you for using Thomas Turf Services, Inc.

Sincerely,

James Thomas

James C. Thomas, C.P.Ag.
G.M., Thomas Turf Services, Inc.

JCT:rgy

Enclosure: Table

File: 98062, G11316 - SF-5 Revised

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
James Thomas
1800 Mockingbird Rd
BRYAN, TX 77803

Sample received on: 4/6/2022
Printed on: 4/19/2022
Area Represented: 2 acres

Grimes County
Laboratory Number: 606395
Customer Sample ID: SF-5
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (ESTABLISHMENT)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	**6.9**	(5.8)	-	**Slightly Acid**						
Conductivity	**97**	(-)	umho/cm	**None**				CL*		**Fertilizer Recommended**
Nitrate-N	**1**	(-)	ppm**							**35** lbs N/acre
Phosphorus	**4**	(50)	ppm							**95** lbs P2O5/acre
Potassium	**140**	(125)	ppm							**0** lbs K20/acre
Calcium	**2,674**	(180)	ppm							**0** lbs Ca/acre
Magnesium	**353**	(50)	ppm							**0** lbs Mg/acre
Sulfur	**16**	(13)	ppm							**0** lbs S/acre
Sodium	**158**	(-)	ppm							
Iron	**20.68**	(4.25)	ppm							
Zinc	**0.20**	(0.27)	ppm							**2** lbs Zn/acre
Manganese	**1.80**	(1.00)	ppm							**0** lbs Mn/acre
Copper	**0.16**	(0.16)	ppm							**0** lbs Cu/acre
Boron										
Limestone Requirement										**0.00** tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Nitrogen: Apply an additional 40 lbs/A of nitrogen upon 75% vegetative cover.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer. 2.19j

Thomas Turf Services
SOIL ANALYSIS AND TURF MANAGEMENT

April 26, 2022

W.R. Cullen, P.E.
JBS Engineering & Environmental
2129 E. William J. Bryan Pkwy.
Bryan, TX 77082

Mr. Cullen:

We have completed the fertility analysis on the SF-6 Soil sample from the Gibbons Creek Electric Station Site F Landfill Closure project. This sample was collected from the Borrow Area North of Site F – Pit #4 (0-1'). The data are summarized in the following table. Except for the pH and EC, all data are in ppm (mg/kg) and most represent the plant available amounts in the soil.

Parameter	SF-6 Soil	Ideal Range
pH	5.6	6.5-7
EC (micromhos/cm)	177	<1000
Major Nutrients		
Nitrate Nitrogen	1	11-30
Available Phosphorus	2	10-40
Available Potassium	58	121-175
Cations:		
Available Calcium	1,335	460-3560
Available Magnesium	188	60-150
Available Sodium	129	N/A
Metals:		
Available Copper	0.16	1-2.4
Available Iron	31.34	7-36
Available Manganese	0.01	4-24
Available Zinc	0.00	2-6

SF-6 Soil (Borrow Area North of Site F – Pit #4 (0-1')

The SF-6 Soil had a medium acid pH of 5.6 which is below the ideal range of 6.5-7.0 units. The soil had an electrical conductivity (EC) of 177 micromhos per cm indicating an acceptable total salt content.

The SF-6 Soil contained a very low 1 ppm nitrate nitrogen which is well below the ideal range of 11-30 ppm. The phosphorus concentration was a very low 2 ppm which is well below the ideal range of 10-40 ppm. The potassium concentration was a very low 58 ppm which is well below the ideal range of 121-175 ppm for healthy plant growth.

The SF-6 Soil contained an acceptable 1,335 ppm calcium which is within the ideal range of 460-3,560 ppm. The soil contained a high 188 ppm available magnesium which is above the ideal range of 60-150 ppm. The sodium concentration of 129 ppm is within the safe range.

The SF-6 Soil contained a very low 0.16 ppm copper which is well below the ideal range of 1-2.4 ppm. The iron concentration of 31.34 ppm was within the ideal range of 7-36 ppm. The manganese concentration of 0.01 ppm was well below the ideal range of 4-24 ppm. The zinc concentration of 0.00 ppm was well below the ideal range of 2-6 ppm.

Summary

The SF-6 Soil collected from the Borrow Area North of Site F – Pit #4 (0-1') had a medium acid pH of 5.6 units which is below the ideal range of 6.5-7.0 units. The soil contained an acceptable amount of total salts.

The SF-6 Soil had acceptable concentrations of calcium and sodium. The soil was high in magnesium. The soil was very low in nitrate nitrogen, phosphorus, potassium, copper, manganese and zinc.

Based on the above results and the indication that the area will be planted to either bermudagrass or TxDOT mix; a pre-plant application of 1.5 lbs. of nitrogen, 2.0 lb. phosphorus and 3.0 lbs. potassium per 1,000 square feet is recommended. In addition, an application of 0.2 lbs. each of copper, manganese and zinc is recommended to insure adequate micronutrients.

Due to the medium acid pH, an application of 60 lbs. finely ground agricultural limestone per 1,000 square feet is recommended.

The fertilizer and limestone applications should be spread uniformly on the surface and tilled into the upper 4-6 inches of soil. If irrigation is available, the fertilizer should be watered in with approximately 0.2 inches of irrigation. It would be best to apply approximately half of the nitrogen in slow-release form to help minimize leaching losses.

If you have questions concerning these analyses or recommendations, please feel free to phone me directly at 979-575-5107. You may also send E-Mail to: <soiltest@thomasturf.com>. Thank you for using Thomas Turf Services, Inc.

Sincerely,

James Thomas

James C. Thomas, C.P.Ag.
G.M., Thomas Turf Services, Inc.

JCT:rgy

Enclosure: Table

File: 98062, G11316 – SF-6 Revised

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
James Thomas
1800 Mockingbird Rd
BRYAN, TX 77803

Sample received on: 4/6/2022
Printed on: 4/19/2022
Area Represented: 2 acres

Grimes County
Laboratory Number: 606396
Customer Sample ID: SF-6
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (ESTABLISHMENT)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	**5.6**	(5.8)	-	**Mod. Acid**	
Conductivity	**177**	(-)	umho/cm	**None** CL*	
Nitrate-N	**1**	(-)	ppm**		**35** lbs N/acre
Phosphorus	**2**	(50)	ppm		**100** lbs P2O5/acre
Potassium	**58**	(125)	ppm		**50** lbs K20/acre
Calcium	**1,335**	(180)	ppm		**0** lbs Ca/acre
Magnesium	**188**	(50)	ppm		**0** lbs Mg/acre
Sulfur	**15**	(13)	ppm		**0** lbs S/acre
Sodium	**129**	(-)	ppm		
Iron	**31.34**	(4.25)	ppm		
Zinc	**0.00**	(0.27)	ppm		**4** lbs Zn/acre
Manganese	**0.01**	(1.00)	ppm		**2** lbs Mn/acre
Copper	**0.16**	(0.16)	ppm		**0** lbs Cu/acre
Boron					
Limestone Requirement					**0.25** tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Limestone recommendations are based on 100 ECCE liming products. Limestone applications >3 tons/acre should be made >4 months prior to crop establishment to lessen micro-nutrient availability issues.

Nitrogen: Apply an additional 40 lbs/A of nitrogen upon 75% vegetative cover.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer. 2.19j

Thomas Turf Services
SOIL ANALYSIS AND TURF MANAGEMENT

April 26, 2022

W.R. Cullen, P.E.
JBS Engineering & Environmental
2129 E. William J. Bryan Pkwy.
Bryan, TX 77082

Mr. Cullen:

We have completed the fertility analysis on the SF-7 Soil sample from the Gibbons Creek Electric Station Site F Landfill Closure project. This sample was collected from the Sludge Pond North West Corner (0-1'). The data are summarized in the following table. Except for the pH and EC, all data are in ppm (mg/kg) and most represent the plant available amounts in the soil.

Parameter	SF-7 Soil	Ideal Range
pH	6.5	6.5-7
EC (micromhos/cm)	2,100	<1000
Major Nutrients		
Nitrate Nitrogen	9	11-30
Available Phosphorus	7	10-40
Available Potassium	152	121-175
Cations:		
Available Calcium	5,291	460-3560
Available Magnesium	688	60-150
Available Sodium	255	N/A
Metals:		
Available Copper	0.16	1-2.4
Available Iron	14.38	7-36
Available Manganese	5.46	4-24
Available Zinc	0.14	2-6

SF-7 Soil (Sludge Pond North West Corner (0-1')

The SF-7 Soil had a slightly acid pH of 6.5 which is within the ideal range of 6.5-7.0 units. The soil had an electrical conductivity (EC) of 2,100 micromhos per cm indicating a very high total salt content.

The SF-7 Soil contained a low 9 ppm nitrate nitrogen which is below the ideal range of 11-30 ppm. The phosphorus concentration was a low 7 ppm which is below the ideal range of 10-40 ppm. The potassium concentration was an acceptable 152 ppm which is within the ideal range of 121-175 ppm for healthy plant growth.

The SF-7 Soil contained a high 5,291 ppm calcium which is above the ideal range of 460-3,560 ppm. The soil contained a very high 688 ppm available magnesium which is well above the ideal range of 60-150 ppm. The sodium concentration of 255 ppm is high and approaching the range that may be detrimental to healthy plant growth.

The SF-7 Soil contained a very low 0.16 ppm copper which is well below the ideal range of 1-2.4 ppm. The iron concentration of 14.38 ppm was within the ideal range of 7-36 ppm. The manganese concentration of 5.46 ppm was within the ideal range of 4-24 ppm. The zinc concentration of 0.14 ppm was well below the ideal range of 2-6 ppm.

Summary

The SF-7 Soil collected from the Sludge Pond North West Corner (0-1') had a slightly acid pH of 6.5 units which is within the ideal range of 6.5-7.0 units. The soil contained a very high amount of total salts.

The SF-7 Soil had acceptable concentrations of potassium, iron and manganese. The soil was high in calcium and sodium, and very high in magnesium. The soil was low in nitrate nitrogen and phosphorus, and very low in copper and zinc.

Based on the above results and the indication that the area will be planted to either bermudagrass or TxDOT mix; a pre-plant application of 1.0 lb. of nitrogen and 1.5 lb. phosphorus per 1,000 square feet is recommended. An application of 0.2 lbs. each of copper and zinc per 1,000 square feet is also recommended to insure adequate micronutrients.

The fertilizer applications should be spread uniformly on the surface and tilled into the upper 4-6 inches of soil. If irrigation is available, the fertilizer should be watered in with approximately 0.2 inches of irrigation. It would be best to apply approximately half of the nitrogen in slow-release form to help minimize leaching losses.

The high sodium content and total salt content of the SF-7 soil can best be reduced by leaching using a low salt content water source. Irrigating this area with approximately 2 inches of low salt water per week for 2-4 weeks should be sufficient to dissolve a significant amount of the salts including sodium and wash them deeper into the soil. Once the area is planted, irrigating with a slight excess of water should continue to help move the salts downward and away from the plant roots.

If you have questions concerning these analyses or recommendations, please feel free to phone me directly at 979-575-5107. You may also send E-Mail to: <soiltest@thomasturf.com>. Thank you for using Thomas Turf Services, Inc.

Sincerely,

James Thomas

James C. Thomas, C.P.Ag.
G.M., Thomas Turf Services, Inc.

JCT:rgy

Enclosure: Table

File: 98062, G11316 - SF-7 Revised

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
James Thomas
1800 Mockingbird Rd
BRYAN, TX 77803

Sample received on: 4/6/2022
Printed on: 4/19/2022
Area Represented: 2 acres

Grimes County
Laboratory Number: 606397
Customer Sample ID: SF-7
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (ESTABLISHMENT)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	**6.5**	(5.8)	-	Slightly Acid						
Conductivity	**2,100**	(-)	umho/cm	High						**Fertilizer Recommended**
Nitrate-N	**9**	(-)	ppm**							**20** lbs N/acre
Phosphorus	**7**	(50)	ppm							**90** lbs P2O5/acre
Potassium	**152**	(125)	ppm							**0** lbs K20/acre
Calcium	**5,291**	(180)	ppm							**0** lbs Ca/acre
Magnesium	**688**	(50)	ppm							**0** lbs Mg/acre
Sulfur	**1,897**	(13)	ppm							**0** lbs S/acre
Sodium	**255**	(-)	ppm							
Iron	**14.38**	(4.25)	ppm							
Zinc	**0.14**	(0.27)	ppm							**3** lbs Zn/acre
Manganese	**5.46**	(1.00)	ppm							**0** lbs Mn/acre
Copper	**0.16**	(0.16)	ppm							**0** lbs Cu/acre
Boron										
Limestone Requirement										**0.00** tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.
Nitrogen: Apply an additional 40 lbs/A of nitrogen upon 75% vegetative cover.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer. 2.19j

Thomas Turf Services
SOIL ANALYSIS AND TURF MANAGEMENT

April 26, 2022

W.R. Cullen, P.E.
JBS Engineering & Environmental
2129 E. William J. Bryan Pkwy.
Bryan, TX 77082

Mr. Cullen:

We have completed the fertility analysis on the SF-8 Soil sample from the Gibbons Creek Electric Station Site F Landfill Closure project. This sample was collected from the Sludge Pond South East Corner (0-1'). The data are summarized in the following table. Except for the pH and EC, all data are in ppm (mg/kg) and most represent the plant available amounts in the soil.

Parameter	SF-8 Soil	Ideal Range
pH	7.2	6.5-7
EC (micromhos/cm)	2,630	<1000
Major Nutrients		
Nitrate Nitrogen	0	11-30
Available Phosphorus	9	10-40
Available Potassium	192	121-175
Cations:		
Available Calcium	7,265	460-3560
Available Magnesium	597	60-150
Available Sodium	286	N/A
Metals:		
Available Copper	0.16	1-2.4
Available Iron	14.46	7-36
Available Manganese	18.31	4-24
Available Zinc	0.52	2-6

SF-8 Soil (Sludge Pond South East Corner (0-1')

The SF-8 Soil had a very slightly alkaline pH of 7.2 which is above the ideal range of 6.5-7.0 units. The soil had an electrical conductivity (EC) of 2,630 micromhos per cm indicating a very high total salt content.

The SF-8 Soil contained a very low 0 ppm nitrate nitrogen which is well below the ideal range of 11-30 ppm. The phosphorus concentration was a low 9 ppm which is below the ideal range of 10-40 ppm. The potassium concentration was a high 192 ppm which is above the ideal range of 121-175 ppm for healthy plant growth.

The SF-8 Soil contained a very high 7,265 ppm calcium which is well above the ideal range of 460-3,560 ppm. The soil contained a very high 597 ppm available magnesium which is well above the ideal range of 60-150 ppm. The sodium concentration of 286 ppm is high and approaching the range that may be detrimental to healthy plant growth.

The SF-8 Soil contained a very low 0.16 ppm copper which is well below the ideal range of 1-2.4 ppm. The iron concentration of 14.46 ppm was within the ideal range of 7-36 ppm. The manganese concentration of 18.31 ppm was within the ideal range of 4-24 ppm. The zinc concentration of 0.52 ppm was well below the ideal range of 2-6 ppm.

Summary

The SF-8 Soil collected from the Sludge Pond South East Corner (0-1') had a very slightly alkaline pH of 7.2 units which is above the ideal range of 6.5-7.0 units. The soil contained a very high amount of total salts.

The SF-8 Soil had acceptable concentrations of iron and manganese. The soil was high in potassium and sodium, and very high in calcium and magnesium. The soil was low in phosphorus, and very low in nitrate nitrogen, copper and zinc.

Based on the above results and the indication that the area will be planted to either bermudagrass or TxDOT mix; a pre-plant application of 1.5 lbs. of nitrogen and 1.0 lb. phosphorus per 1,000 square feet is recommended. An application of 0.2 lbs. each of copper and zinc per 1,000 square feet is also recommended to insure adequate micronutrients.

The fertilizer applications should be spread uniformly on the surface and tilled into the upper 4-6 inches of soil. If irrigation is available, the fertilizer should be watered in with approximately 0.2 inches of irrigation. It would be best to apply approximately half of the nitrogen in slow-release form to help minimize leaching losses.

The high sodium and total salt content of the SF-8 soil can best be reduced by leaching using a low salt water content source. Irrigating this area with approximately 2 inches of low salt water per week for 2-4 weeks should be sufficient to dissolve a significant amount of the salts including sodium and wash them deeper into the soil. Once the area is planted, irrigating with a slight excess of water should continue to help move the salts downward and away from the plant roots.

If you have questions concerning these analyses or recommendations, please feel free to phone me directly at 979-575-5107. You may also send E-Mail to: <soiltest@thomasturf.com>. Thank you for using Thomas Turf Services, Inc.

Sincerely,

James Thomas

James C. Thomas, C.P.Ag.
G.M., Thomas Turf Services, Inc.

JCT:rgy

Enclosure: Table

File: 98062, G11316 - SF-8 Revised

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Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
James Thomas
1800 Mockingbird Rd
BRYAN, TX 77803

Sample received on: 4/6/2022
Printed on: 4/19/2022
Area Represented: 2 acres

Grimes County
Laboratory Number: 606398
Customer Sample ID: SF-8
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (ESTABLISHMENT)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	**7.2**	(5.8)	-	**Slightly Alkaline**							
Conductivity	**2,630**	(-)	umho/cm	**V. High**				CL*			**Fertilizer Recommended**
Nitrate-N	**0**	(-)	ppm**								**35** lbs N/acre
Phosphorus	**9**	(50)	ppm								**85** lbs P2O5/acre
Potassium	**192**	(125)	ppm								**0** lbs K20/acre
Calcium	**7,265**	(180)	ppm								**0** lbs Ca/acre
Magnesium	**597**	(50)	ppm								**0** lbs Mg/acre
Sulfur	**4,356**	(13)	ppm								**0** lbs S/acre
Sodium	**286**	(-)	ppm								
Iron	**14.46**	(4.25)	ppm								
Zinc	**0.52**	(0.27)	ppm								**0** lbs Zn/acre
Manganese	**18.31**	(1.00)	ppm								**0** lbs Mn/acre
Copper	**0.16**	(0.16)	ppm								**0** lbs Cu/acre
Boron											
Limestone Requirement											**0.00** tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.
Nitrogen: Apply an additional 40 lbs/A of nitrogen upon 75% vegetative cover.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer. 2.19j

ATTACHMENT C

Table 2 – Summary of Moisture/Density Curves and Associated Engineering Properties

Lab Data Sheets for Moisture/Density Curves and Associated Engineering Properties

Table 2: Summary of Proctor Curves and Associated Suitability Test Results - GCERG Site F Landfill Closure Cap

Proctor Ref.	CME Lab #	Sample I.D. *	Material Description	Max Dry Density, pcf	Opt. Moist, %	% Pass 200 Sieve	% Passing #40 Sieve	Liquid Limit, %	Plastic Limit, %	Plasticity Index, %	Hyd. Cond., cm/sec
1	245	SF-2	Brown & Red Shaley/Sandy Fat Clay	80.3	33.6	89.8	98.3	76	27	49	1.03E-08
2	246	SF-4	Tan Shaley/Sandy Fat Clay	87.8	26.6	68.8	98.9	60	26	34	2.88E-08
3	436	SF-9	Tan & Gray Sandy Fat Clay	97.3	20.5	50.3	75.0	56	25	31	2.93E-08
4	437	SF-10	Brown & Red Sandy Fat Clay	84.6	29.8	61.9	86.9	74	27	47	8.13E-09
5	438	SF-11	Red & Brown Sandy Fat Clay	88.7	27.7	62.5	88.0	60	25	35	1.09E-08
6	439	SF-12	Gray & Brown Sandy Fat Clay	89.5	26.4	50.5	81.5	68	27	41	4.14E-08
7	440	SF-13	Red & Gray Sandy Fat Clay	92.7	25.9	58.1	88.9	60	26	34	1.17E-08
8	598	SF-22	Reddish-Brown Sandy Lean Clay	104.7	17.5	53.4	98.0	40	19	21	1.36E-08
9	655	SF-51	Brown Sandy Lean Clay	97.0	21.3	58.8	98.1	44	22	22	1.34E-07
10	657	SF-53	Brown & Gray Fat Clay with Sand	91.1	24.9	71.1	98.1	57	24	33	7.67E-09
11	820	SF-55	Brown Clayey Sand	111.9	15.3	34.4	90.6	32	15	17	1.40E-07
12	823	SF-56	Tan & Gray Clayey Sand	107.8	17.2	30.2	92.4	32	18	14	3.42E-08

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	245	Sample Date:	4/6/2022
Test Number:	1	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	2'-6' B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Bill Cullen	Method: **A,B,C**	A
Material Description:	Brown & Red Shaley Sandy Fat Clay		
Type of Structure:	Proposed Fill for Clay Cap for Landfill		
Sample Location:	SF-2 Pit-1 Borrow Area North Side of Site F		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A38		89.21	36.36	30.34		89.8
-40	A38		89.21	31.37	30.34		98.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C2	27.03	17.93	23	6.14	77.2	76
2	C1	27.92	18.45	22	6.18	77.2	76
3							
						Liquid Limit	**76**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C40	28.59	23.87	6.37	4.72	27
2	C42	29.01	24.11	6.15	4.9	27
					Plastic Limit	**27**

Plasticity Index - Tex-106-E

Plasticity Index:	**49**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

REMOLD PERM

Test Method:	Tested By:	Tested Date:
TX104	Oscar Cabazos	04/11/22
TX105	Oscar Cabazos	04/11/22
TX106	Oscar Cabazos	04/11/22

Completed Date:	Reviewed By:
04/11/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	04/06/22	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-2 Borrow Area North Side of Site F	Lab Start Date:	4/26/22
Material:	Brown & Red Shaley Sandy Fat Clay	Lab Completion Date:	4/29/22
Sample Location	Pit-1	Technician	Craig Moore
Lab #:	245	Lift	
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.62 in	b. Avg. Diameter of Specimen:	2.85 in.
c. Sample Volume: (0.7854 * b^2 * a):	29.441 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	108.7 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	839.9 gms	k. Wet Weight Soil + Tare:	858.6 gms
f. Wet Weight Soil + Tare:	839.9 gms	l. Dry Weight Soil + Tare:	620.0 gms
g. Dry Weight Soil + Tare:	620.0 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	38.5 %
I. Moisture Content [(f-g)/(g-h)]*100	35.5 %		
j. Unit Dry Wt. [d/I + (I/100)]	80.2 pcf		

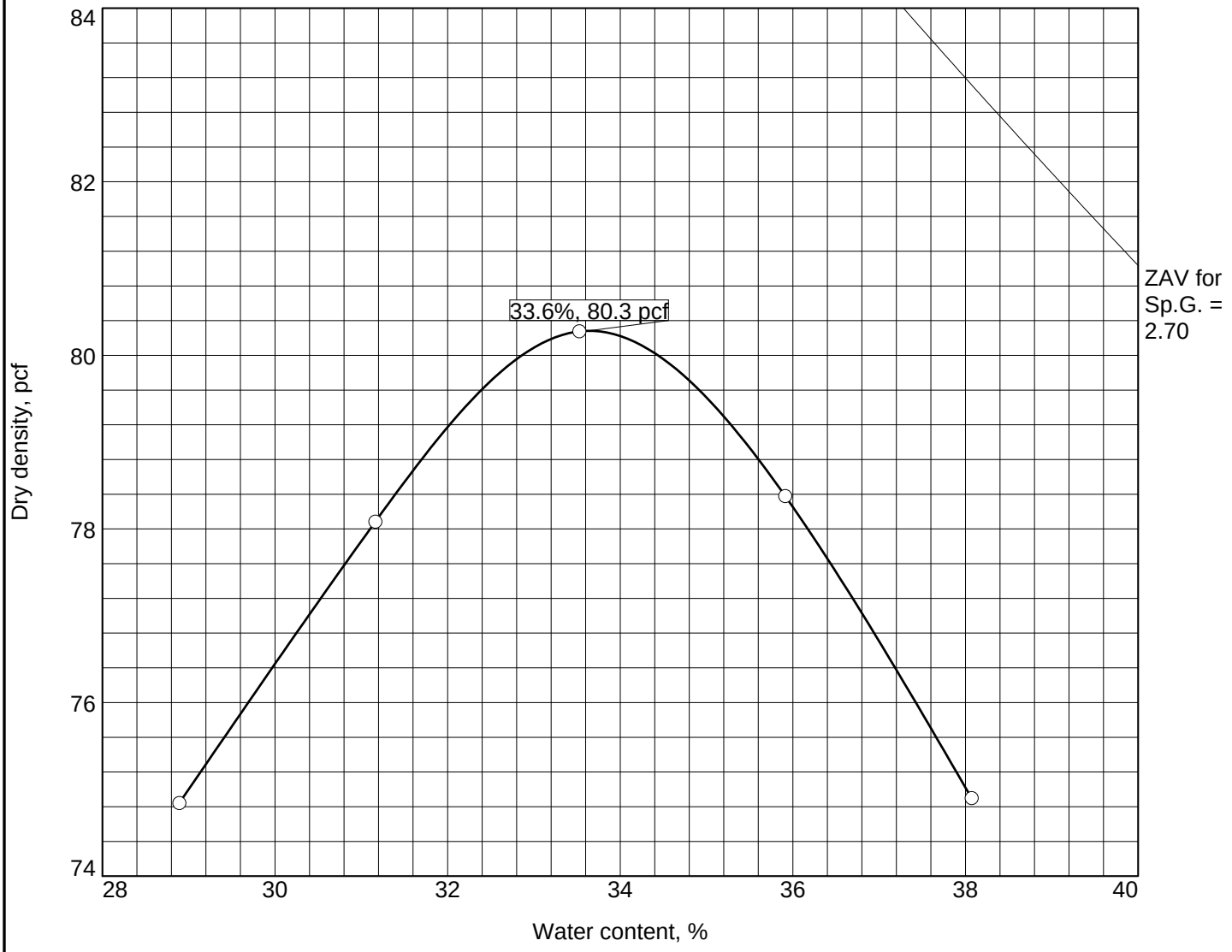
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
4/25/2022	6:30		3.00	23.00					
4/26/2022	7:00	88200	4.50	21.50	1.50	1.50	22	0.953	7.91E-09
4/27/2022	7:00	86400	6.40	19.60	1.90	1.90	22	0.953	1.03E-08
4/28/2022	7:00	86400	8.20	17.80	1.80	1.80	22	0.953	9.82E-09
4/29/2022	6:30	84600	10.40	15.60	2.20	2.20	22	0.953	1.24E-08
4/30/2022	6:30	86400	12.40	13.60	2.00	2.00	22	0.953	1.11E-08
								AVERAGE	1.03E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
2' to 6' B.E.G.S.	CH				76	49		89.8

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 80.3 pcf Optimum moisture = 33.6 %	Brown & Red Shaley Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-2 Borrow Area North Side of Site F Pit 1

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Sample delivered by Mr. Bill Cullen w/JBS Eng. & Env. to CME on 4/6/2022.
Lab No. 245
Hydaulic Conductivity: 1.03E-08
Percent Passing No. 40 Sieve: 98.3

Report No. 1-A

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	246	Sample Date:	4/6/2022
Test Number:	2	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	2'-5' B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Bill Cullen	Method: **A,B,C**	A
Material Description:	Tan Shaley Sandy Fat Clay		
Type of Structure:	Proposed Fill for Clay Cap for Landfill		
Sample Location:	SF-4 Pit-2 Borrow Area North Side of Site F		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A63		112.29	55.71	30.1		68.8
-40	A63		112.29	31.02	30.1		98.9

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C3	28.41	20.06	26	6.16	60.1	60
2	C4	30.02	21.12	26	6.21	59.7	60
3							
						Liquid Limit	**60**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C83	30.43	25.34	6.1	5.09	26
2	C84	26.02	21.88	6.04	4.14	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**34**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

REMOLD PERM

Test Method:	Tested By:	Tested Date:
TX104	Oscar Cabazos	04/11/22
TX105	Oscar Cabazos	04/11/22
TX106	Oscar Cabazos	04/11/22

Completed Date:	Reviewed By:
04/11/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	04/06/22	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-4 Borrow Area North Side of Site F	Lab Start Date:	4/22/22
Material:	Tan Shaley Sandy Fat Clay	Lab Completion Date:	4/26/22
Sample Location:	Pit-2	Technician	Craig Moore
Lab #:	246	Lift	
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.40 in	b. Avg. Diameter of Specimen:	2.833 in.
c. Sample Volume: (0.7854 * b^2 * a):	27.704 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	112.0 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	814.6 gms	k. Wet Weight Soil + Tare:	826.6 gms
f. Wet Weight Soil + Tare:	814.6 gms	l. Dry Weight Soil + Tare:	636.4 gms
g. Dry Weight Soil + Tare:	636.4 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	29.9 %
l. Moisture Content [(f-g)/(g-h)]*100	28.0 %		
j. Unit Dry Wt. [d/l + (l/100)]	87.5 pcf		

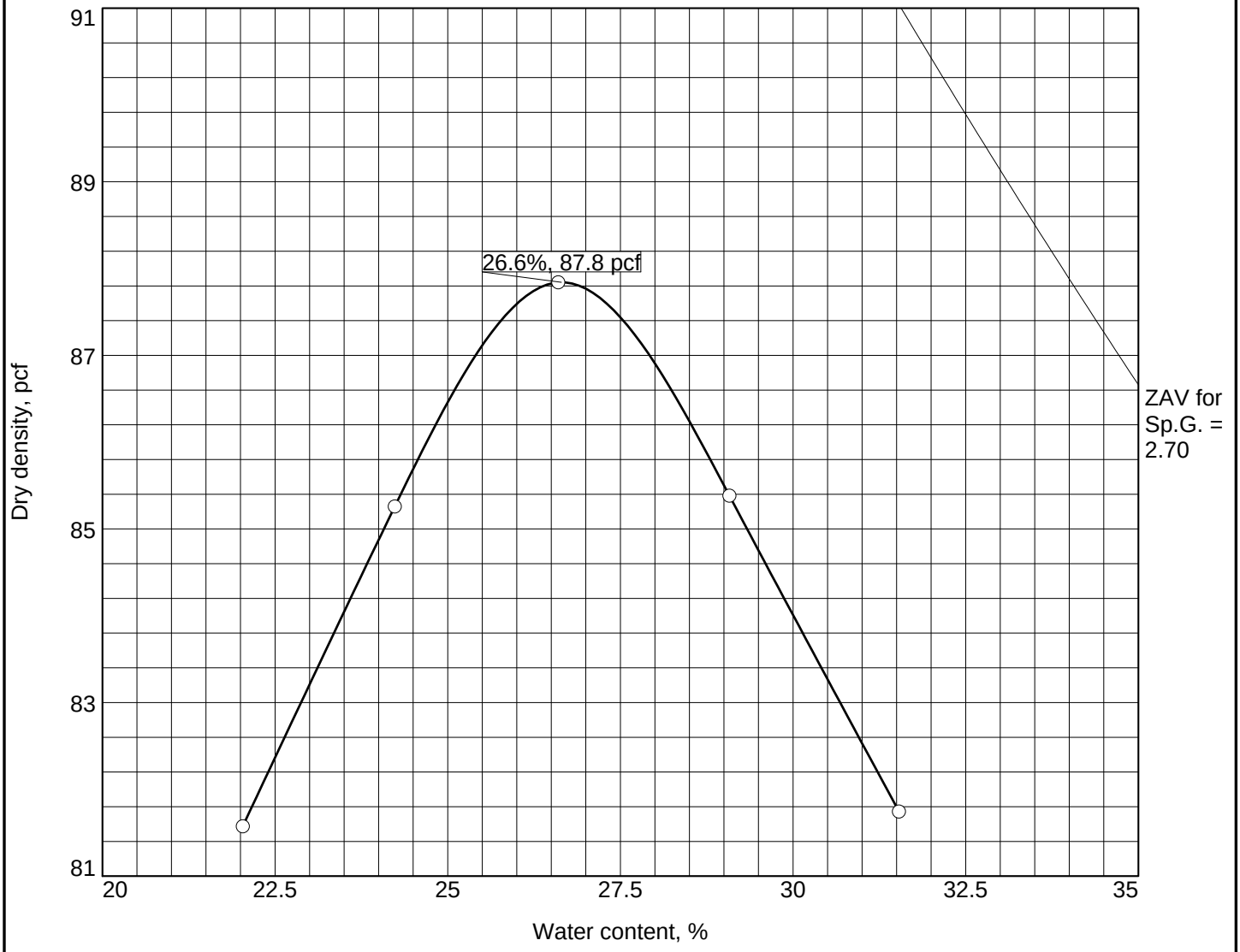
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
4/22/2022	12:00		1.00	22.80					
4/23/2022	8:00	72000	5.50	18.30	4.50	4.50	22	0.953	2.81E-08
4/25/2022	6:30	167400	15.80	8.00	10.30	10.30	22	0.953	2.85E-08
4/25/2022	15:10	31200	17.80	6.00	2.00	2.00	22	0.953	3.04E-08
4/26/2022	6:30	55200	21.10	2.70	3.30	3.30	22	0.953	2.87E-08
4/26/2022	15:30	32400	23.00	0.80	1.90	1.90	22	0.953	2.84E-08
								AVERAGE	2.88E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
2' to 5' B.E.G.S.	CH				60	34		68.8

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 87.8 pcf Optimum moisture = 26.6 %	Tan Shaley Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-4 Borrow Area North Side of Site F Pit 2

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Sample delivered by Mr. Bill Cullen w/JBS Eng. & Env. to CME on 4/6/2022.
Lab No. 246
Hydaulic Conductivity: 2.88E-08
Percent Passing No. 40 Sieve: 98.9

Report No. 1-B

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	436	Sample Date:	6/3/2022
Test Number:	1	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	18"-36" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Ty Goebler	Method: **A,B,C**	A
Material Description:	Tan & Gray Sandy Fat Clay		
Type of Structure:	Site F Insitu		
Sample Location:	SF-9 Pit-1		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A202		919.25	456.75	0		50.3
-40	A202		919.25	229.57	0		75.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	c55	21.45	16.07	29	6.21	54.6	56
2	c56	20.29	15.32	29	6.22	54.6	56
3							
						Liquid Limit	**56**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C76	24.8	21.09	6.18	3.71	25
2	C77	28.03	23.66	6.16	4.37	25
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**31**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	06/03/22	No. of Sps Del. On This Date	5
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-9	Lab Start Date:	6/20/22
Material:	Tan & Gray Sandy Fat Clay	Lab Completion Date:	6/22/22
Sample Location:	Pit-1	Technician	Craig Moore
Lab #:	436	Lift	1st lift
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.54 in	b. Avg. Diameter of Specimen:	2.869 in.
c. Sample Volume: (0.7854 * b^2 * a):	29.376 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	113.7 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	876.9 gms	k. Wet Weight Soil + Tare:	926.7 gms
f. Wet Weight Soil + Tare:	876.9 gms	l. Dry Weight Soil + Tare:	717.1 gms
g. Dry Weight Soil + Tare:	717.1 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	29.2 %
l. Moisture Content [(f-g)/(g-h)]*100	22.3 %		
j. Unit Dry Wt. [d/l + (l/100)]	93.0 pcf		

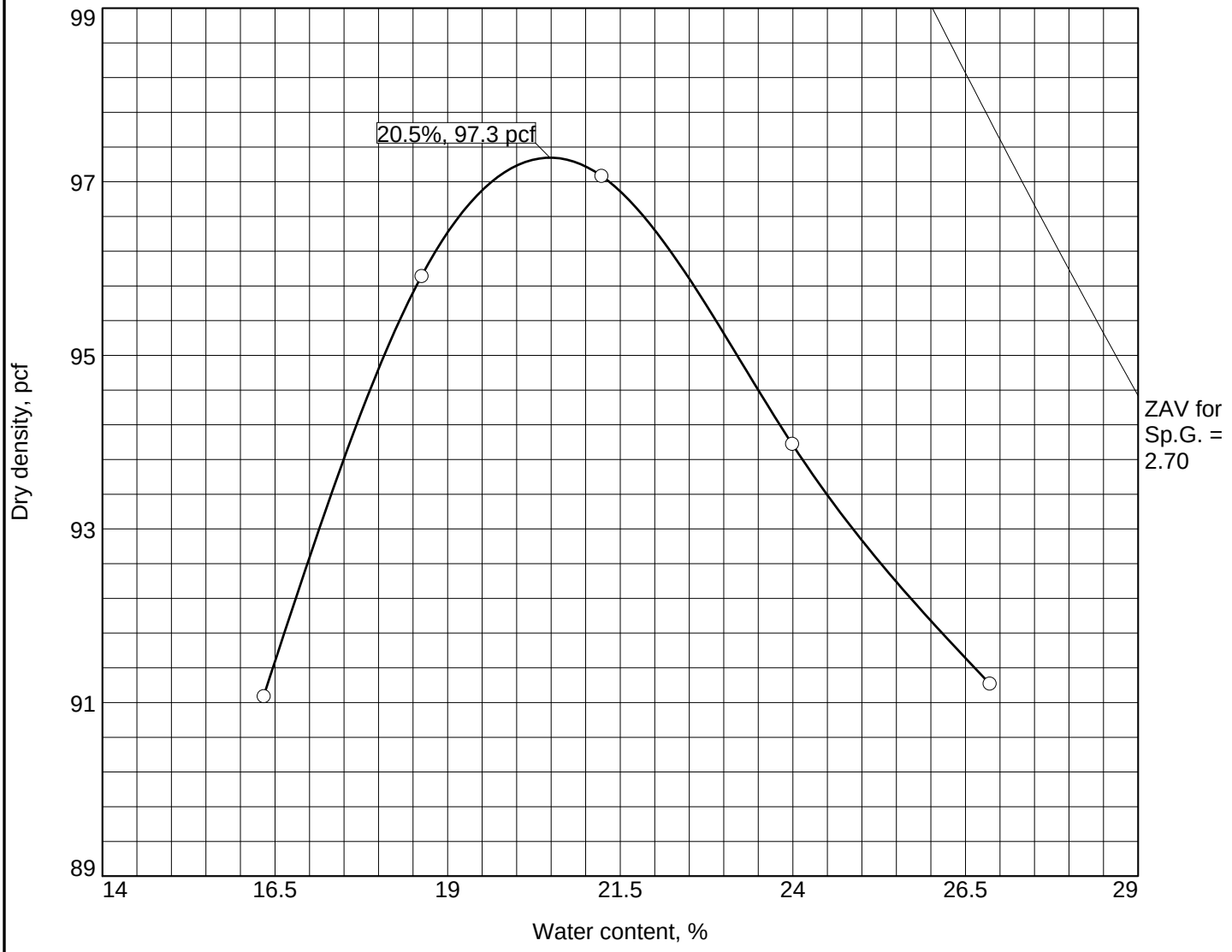
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
6/20/2022	8:29		0.00	24.00					
6/20/2022	16:00	27060	2.00	22.00	2.00	2.00	22	0.953	3.32E-08
6/21/2022	6:30	52200	5.80	18.20	3.80	3.80	22	0.953	3.30E-08
6/21/2022	15:30	32400	8.00	16.00	2.20	2.20	22	0.953	3.12E-08
6/22/2022	6:30	54000	11.00	13.00	3.00	3.00	22	0.953	2.58E-08
6/22/2022	17:45	40500	13.00	11.00	2.00	2.00	22	0.953	2.31E-08
								AVERAGE	2.93E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
18" to 36" B.E.G.S.	CH				56	31		50.3

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 97.3 pcf Optimum moisture = 20.5 %	Tan & Gray Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-9 Site F Insitu Pit 1

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 6/3/2022
Lab No. 436
Hydraulic Conductivity: 2.93E-08
Percent Passing No. 40 Sieve: 75.0

Report No. 2-A

CME TESTING AND ENGINEERING, INC
320 Graham Road • College Station, Texas 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	437	Sample Date:	6/3/2022
Test Number:	2	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	18"-48" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Ty Goebler	Method: **A,B,C**	A
Material Description:	Brown & Red Sandy Fat Clay		
Type of Structure:	Site F Insitu		
Sample Location:	SF-10 Pit-2		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A19		133.22	69.42	30.08		61.9
-40	A19		133.22	43.56	30.08		86.9

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C20	20.99	14.78	28	6.2	72.4	73
2	C32	20.68	14.54	26	6.16	73.3	74
3							
						Liquid Limit	**74**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C72	33.14	27.48	6.21	5.66	27
2	C74	29.27	24.27	6	5	27
					Plastic Limit	**27**

Plasticity Index - Tex-106-E

Plasticity Index:	**47**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	06/03/22	No. of Sps Del. On This Date	5
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-10	Lab Start Date:	6/20/22
Material:	Brown & Red Sandy Fat Clay	Lab Completion Date:	6/27/22
Sample Location:	Pit-2	Technician	Craig Moore
Lab #:	437	Lift	Subbase
Sample Orientation	H _____ V ___X__	Spl.	2
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.44 in	b. Avg. Diameter of Specimen:	2.816 in.
c. Sample Volume: (0.7854 * b^2 * a):	27.671 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	113.2 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	822.0 gms	k. Wet Weight Soil + Tare:	844.7 gms
f. Wet Weight Soil + Tare:	822.0 gms	l. Dry Weight Soil + Tare:	626.2 gms
g. Dry Weight Soil + Tare:	626.2 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	34.9 %
l. Moisture Content [(f-g)/(g-h)]*100	31.3 %		
j. Unit Dry Wt. [d/l + (l/100)]	86.2 pcf		

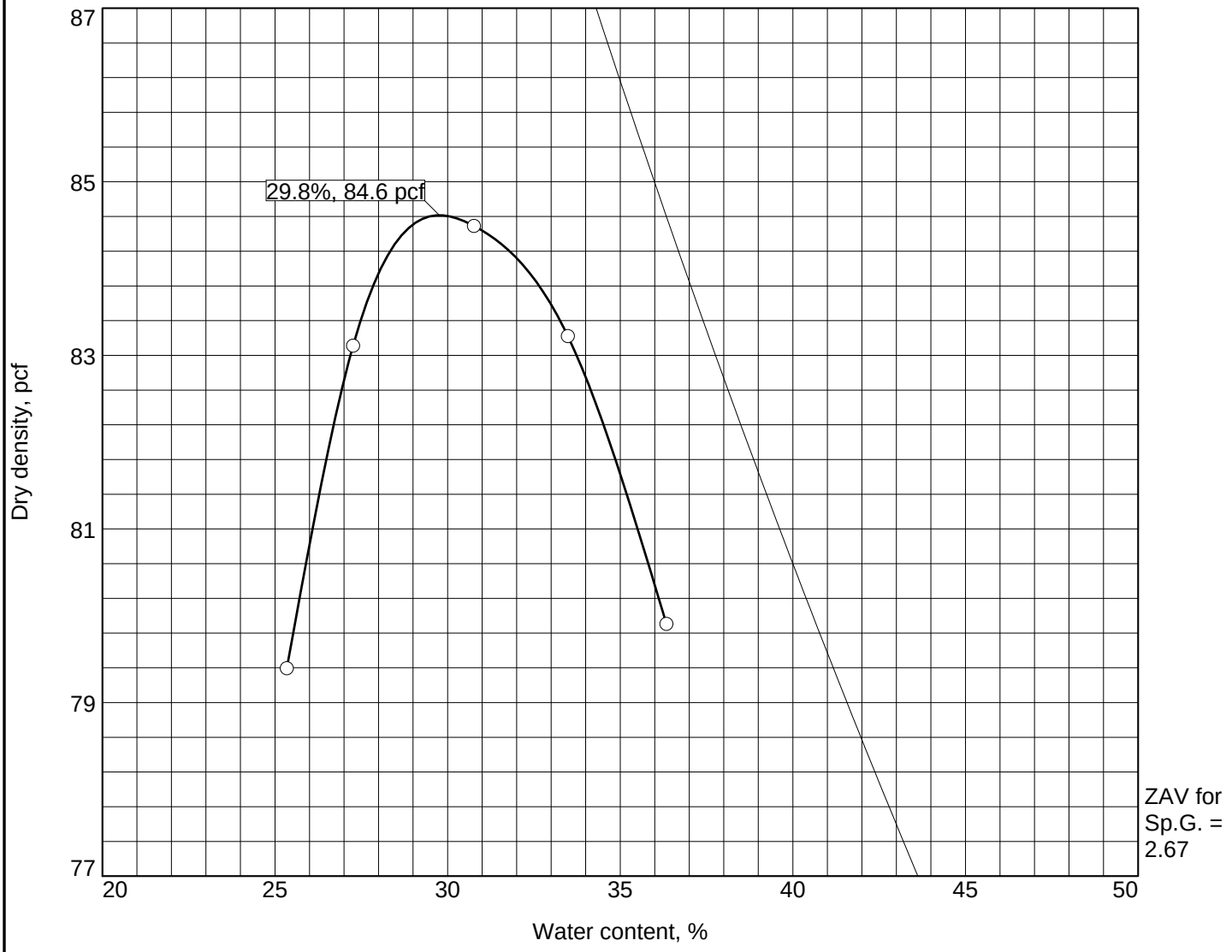
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
6/20/2022	8:29		0.00	24.00					
6/21/2022	6:30	79260	1.50	22.50	1.50	1.50	22	0.953	8.61E-09
6/22/2022	6:30	86400	3.00	21.00	1.50	1.50	22	0.953	7.94E-09
6/23/2022	6:30	86400	4.60	19.40	1.60	1.60	22	0.953	8.53E-09
6/24/2022	6:30	86400	6.00	18.00	1.40	1.40	22	0.953	7.50E-09
6/27/2022	7:00	261000	10.50	13.50	4.50	4.50	22	0.953	8.08E-09
								AVERAGE	8.13E-09

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
18" to 48" B.E.G.S.	CH				74	47		61.9

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 84.6 pcf Optimum moisture = 29.8 %	Brown & Red Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-10 Site F Insitu Pit 2

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 6/3/2022
Lab No. 437
Hydraulic Conductivity: 8.13E-09
Percent Passing No. 40 Sieve: 86.9

Report No. 2-B

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	438	Sample Date:	6/3/2022
Test Number:	3	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	16"-42" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Ty Goebler	Method: **A,B,C**	A
Material Description:	Red & Brown Sandy Fat Clay		
Type of Structure:	Site F Insitu		
Sample Location:	SF-11 Pit-3		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A16		126.6	66.38	30.3		62.5
-40	A16		126.6	41.83	30.3		88.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C33	28.91	20.35	23	6.19	60.5	60
2	C18	22.72	16.51	22	6.18	60.1	59
3							
						Liquid Limit	**60**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C89	31.96	26.79	6.11	5.17	25
2	C90	28.45	24.12	6.06	4.33	24
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**35**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	06/03/22	No. of Sps Del. On This Date	5
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-11	Lab Start Date:	6/27/22
Material:	Red & Brown Sandy Fat Clay	Lab Completion Date:	7-1/22
Sample Location:	Pit-3	Technician	Craig Moore
Lab #:	438	Lift	Sub base
Sample Orientation	H _____ V ___X__	Spl.	3
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L: 4.68 in
b. Avg. Diameter of Specimen: 2.838 in.
c. Sample Volume: (0.7854 * b^2 * a): 29.579 cu. in.
d. Wet Unit Weight [(e * 3.8095)/c]: 115.5 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	896.6 gms	k. Wet Weight Soil + Tare:	914.3 gms
f. Wet Weight Soil + Tare:	896.6 gms	l. Dry Weight Soil + Tare:	701.1 gms
g. Dry Weight Soil + Tare:	701.1 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	30.4 %
l. Moisture Content [(f-g)/(g-h)]*100	27.9 %		
j. Unit Dry Wt. [d/l + (l/100)]	90.3 pcf		

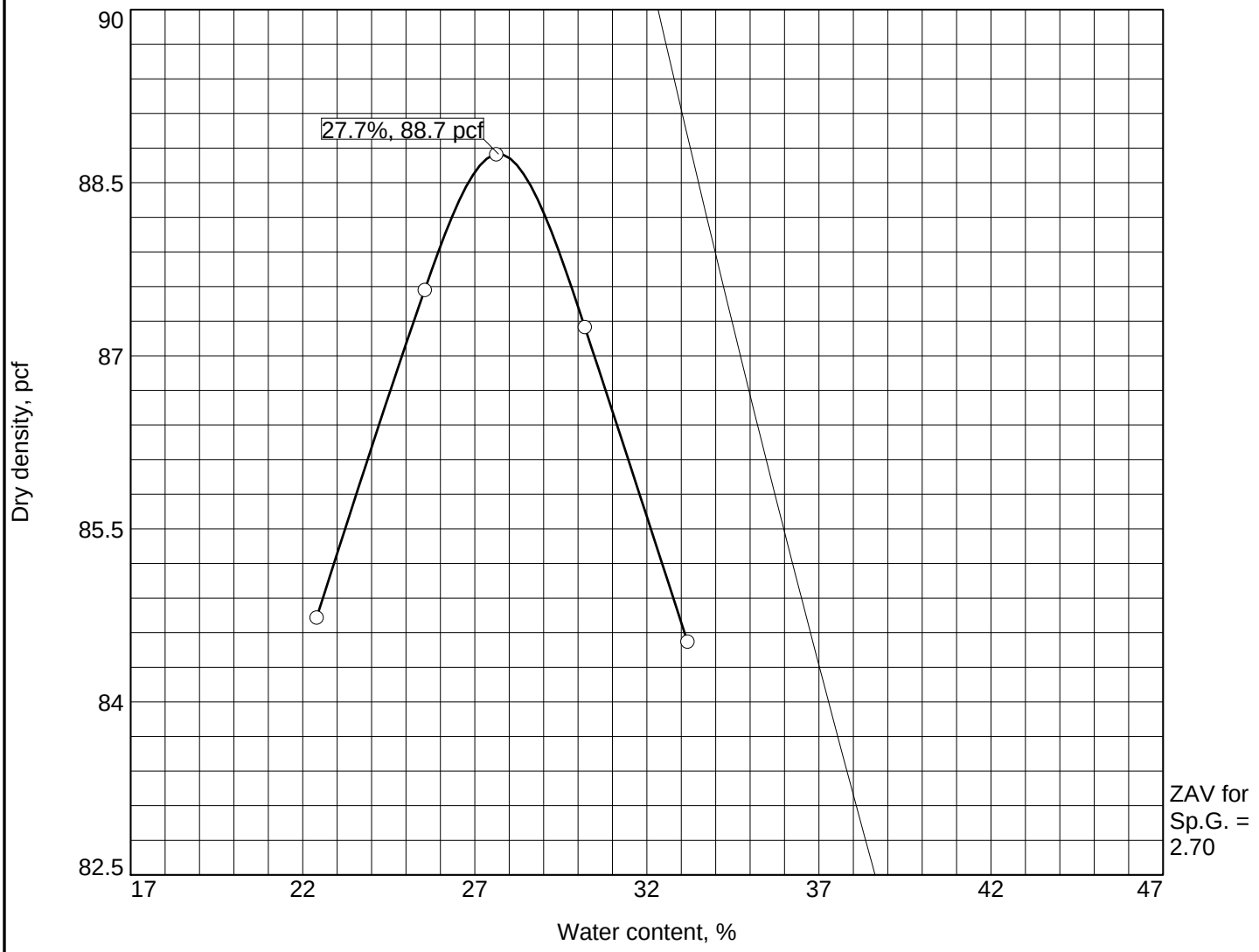
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
6/27/2022	7:00		0.00	24.00					
6/28/2022	6:30	84600	1.70	22.30	1.70	1.70	22	0.953	9.48E-09
6/29/2022	6:30	86400	3.70	20.30	2.00	2.00	22	0.953	1.10E-08
6/30/2022	6:30	86400	4.70	19.30	1.00	1.00	22	0.953	5.53E-09
7/1/2022	6:30	86400	7.80	16.20	3.10	3.10	22	0.953	1.73E-08
7/1/2022	15:00	30600	8.50	15.50	0.70	0.70	22	0.953	1.11E-08
								AVERAGE	1.09E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
16" to 42" B.E.G.S.	CH				60	35		62.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 88.7 pcf Optimum moisture = 27.7 %	Red & Brown Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-11 Site F Insitu Pit 3

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 6/3/2022
Lab No. 438
Hydraulic Conductivity: 1.09E-08
Percent Passing No. 40 Sieve: 88.0

Report No. 2-C

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	439	Sample Date:	6/3/2022
Test Number:	4	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	16"-48" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Ty Goebler	Method: **A,B,C**	A
Material Description:	Gray & Brown Sandy Fat Clay		
Type of Structure:	Site F Insitu		
Sample Location:	SF-12 Pit-4		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A87		136.8	83.11	30.55		50.5
-40	A87		136.8	50.17	30.55		81.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C48	24.01	16.8	23	6.23	68.2	68
2	C49	23.66	16.57	23	6.19	68.3	68
3							
						Liquid Limit	**68**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C75	25.9	21.79	6.05	4.11	26
2	C91	23.14	19.47	6.03	3.67	27
					Plastic Limit	**27**

Plasticity Index - Tex-106-E

Plasticity Index:	**41**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	06/03/22	No. of Sps Del. On This Date	5
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-12	Lab Start Date:	6/27/22
Material:	Gray & Brown Sandy Fat Clay	Lab Completion Date:	6/29/22
Sample Location:	Pit-4	Technician	Craig Moore
Lab #:	439	Lift	Sub-Base
Sample Orientation	H _____ V ___X__	Spl.	4
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.89 in	b. Avg. Diameter of Specimen:	2.883 in.
c. Sample Volume: (0.7854 * b^2 * a):	31.942 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	107.1 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	897.9 gms	k. Wet Weight Soil + Tare:	921.5 gms
f. Wet Weight Soil + Tare:	897.9 gms	l. Dry Weight Soil + Tare:	699.9 gms
g. Dry Weight Soil + Tare:	699.9 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	31.7 %
l. Moisture Content [(f-g)/(g-h)]*100	28.3 %		
j. Unit Dry Wt. [d/l + (l/100)]	83.5 pcf		

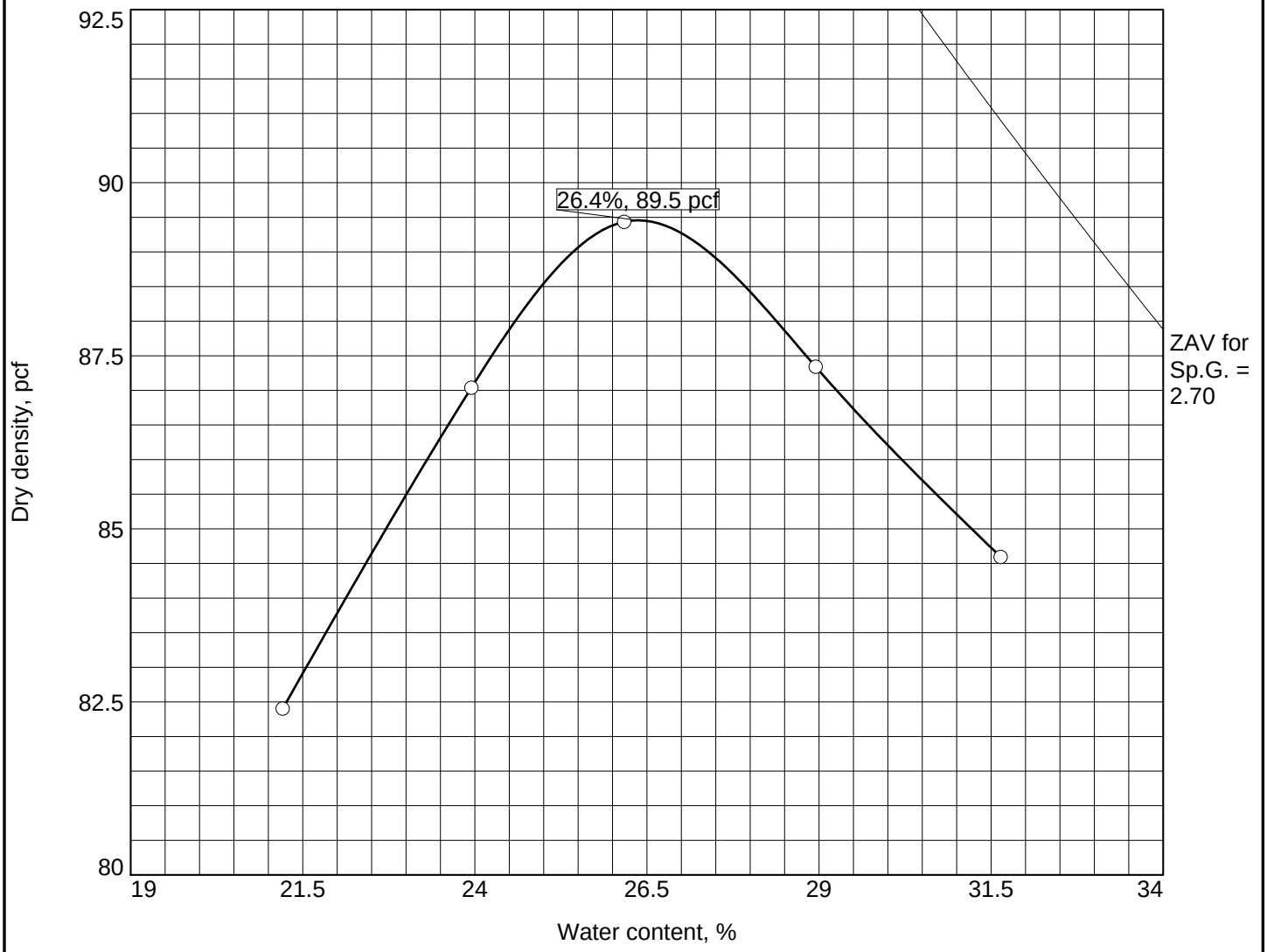
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
6/27/2022	7:00		0.00	24.00					
6/27/2022	16:00	32400	3.00	21.00	3.00	3.00	22	0.953	4.44E-08
6/28/2022	6:30	52200	7.50	16.50	4.50	4.50	22	0.953	4.19E-08
6/28/2022	15:00	30600	10.00	14.00	2.50	2.50	22	0.953	4.03E-08
6/29/2022	6:30	55800	14.50	9.50	4.50	4.50	22	0.953	4.03E-08
6/29/2022	16:00	34200	17.20	6.80	2.70	2.70	22	0.953	4.01E-08
								AVERAGE	4.14E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
16" to 48" B.E.G.S.	CH				68	41		50.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 89.5 pcf Optimum moisture = 26.4 %	Gray & Brown Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-12 Site F Insitu Pit 4

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 6/3/2022
Lab No. 439
Hydraulic Conductivity: 4.14E-08
Percent Passing No. 40 Sieve: 81.5

Report No. 2-D

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	440	Sample Date:	6/3/2022
Test Number:	5	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	18"-42" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Ty Goebler	Method: **A,B,C**	A
Material Description:	Red & Gray Sandy Fat Clay		
Type of Structure:	Site F Insitu		
Sample Location:	SF-13 Pit-5		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A73		145.7	78.8	30.47		58.1
-40	A73		145.7	43.22	30.47		88.9

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C28	24.13	17.42	27	6.19	59.8	60
2	C27	26.01	18.56	25	6.17	60.1	60
3							
						Liquid Limit	**60**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C40	26.98	22.71	6.37	4.27	26
2	C42	30.28	25.34	6.15	4.94	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**34**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	6/3/22	No. of Sps Del. On This Date	5
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	SF-13	Lab Start Date:	6/27/22
Material:	Red & Gray Sandy Fat Clay	Lab Completion Date:	7/1/22
Sample Location:	Pit-5	Technician	Craig Moore
Lab #:	440	Lift	Sub-Base
Sample Orientation	H _____ V ___X__	Spl.	5
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.75 in	b. Avg. Diameter of Specimen:	2.818 in.
c. Sample Volume: (0.7854 * b^2 * a):	29.601 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	117.6 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	913.9 gms	k. Wet Weight Soil + Tare:	927.9 gms
f. Wet Weight Soil + Tare:	913.9 gms	l. Dry Weight Soil + Tare:	726.1 gms
g. Dry Weight Soil + Tare:	726.1 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	27.8 %
l. Moisture Content [(f-g)/(g-h)]*100	25.9 %		
j. Unit Dry Wt. [d/l + (l/100)]	93.4 pcf		

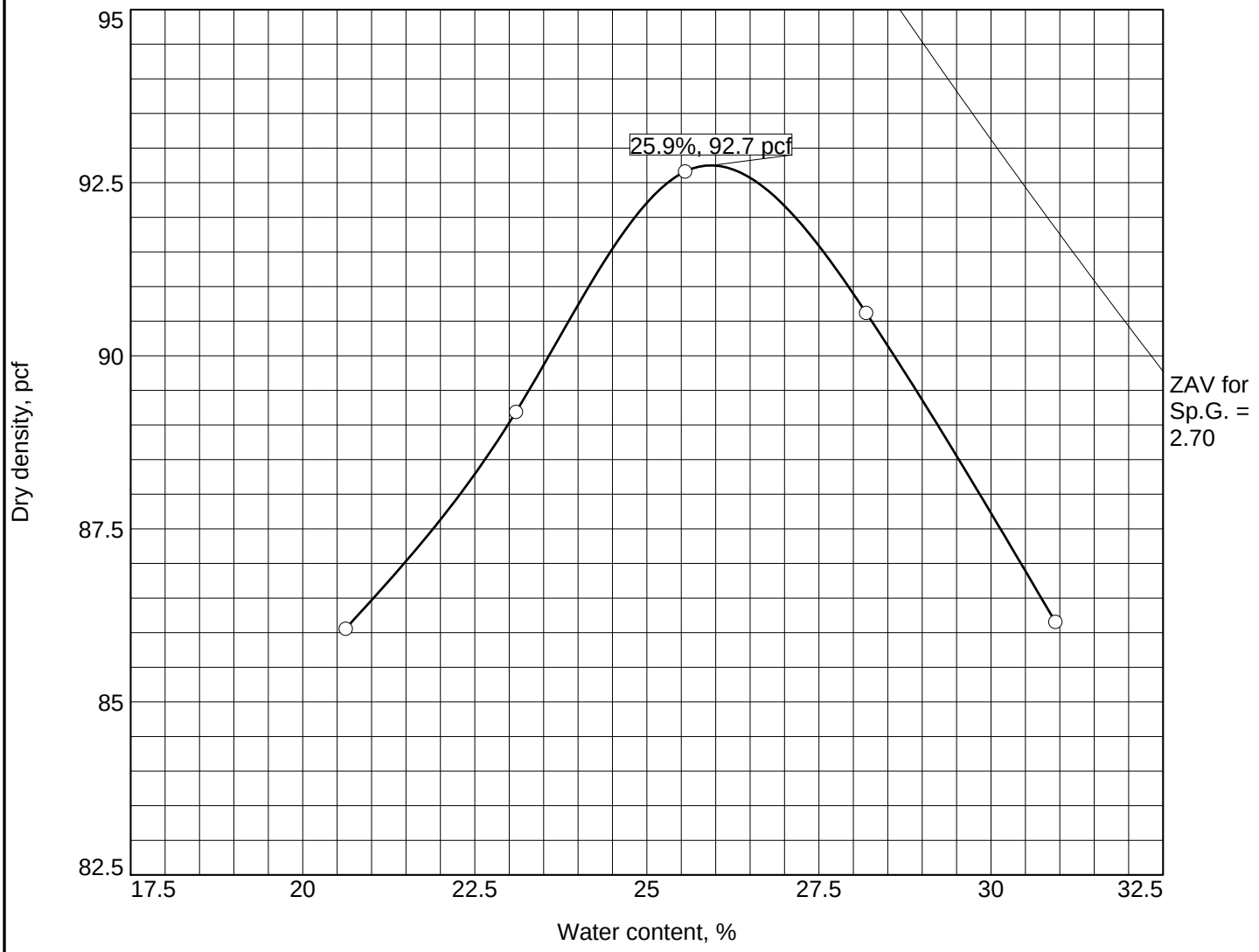
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
6/27/2022	7:00		0.00	24.00					
6/28/2022	6:30	84600	1.60	22.40	1.60	1.60	22	0.953	9.18E-09
6/29/2022	6:30	86400	3.00	21.00	1.40	1.40	22	0.953	7.91E-09
6/30/2022	6:30	86400	5.40	18.60	2.40	2.40	22	0.953	1.37E-08
7/1/2022	6:30	86400	7.40	16.60	2.00	2.00	22	0.953	1.15E-08
7/1/2022	15:00	30600	8.40	15.60	1.00	1.00	22	0.953	1.63E-08
								AVERAGE	1.17E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
18" to 42" B.E.G.S.	CH				60	34		58.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 92.7 pcf Optimum moisture = 25.9 %	Red & Gray Sandy Fat Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-13 Site F Insitu Pit 5

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 6/3/2022
Lab No. 440
Hydraulic Conductivity: 1.17E-08
Percent Passing No. 40 Sieve: 88.9

Report No. 2-E

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	598	Sample Date:	7/19/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Anthony Muzny	Method: **A,B,C**	A
Material Description:	Reddish-Brown Sandy Lean Clay		
Type of Structure:	Interim Liner		
Sample Location:	SF-22, Grid Location W.0/9.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A19		152.06	86.89	30.08		53.4
-40	A19		152.06	32.51	30.08		98.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C13	30.13	23.4	29	6.18	39.1	40
2	C14	30.14	23.41	29	6.21	39.1	40
3							
						Liquid Limit	**40**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C19	39.26	34.05	6.17	5.21	19
2	C18	47.25	40.65	6.17	6.6	19
					Plastic Limit	**19**

Plasticity Index - Tex-106-E

Plasticity Index:	**21**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	07/21/22
TX105	Joe DeCoste	07/21/22
TX106	Joe DeCoste	07/21/22

Completed Date:	Reviewed By:
07/21/22	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	07/19/22	No. of Sps Del. On This Date	1
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location W.0/9.0	Lab Start Date:	7/27/22
Material:	Reddish-Brown Sandy Lean Clay	Lab Completion Date:	8/3/22
Sample Location:	SF-22	Technician	Craig Moore
Lab #:	598	Lift	Interim Liner
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.89 in	b. Avg. Diameter of Specimen:	2.811 in.
c. Sample Volume: (0.7854 * b^2 * a):	30.329 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	123.7 pcf

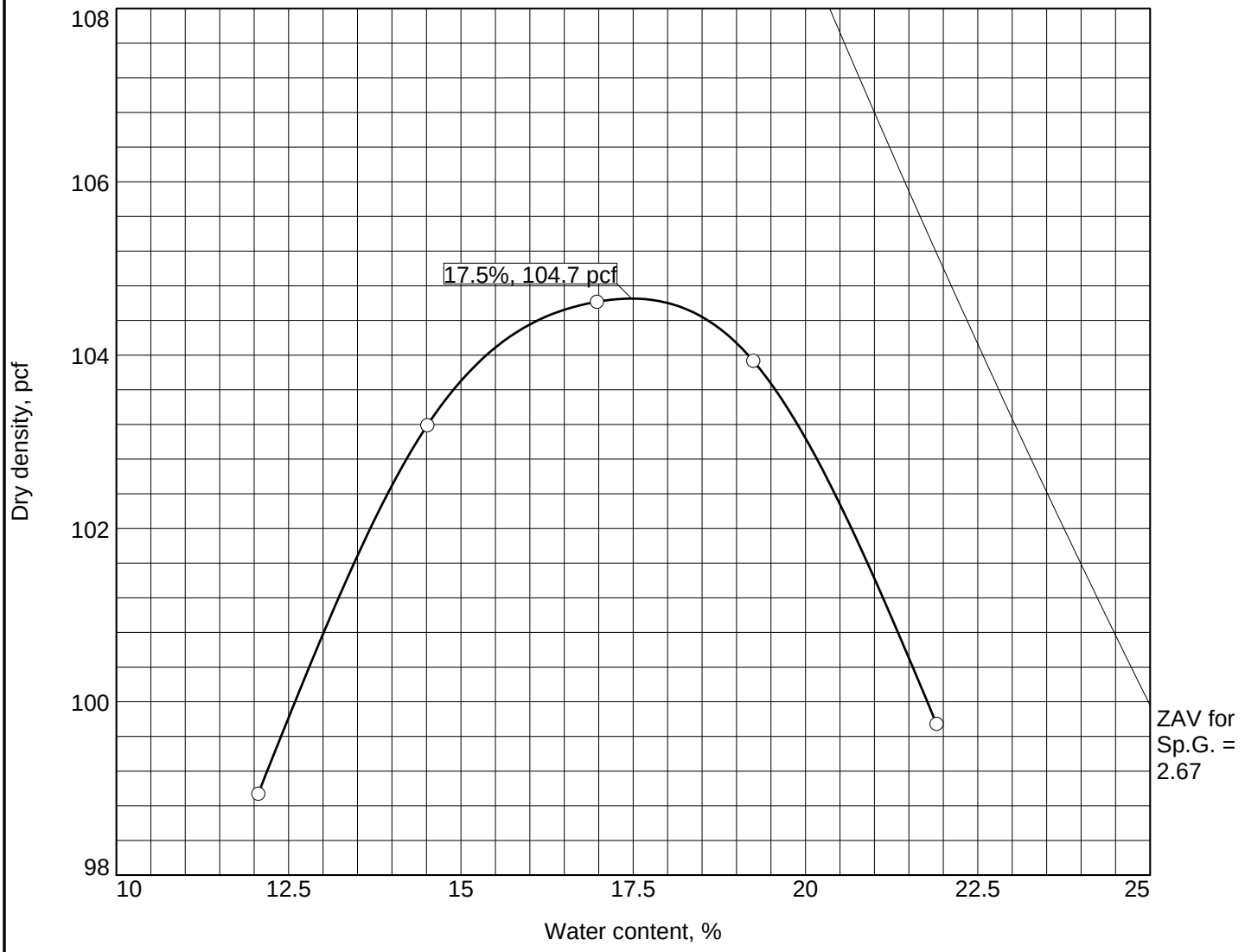
INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	984.7 gms	k. Wet Weight Soil + Tare:	993.4 gms
f. Wet Weight Soil + Tare:	984.7 gms	l. Dry Weight Soil + Tare:	814.8 gms
g. Dry Weight Soil + Tare:	814.8 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	21.9 %
l. Moisture Content [(f-g)/(g-h)]*100	20.8 %		
j. Unit Dry Wt. [d/l + (l/100)]	102.3 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
7/27/2022	15:45		0.00	24.00					
7/28/2022	6:15	52200	2.50	21.50	2.50	2.50	22	0.953	2.41E-08
7/29/2022	6:45	88200	4.60	19.40	2.10	2.10	22	0.953	1.21E-08
8/1/2022	6:40	258900	9.40	14.60	4.80	4.80	22	0.953	9.54E-09
8/2/2022	6:30	85800	11.10	12.90	1.70	1.70	22	0.953	1.03E-08
8/3/2022	6:30	86400	13.10	10.90	2.00	2.00	22	0.953	1.22E-08
								AVERAGE	1.36E-08

Pipet Area:	0.877 sq cm	Pipet Volume, Vp:	25 cc	Pipet Length, Lp:	28.5 cm
Test Method:	ASTM D 5084-16a				

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0 to 6" B.E.G.S.	CL				40	21		53.4

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 104.7 pcf Optimum moisture = 17.5 %	Reddish-Brown Sandy Lean Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** Final Grade at Sample Location SF-22, Grid Location W.0/9.0

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 7/19/2022
Lab No. 598
Hydraulic Conductivity:1.36E-08
Percent Passing No. 40 Sieve: 98.0

Report No. 15-A

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	655	Sample Date:	9/7/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6' B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Chris Marshall	Method: **A,B,C**	A
Material Description:	Brown Sandy Lean Clay		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-51 East Borrow Area Pit-1		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A77		139.72	75.43	30.46		58.8
-40	A77		139.72	32.59	30.46		98.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C22	25.52	19.64	26	6.17	43.7	44
2	C23	23.8	18.44	26	6.15	43.6	44
3							
						Liquid Limit	**44**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C30	23.68	20.52	6.17	3.16	22
2	C29	20.14	17.62	6.18	2.52	22
					Plastic Limit	**22**

Plasticity Index - Tex-106-E

Plasticity Index:	**22**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	09/13/23
TX105	Craig Moore	09/13/23
TX106	Craig Moore	09/13/23

Completed Date:	Reviewed By:
09/13/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	09/07/23	No. of Sps Del. On This Date	4
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	East Borrow Area Pit-1	Lab Start Date:	9/18/23
Material:	Brown Sandy Lean Clay	Lab Completion Date:	9/23/23
Sample Location:	SF-51	Technician	Craig Moore
Lab #:	655	Lift	
Sample Orientation	H _____ V ___X__	Spl.	1
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.73 in	b. Avg. Diameter of Specimen:	2.889 in.
c. Sample Volume: (0.7854 * b^2 * a):	30.980 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	114.1 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	927.6 gms	k. Wet Weight Soil + Tare:	944.3 gms
f. Wet Weight Soil + Tare:	927.6 gms	l. Dry Weight Soil + Tare:	763.9 gms
g. Dry Weight Soil + Tare:	763.9 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	23.6 %
l. Moisture Content [(f-g)/(g-h)]*100	21.4 %		
j. Unit Dry Wt. [d/l + (l/100)]	93.9 pcf		

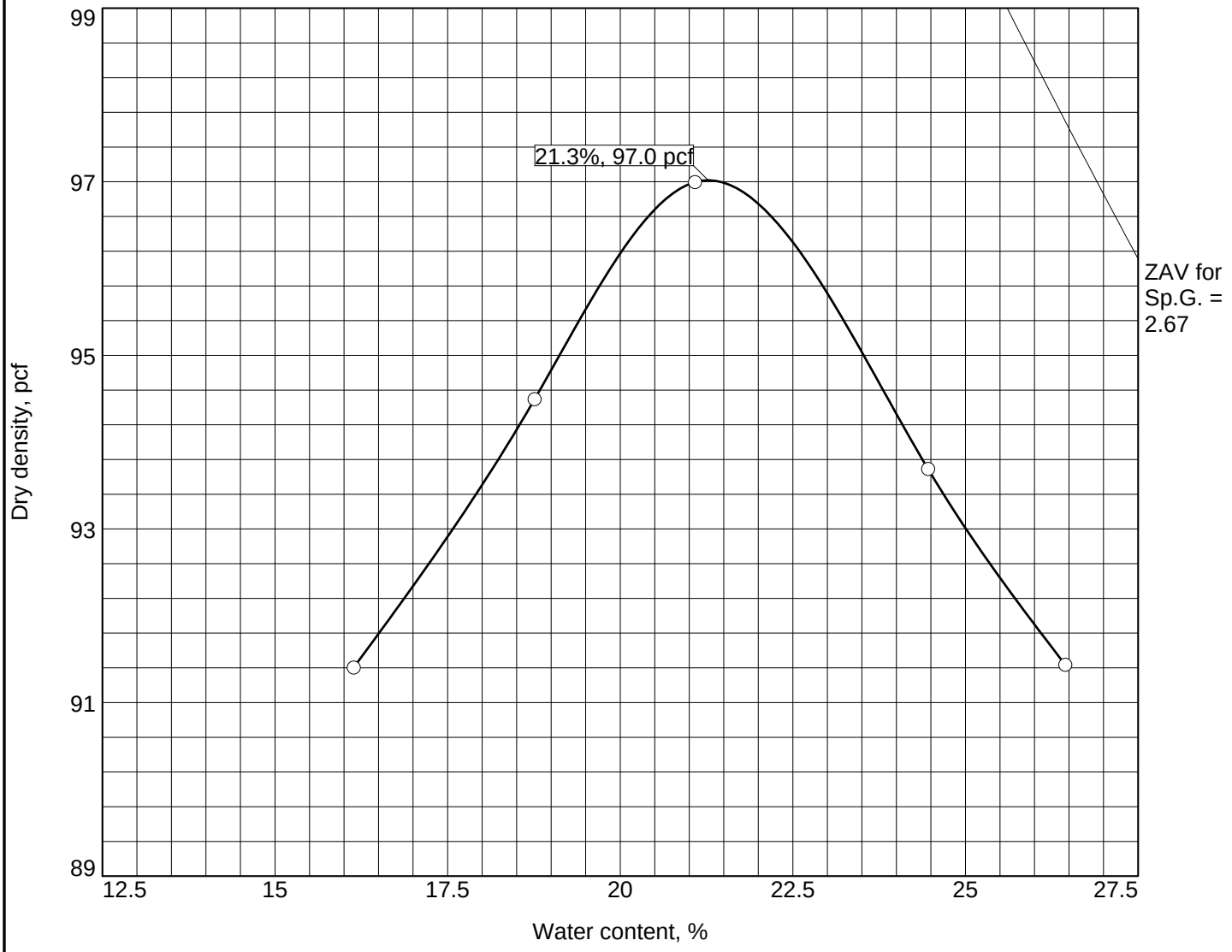
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
9/21/2023	6:25		0.00	25.00					
9/21/2023	8:11	6360	1.30	23.70	1.30	1.30	22	0.953	9.38E-08
9/21/2023	12:00	13740	4.50	20.50	3.20	3.20	22	0.953	1.08E-07
9/21/2023	12:58	3480	5.50	17.50	1.00	3.00	22	0.953	2.69E-07
9/21/2023	14:33	5700	6.80	16.20	1.30	1.30	22	0.953	1.07E-07
9/22/2023	6:22	56940	17.80	5.20	11.00	11.00	22	0.953	9.32E-08
								AVERAGE	1.34E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0 to 6' B.E.G.S.	CL				44	22		58.8

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 97.0 pcf Optimum moisture = 21.3 %	Brown Sandy Lean Clay

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-51 East Borrow Area Pit No. 1

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 9/7/2023
Lab No. 655
Hydraulic Conductivity: 1.34E-07
Percent Passing No. 40 Sieve: 98.1

Report No. 101-A

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	657	Sample Date:	9/7/2023
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-4' B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Chris Marshall	Method: **A,B,C**	A
Material Description:	Brown & Gray Fat Clay with Sand		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-53 East Borrow Area Pit-3		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A80		129.18	59.07	30.55		71.1
-40	A80		129.18	32.45	30.55		98.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C100	20.94	15.55	24	6.1	57.0	57
2	C99	22.11	16.27	24	6.03	57.0	57
3							
						Liquid Limit	**57**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C47	26.34	22.39	6.16	3.95	24
2	C46	24.23	20.7	6.19	3.53	24
					Plastic Limit	**24**

Plasticity Index - Tex-106-E

Plasticity Index:	**33**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	09/13/23
TX105	Craig Moore	09/13/23
TX106	Craig Moore	09/13/23

Completed Date:	Reviewed By:
09/13/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	09/07/23	No. of Sps Del. On This Date	4
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	East Borrow Area Pit-3	Lab Start Date:	9/18/23
Material:	Brown & Gray Fat Clay with Sand	Lab Completion Date:	9/29/23
Sample Locati	SF-53	Technician	Craig Moore
Lab #:	657	Lift	
Sample Orientation	H _____ V ___X__	Spl.	3
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.69 in	b. Avg. Diameter of Specimen:	2.854 in.
c. Sample Volume: (0.7854 * b^2 * a):	29.971 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	116.4 pcf

INITIAL CONDITIONS

e. Wet Weight Soil:	916.0 gms
f. Wet Weight Soil + Tare:	916.0 gms
g. Dry Weight Soil + Tare:	705.3 gms
h. Tare Weight:	0.0 gms
I. Moisture Content [(f-g)/(g-h)]*100	29.9 %
j. Unit Dry Wt. [d/l + (I/100)]	89.6 pcf

FINAL CONDITIONS

k. Wet Weight Soil + Tare:	926.3 gms
l. Dry Weight Soil + Tare:	705.3 gms
m. Tare Weight:	0.0 gms
n. Moisture Content [(k-l)/(l-m)]*100	31.3 %

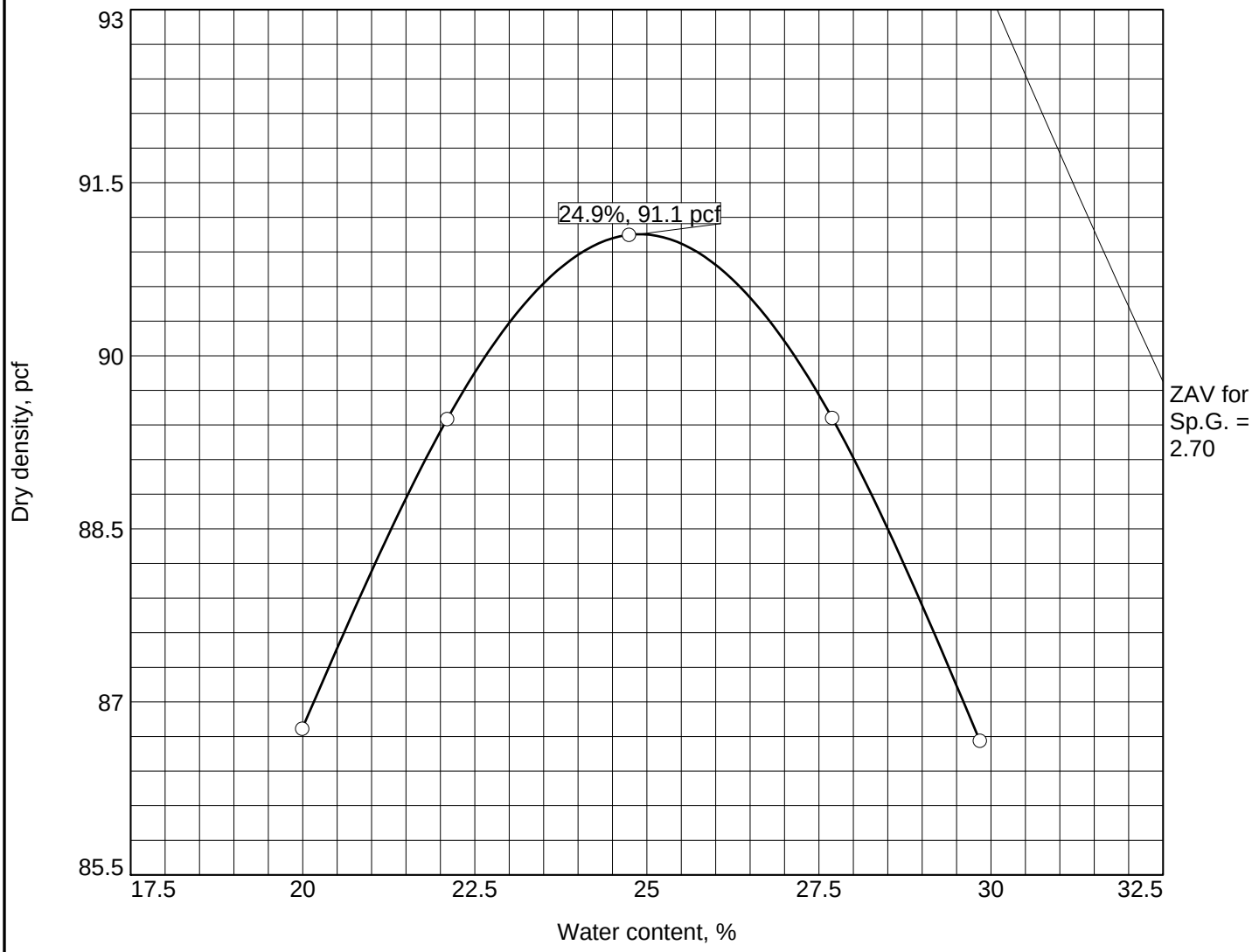
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							15	10	2

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
9/25/2023	5:17		0.00	25.00					
9/25/2023	12:01	24240	0.50	24.50	0.50	0.50	22	0.953	9.60E-09
9/26/2023	6:34	66780	1.50	23.50	1.00	1.00	22	0.953	6.99E-09
9/27/2023	6:48	87240	3.00	22.00	1.50	1.50	22	0.953	8.06E-09
9/28/2023	6:27	85140	4.20	20.80	1.20	1.20	22	0.953	6.64E-09
9/29/2023	6:40	87180	5.50	19.50	1.30	1.30	22	0.953	7.06E-09
								AVERAGE	7.67E-09

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698 - 12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0 to 4' B.E.G.S.	CH				57	33		71.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 91.1 pcf Optimum moisture = 24.9 %	Brown & Gray Fat Clay with Sand

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Location:** SF-53 East Borrow Area Pit No. 3

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 9/7/2023
Lab No. 657
Hydraulic Conductivity: 7.67E-09
Percent Passing No. 40 Sieve: 98.1

Report No. 101-B

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	820	Sample Date:	11/14/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Gary Miner	Method: **A,B,C**	A
Material Description:	Brown Clayey Sand		
Type of Structure:	1st Lift of General Fill for Clay Cap		
Sample Location:	SF-55, Grid Location S.0/17.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A7		161.78	116.57	30.41		34.4
-40	A7		161.78	42.72	30.41		90.6

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C22	22.1	18.3	27	6.17	31.3	32
2	C21	24.19	19.87	27	6.15	31.5	32
3							
						Liquid Limit	**32**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C28	24.84	22.36	6.16	2.48	15
2	C29	24.67	22.2	6.16	2.47	15
					Plastic Limit	**15**

Plasticity Index - Tex-106-E

Plasticity Index:	**17**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	11/21/23
TX105	Craig Moore	11/21/23
TX106	Craig Moore	11/21/23

Completed Date:	Reviewed By:
11/21/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	11/14/23	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location S.0/17.0	Lab Start Date:	11/27/23
Material:	Brown Clayey Sand	Lab Completion Date:	12/1/23
Sample Location:	SF-55	Technician	Craig Moore
Lab #:	820	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.91 in	b. Avg. Diameter of Specimen:	2.848 in.
c. Sample Volume: (0.7854 * b^2 * a):	31.273 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	126.5 pcf

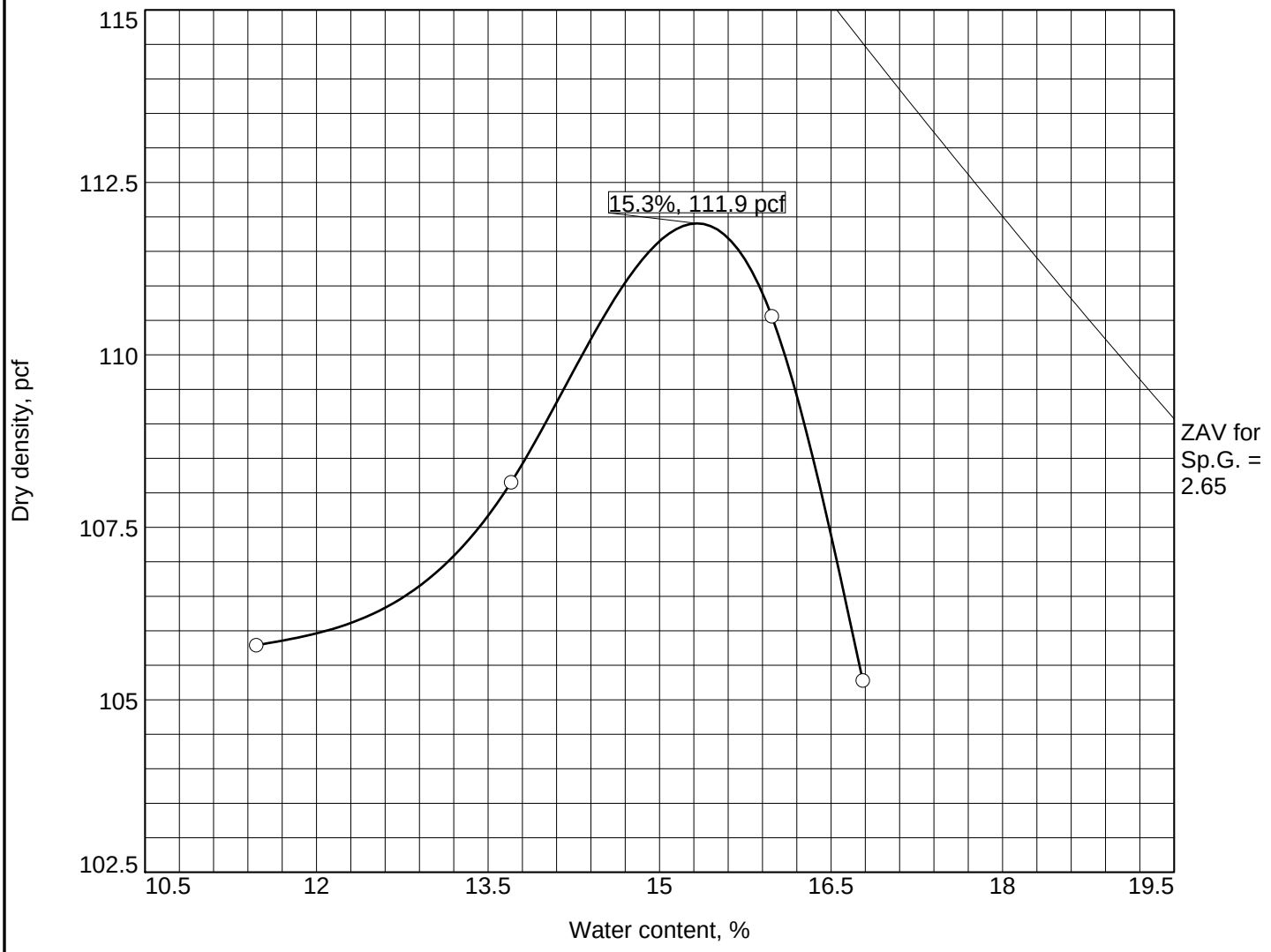
INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	1038.7 gms	k. Wet Weight Soil + Tare:	1056.8 gms
f. Wet Weight Soil + Tare:	1038.7 gms	l. Dry Weight Soil + Tare:	880.2 gms
g. Dry Weight Soil + Tare:	880.2 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	20.1 %
l. Moisture Content [(f-g)/(g-h)]*100	18.0 %		
j. Unit Dry Wt. [d/l + (l/100)]	107.2 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
11/28/2023	14:31		0.00	25.00					
11/29/2023	6:18	56820	5.80	19.20	5.80	5.80	22	0.953	1.82E-07
11/29/2023	11:00	16920	7.20	17.80	1.40	1.40	22	0.953	1.55E-07
11/29/2023	15:49	17340	8.50	16.50	1.30	1.30	22	0.953	1.43E-07
11/30/2023	6:05	51360	12.00	13.00	3.50	3.50	22	0.953	1.35E-07
11/30/2023	14:26	30060	13.80	11.20	1.80	1.80	22	0.953	1.24E-07
12/1/23	6:11:00	56700	16.40	8.60	2.60	2.60	22	0.953	9.84E-08
								AVERAGE	1.40E-07

Pipet Area:	0.877 sq cm	Pipet Volume, Vp:	25 cc	Pipet Length, Lp:	28.5 cm
Test Method:	ASTM D 5084-16a				

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0 to 6" B.E.G.S.	SC				32	17		34.4

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 111.9 pcf Optimum moisture = 15.3 %	Brown Clayey Sand

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Loc.:** SF-55 1st Lift of General Fill for Clay Cap at Grid Location S.0/17.0

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 11/15/2023
Lab No. 820
Hydraulic Conductivity: 1.40E-07
Percent Passing No. 40 Sieve: 90.6

Report No. 104-A

CME TESTING AND ENGINEERING, INC
320 GRAHAM ROAD • COLLEGE STATION, TEXAS 77845 • 979.690.3600

ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	823	Sample Date:	11/16/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	STD
Sampled By:	Anthony Muzny	Method: **A,B,C**	A
Material Description:	Tan & Gray Clayey Sand		
Type of Structure:	1st Lift of General Fill for Clay Cap		
Sample Location:	SF-56, Grid Location U.0/14.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:	1	Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A96		165.25	124.56	30.56		30.2
-40	A96		165.25	40.86	30.56		92.4

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C37	26.52	21.66	27	6.13	31.3	32
2	C35	24.21	19.93	27	6.17	31.1	31
3							
						Liquid Limit	**32**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C44	22.68	20.15	6.2	2.53	18
2	C45	28.32	24.87	6.17	3.45	18
					Plastic Limit	**18**

Plasticity Index - Tex-106-E

Plasticity Index:	**14**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	11/21/23
TX105	Craig Moore	11/21/23
TX106	Craig Moore	11/21/23

Completed Date:	Reviewed By:
11/21/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	11/16/23	No. of Sps Del. On This Date	1
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location U.0/14.0	Lab Start Date:	11/27/23
Material:	Tan & Gray Clayey Sand	Lab Completion Date:	12/1/23
Sample Location:	SF- 56	Technician	Craig Moore
Lab #:	823	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	2.86 in	b. Avg. Diameter of Specimen:	2.848 in.
c. Sample Volume: (0.7854 * b^2 * a):	18.213 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	124.1 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	593.3 gms	k. Wet Weight Soil + Tare:	608.4 gms
f. Wet Weight Soil + Tare:	593.3 gms	l. Dry Weight Soil + Tare:	501.3 gms
g. Dry Weight Soil + Tare:	501.3 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	21.4 %
l. Moisture Content [(f-g)/(g-h)]*100	18.3 %		
j. Unit Dry Wt. [d/l + (l/100)]	104.9 pcf		

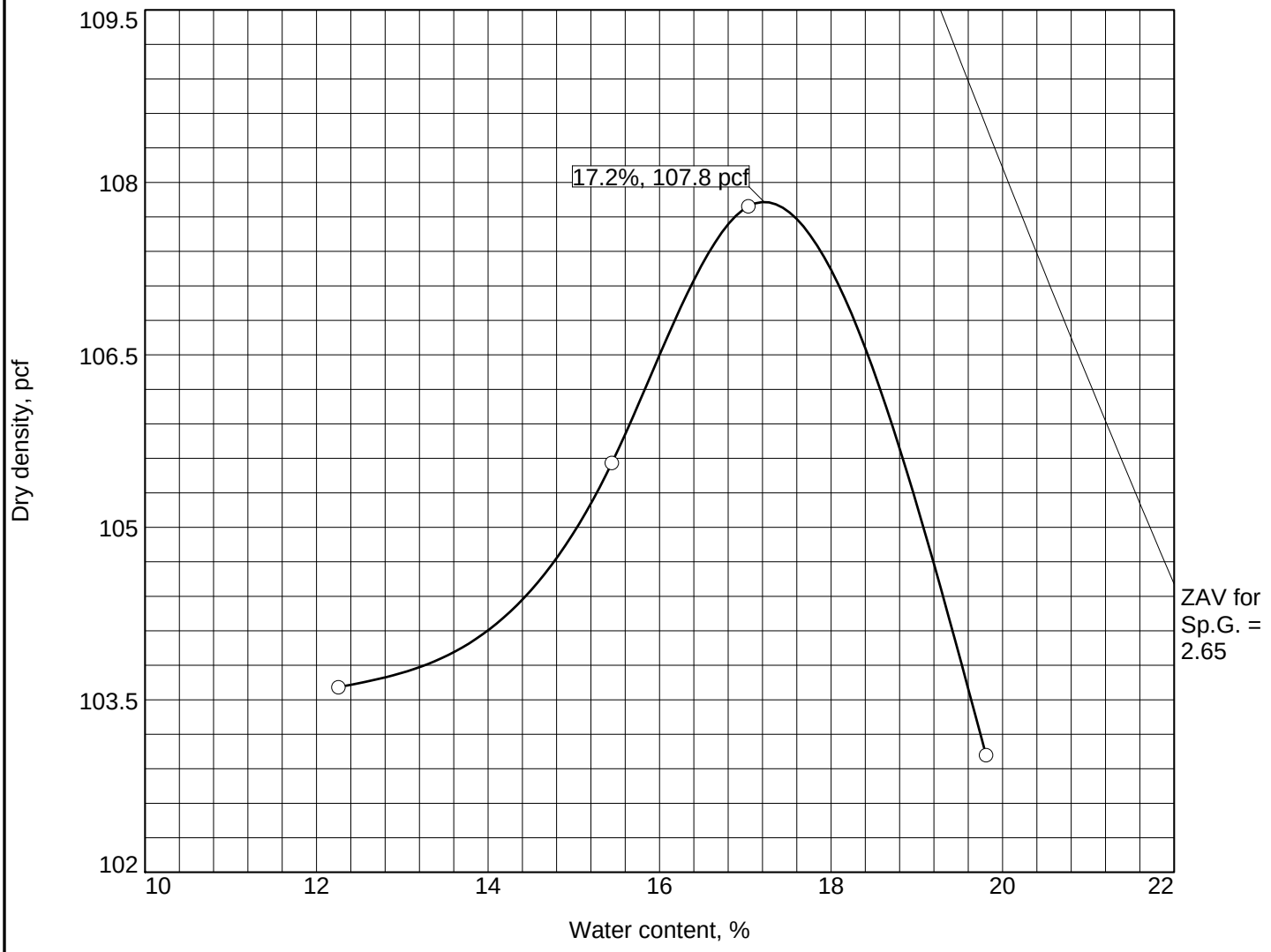
B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
11/27/2023	6:29		0.00	25.00					
11/28/2023	6:10	85260	2.30	22.70	2.30	2.30	22	0.953	2.73E-08
11/28/2023	14:31	30060	3.20	21.60	0.90	1.10	22	0.953	3.44E-08
11/29/2023	6:17	56760	5.20	19.60	2.00	2.00	22	0.953	3.72E-08
11/29/2023	15:50	34380	6.40	18.40	1.20	1.20	22	0.953	3.77E-08
11/30/2023	6:06	51360	8.00	16.80	1.60	1.60	22	0.953	3.44E-08
								AVERAGE	3.42E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 (2021) Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0 to 6" B.E.G.S.	SC				32	14		30.2

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 107.8 pcf Optimum moisture = 17.2 %	Tan & Gray Clayey Sand

Project No. 62063 **Client:** JBS ENGINEERING & ENVIRONMENTAL

Project: TMPA SITE F LANDFILL CLOSURE, GRIMES COUNTY, TEXAS

○ **Loc.:** SF-56 1st Lift of General Fill for Clay Cap at Grid Location U.0/14.0

CME Testing and Engineering, Inc.

College Station, TX

Remarks:

Date Sampled: 11/15/2023
Lab No. 823
Hydraulic Conductivity: 3.42E-08
Percent Passing No. 40 Sieve: 92.4

Report No. 106-A

ATTACHMENT D

Table 3 – Summary Table of Passing Moisture/Density Tests – Inactive Area

Table 4 – Summary Table of Passing Moisture/Density Tests – Active Area

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
7	E.3/14	Subgrade	88.7	24.7	-1.2	95.7
4	E.5/15	Subgrade	81.0	30.5	0.7	95.7
2	F.2/12	Subgrade	85.0	27.2	0.6	96.8
3	F.5/13.5	Subgrade	97.3	19.6	-0.9	100.0
4	F.5/15.5	Subgrade	84.2	29.2	-0.6	99.5
7	F/13	Subgrade	88.1	25.2	-0.7	95.0
1	F/14	Subgrade	78.9	32.8	-0.8	98.3
4	F/15	Subgrade	83.6	28.0	-1.8	98.8
4	F/16	Subgrade	81.5	30.4	0.6	96.3
7	G.5/11.5	Subgrade	88.5	25.9	0.0	95.5
3	G.5/16.5	Subgrade	95.5	20.9	0.4	98.2
2	G/11	Subgrade	84.6	24.9	-1.7	96.4
5	G/12	Subgrade	86.9	27.8	0.1	98.0
3	G/13	Subgrade	93.8	20.6	0.1	96.4
3	G/14	Subgrade	94.1	23.1	2.6	96.7
4	G/15	Subgrade	83.1	30.2	0.4	98.2
5	G/16	Subgrade	88.5	27.5	-0.2	99.8
4	G/17	Subgrade	83.2	31.0	1.2	98.3
4	G/18	Subgrade	82.2	30.9	1.1	97.2
4	H.5/12.5	Subgrade	82.1	31.6	1.8	97.0
4	H.5/17.5	Subgrade	84.4	30.8	1.0	99.8
2	H/10.3	Subgrade	84.6	25.0	-1.6	96.4
2	H/11	Subgrade	88.8	26.6	0.0	101.1
5	H/12	Subgrade	84.7	28.4	0.7	95.5
3	H/13	Subgrade	93.3	21.8	1.3	95.9
7	H/14	Subgrade	90.0	24.7	-1.2	97.1
2	H/15	Subgrade	85.8	25.9	-0.7	97.7
3	H/16	Subgrade	93.7	21.9	1.4	96.3
7	H/17	Subgrade	91.3	26.8	0.9	98.5
4	H/18	Subgrade	81.5	31.5	1.7	96.3
4	H/19	Subgrade	82.1	32.2	2.4	97.0
4	H/20	Subgrade	80.5	29.9	0.1	95.2
4	I.2/22	Subgrade	83.0	29.1	-0.7	98.1
2	I.5/11.5	Subgrade	87.0	27.5	0.9	99.1
4	I.5/14.5	Subgrade	83.2	30.0	0.2	98.3
6	I.5/18.5	Subgrade	88.2	26.7	0.3	98.5
4	I.5/21.5	Subgrade	82.6	30.6	0.8	97.6
7	I/10.1	Subgrade	88.2	23.9	-2.0	95.1
2	I/11	Subgrade	87.7	24.9	-1.7	99.9
4	I/12	Subgrade	81.7	29.2	-0.6	96.6
7	I/13	Subgrade	90.3	24.3	-1.6	97.4
7	I/14	Subgrade	91.0	25.5	-0.4	98.2
5	I/15	Subgrade	88.0	29.0	1.3	99.2
2	I/16	Subgrade	85.0	25.6	-1.0	96.8

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
6	I/17	Subgrade	89.7	28.3	1.9	100.2
5	I/18	Subgrade	89.0	27.6	-0.1	100.3
1	I/19	Subgrade	77.5	34.4	0.8	96.5
1	I/20	Subgrade	78.1	32.1	-1.5	97.3
6	I/21	Subgrade	88.7	26.5	0.1	99.1
4	J.2/24	Subgrade	83.5	28.6	-1.2	98.7
3	J.5/12.5	Subgrade	98.1	21.6	1.1	100.8
4	J.5/16.5	Subgrade	81.2	31.4	1.6	96.0
1	J.5/20.5	Subgrade	80.2	33.2	-0.4	99.9
4	J.5/22.5	Subgrade	85.0	30.3	0.5	100.5
3	J/10.2	Subgrade	93.7	18.5	-2.0	96.3
7	J/11	Subgrade	88.8	23.9	-2.0	95.8
2	J/12	Subgrade	84.2	27.3	0.7	95.9
3	J/13	Subgrade	96.1	21.6	1.1	98.8
4	J/14	Subgrade	85.1	30.8	1.0	100.6
4	J/15	Subgrade	83.9	31.9	2.1	99.2
4	J/16	Subgrade	81.7	31.6	1.8	96.6
2	J/17	Subgrade	87.4	26.9	0.3	99.5
2	J/18	Subgrade	83.4	28.0	1.4	95.0
7	J/19	Subgrade	89.1	23.9	-2.0	96.1
4	J/20	Subgrade	81.7	30.4	0.6	96.6
4	J/21	Subgrade	83.6	27.9	-1.9	98.8
4	J/22	Subgrade	80.4	30.1	0.3	95.0
6	J/23	Subgrade	87.0	24.8	-1.6	97.2
2	K.5/14.5	Subgrade	86.2	25.8	-0.8	98.2
7	K.5/19.5	Subgrade	91.0	27.1	1.2	98.2
2	K.5/21.5	Subgrade	86.7	27.8	1.2	98.7
4	K.5/23.5	Subgrade	85.1	29.9	0.1	100.6
3	K/10	Subgrade	98.5	21.5	1.0	101.2
3	K/11	Subgrade	94.8	23.5	3.0	97.4
7	K/12	Subgrade	88.1	26.0	0.1	95.0
2	K/13	Subgrade	88.7	26.9	0.3	101.0
2	K/14	Subgrade	84.4	27.9	1.3	96.1
4	K/15	Subgrade	84.3	30.5	0.7	99.6
2	K/16	Subgrade	88.3	26.6	0.0	100.6
2	K/17	Subgrade	88.1	28.1	1.5	100.3
4	K/18	Subgrade	84.7	31.2	1.4	100.1
7	K/19	Subgrade	92.1	24.3	-1.6	99.4
7	K/20	Subgrade	91.3	26.9	1.0	98.5
2	K/21	Subgrade	85.2	27.5	0.9	97.0
4	K/22	Subgrade	84.8	31.4	1.6	100.2
4	K/23	Subgrade	82.1	31.9	2.1	97.0
4	K/24	Subgrade	83.9	28.5	-1.3	99.2
5	K/25	Subgrade	84.3	27.5	-0.2	95.0

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
7	L.5/12.5	Subgrade	93.3	24.6	-1.3	100.6
4	L.5/15.5	Subgrade	83.9	30.8	1.0	99.2
7	L.5/21.5	Subgrade	90.9	27.0	1.1	98.1
5	L.5/24.5	Subgrade	85.3	29.4	1.7	96.2
7	L/10	Subgrade	90.0	25.7	-0.2	97.1
2	L/11	Subgrade	85.6	24.6	-2.0	97.5
3	L/12	Subgrade	94.2	20.5	0.0	96.8
7	L/13	Subgrade	91.8	23.9	-2.0	99.0
4	L/14	Subgrade	81.7	32.1	2.3	96.6
4	L/15	Subgrade	84.0	31.6	1.8	99.3
2	L/16	Subgrade	88.2	25.2	-1.4	100.5
2	L/17	Subgrade	86.0	28.6	2.0	97.9
4	L/18	Subgrade	81.4	31.6	1.8	96.2
1	L/19	Subgrade	78.2	36.0	2.4	97.4
7	L/20	Subgrade	90.3	24.7	-1.2	97.4
7	L/21	Subgrade	90.5	24.3	-1.6	97.6
2	L/22	Subgrade	85.1	28.3	1.7	96.9
6	L/23	Subgrade	89.1	25.7	-0.7	99.6
5	L/24	Subgrade	88.5	28.1	0.4	99.8
1	L/25	Subgrade	77.9	31.6	-2.0	97.0
4	L/26	Subgrade	83.7	30.0	0.2	98.9
7	M.5/11.5	Subgrade	88.3	27.0	1.1	95.3
2	M.5/13.5	Subgrade	86.4	26.3	-0.3	98.4
2	M.5/17.5	Subgrade	84.2	27.7	1.1	95.9
2	M.5/19.5	Subgrade	86.7	27.9	1.3	98.7
1	M.5/22.5	Subgrade	77.8	35.0	1.4	96.9
7	M.5/24.5	Subgrade	88.1	24.9	-1.0	95.0
2	M/10	Subgrade	88.6	29.4	2.8	100.9
7	M/11	Subgrade	88.7	26.6	0.7	95.7
3	M/12	Subgrade	97.3	22.4	1.9	100.0
1	M/13	Subgrade	78.9	33.0	-0.6	98.3
2	M/14	Subgrade	88.0	28.3	1.7	100.2
4	M/15	Subgrade	84.8	31.6	1.8	100.2
4	M/16	Subgrade	82.0	32.1	2.3	96.9
4	M/17	Subgrade	81.8	32.0	2.2	96.7
2	M/18	Subgrade	86.5	28.9	2.3	98.5
2	M/19	Subgrade	89.0	28.2	1.6	101.4
4	M/20	Subgrade	83.1	30.7	0.9	98.2
4	M/21	Subgrade	85.1	32.3	2.5	100.6
2	M/22	Subgrade	86.0	28.9	2.3	97.9
5	M/23	Subgrade	84.5	29.6	1.9	95.3
2	M/24	Subgrade	85.4	25.9	-0.7	97.3
4	M/25	Subgrade	83.5	28.2	-1.6	98.7
1	M/26	Subgrade	79.7	32.2	-1.4	99.3

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
8	M/26.8	Subgrade	101.4	18.1	0.6	96.8
7	M/9	Subgrade	88.5	26.5	0.6	95.5
7	N.5/13.5	Subgrade	88.1	24.5	-1.4	95.0
2	N.5/17	Subgrade	88.1	29.1	2.5	100.3
7	N.5/18	Subgrade	91.2	26.6	0.7	98.4
1	N.5/25.0	Subgrade	78.3	32.6	-1.0	97.5
2	N/10	Subgrade	87.6	28.7	2.1	99.8
2	N/11	Subgrade	84.6	28.9	2.3	96.4
7	N/12	Subgrade	92.7	25.3	-0.6	100.0
2	N/13	Subgrade	85.9	29.2	2.6	97.8
4	N/14	Subgrade	83.5	29.5	-0.3	98.7
4	N/15	Subgrade	82.0	31.2	1.4	96.9
7	N/16	Subgrade	89.0	24.2	-1.7	96.0
2	N/17	Subgrade	86.6	26.2	-0.4	98.6
2	N/18	Subgrade	86.8	26.1	-0.5	98.9
2	N/19	Subgrade	85.3	26.5	-0.1	97.2
7	N/20	Subgrade	92.0	24.2	-1.7	99.2
3	N/21	Subgrade	94.1	21.5	1.0	96.7
3	N/22	Subgrade	92.9	23.0	2.5	95.5
1	N/23	Subgrade	79.0	34.1	0.5	98.4
2	N/24	Subgrade	84.6	26.6	0.0	96.4
5	N/25	Subgrade	86.3	27.5	-0.2	97.3
7	N/26	Subgrade	88.1	24.6	-1.3	95.0
3	N/26.8	Subgrade	94.2	23.2	2.7	96.8
8	N/7	Subgrade	102.4	18.5	1.0	97.8
3	N/8	Subgrade	92.6	23.1	2.6	95.2
7	N/9	Subgrade	88.8	26.4	0.5	95.8
2	O/10	Subgrade	89.1	27.8	1.2	101.5
2	O/11	Subgrade	88.8	26.4	-0.2	101.1
2	O/12	Subgrade	87.0	26.3	-0.3	99.1
2	O/13	Subgrade	86.1	28.3	1.7	98.1
4	O/14	Subgrade	83.3	31.6	1.8	98.5
4	O/15	Subgrade	82.3	28.6	-1.2	97.3
2	O/16	Subgrade	86.8	27.2	0.6	98.9
7	O/17	Subgrade	88.3	29.0	3.1	95.3
3	O/18	Subgrade	96.0	18.5	-2.0	98.7
4	O/19	Subgrade	86.0	30.8	1.0	101.7
7	O/20	Subgrade	89.2	25.2	-0.7	96.2
3	O/21	Subgrade	97.8	20.3	-0.2	100.5
3	O/22	Subgrade	96.2	18.5	-2.0	98.9
3	O/23	Subgrade	94.5	20.9	0.4	97.1
8	O/24	Subgrade	104.2	19.1	1.6	99.5
3	O/25	Subgrade	92.8	18.5	-2.0	95.4
3	O/26	Subgrade	94.9	20.9	0.4	97.5

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
2	O/26.8	Subgrade	88.2	27.3	0.7	100.5
7	O/6	Subgrade	88.1	23.9	-2.0	95.0
7	O/7	Subgrade	91.0	26.6	0.7	98.2
3	O/8	Subgrade	99.2	19.9	-0.6	102.0
7	O/9	Subgrade	89.3	27.4	1.5	96.3
8	P.1/19.5	Subgrade	105.6	20.5	3.0	100.9
3	P.1/20.6	Subgrade	97.3	18.5	-2.0	100.0
3	P.5/18	Subgrade	96.3	22.8	2.3	99.0
7	P.7/10.8	Subgrade	90.8	26.3	0.4	98.0
2	P/10	Subgrade	86.2	28.9	2.3	98.2
1	P/11	Subgrade	77.7	32.5	-1.1	96.8
7	P/12	Subgrade	88.5	28.0	2.1	95.5
7	P/13	Subgrade	90.9	26.8	0.9	98.1
4	P/14	Subgrade	83.9	27.8	-2.0	99.2
4	P/15	Subgrade	82.4	28.6	-1.2	97.4
3	P/16	Subgrade	92.8	22.7	2.2	95.4
3	P/17	Subgrade	96.0	20.0	-0.5	98.7
3	P/18	Subgrade	97.4	21.3	0.8	100.1
3	P/19	Subgrade	95.7	22.0	1.5	98.4
3	P/20	Subgrade	97.5	18.8	-1.7	100.2
3	P/21	Subgrade	95.2	23.0	2.5	97.8
3	P/21.6	Subgrade	99.0	21.4	0.9	101.7
3	P/22	Subgrade	97.7	22.2	1.7	100.4
1	P/23	Subgrade	76.3	34.0	0.4	95.0
3	P/24	Subgrade	94.1	22.9	2.4	96.7
3	P/25	Subgrade	95.9	22.4	1.9	98.6
3	P/26	Subgrade	94.4	23.0	2.5	97.0
7	P/6	Subgrade	90.8	24.9	-1.0	98.0
8	P/7	Subgrade	103.6	17.0	-0.5	98.9
3	P/8	Subgrade	98.2	19.7	-0.8	100.9
3	P/9	Subgrade	96.5	22.0	1.5	99.2
7	Q.5/10.5	Subgrade	90.8	25.6	-0.3	98.0
7	Q.5/8.5	Subgrade	88.1	24.7	-1.2	95.0
3	Q.8/6.8	Subgrade	97.4	20.0	-0.5	100.1
7	Q/10	Subgrade	91.7	27.1	1.2	98.9
7	Q/11	Subgrade	91.8	24.6	-1.3	99.0
1	Q/12	Subgrade	81.7	31.7	-1.9	101.7
3	Q/13	Subgrade	97.7	22.7	2.2	100.4
8	Q/14	Subgrade	102.1	20.5	3.0	97.5
3	Q/15	Subgrade	97.4	21.1	0.6	100.1
3	Q/16	Subgrade	95.2	21.4	0.9	97.8
3	Q/17	Subgrade	95.9	21.7	1.2	98.6
8	Q/5	Subgrade	101.7	18.3	0.8	97.1
7	Q/6	Subgrade	91.2	25.1	-0.8	98.4

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
8	Q/7	Subgrade	99.5	17.1	-0.4	95.0
8	Q/8	Subgrade	100.3	18.0	0.5	95.8
7	Q/9	Subgrade	90.6	24.6	-1.3	97.7
7	R.5/11.5	Subgrade	88.7	25.8	-0.1	95.7
2	R.5/13.5	Subgrade	88.7	27.7	1.1	101.0
8	R.5/7.5	Subgrade	102.2	17.5	0.0	97.6
7	R.5/9.5	Subgrade	94.3	26.4	0.5	101.7
7	R/10	Subgrade	88.3	25.7	-0.2	95.3
2	R/11	Subgrade	87.0	27.3	0.7	99.1
5	R/12	Subgrade	86.0	30.0	2.3	97.0
3	R/13	Subgrade	97.2	19.1	-1.4	99.9
5	R/14	Subgrade	89.0	29.3	1.6	100.3
3	R/15	Subgrade	99.2	20.1	-0.4	102.0
8	R/26	Subgrade	99.5	18.7	1.2	95.0
8	R/27	Subgrade	99.5	19.4	1.9	95.0
3	R/5	Subgrade	97.6	19.9	-0.6	100.3
8	R/6	Subgrade	103.5	19.5	2.0	98.9
8	R/7	Subgrade	99.5	18.2	0.7	95.0
8	R/8	Subgrade	103.3	16.4	-1.1	98.7
3	R/9	Subgrade	98.1	21.4	0.9	100.8
3	S.5/5.5	Subgrade	94.9	22.1	1.6	97.5
3	S/10	Subgrade	97.0	22.1	1.6	99.7
2	S/11	Subgrade	88.7	28.2	1.6	101.0
7	S/12	Subgrade	93.5	24.0	-1.9	100.9
4	S/13	Subgrade	81.4	30.0	0.2	96.2
8	S/27	Subgrade	100.0	18.5	1.0	95.5
3	S/5	Subgrade	95.5	20.8	0.3	98.2
3	S/6	Subgrade	95.2	21.4	0.9	97.8
3	S/7	Subgrade	96.1	21.8	1.3	98.8
3	S/8	Subgrade	97.2	21.3	0.8	99.9
8	S/9	Subgrade	104.8	18.5	1.0	100.1
9	T/5	Subgrade	93.2	20.7	-0.6	96.1
12	T.2/4.5	Subgrade	104.8	16.1	-1.1	97.2
7	T.5/25.5	Subgrade	91.4	25.3	-0.6	98.6
3	T.5/9.5	Subgrade	99.3	22.7	2.2	102.1
3	T/10	Subgrade	95.3	23.0	2.5	97.9
8	T/25	Subgrade	100.5	20.5	3.0	96.0
8	T/26	Subgrade	100.8	20.4	2.9	96.3
8	T/27	Subgrade	99.8	20.1	2.6	95.3
3	T/6	Subgrade	92.6	19.8	-0.7	95.2
3	T/7	Subgrade	95.8	18.8	-1.7	98.5
3	T/8	Subgrade	98.0	21.1	0.6	100.7
8	T/9	Subgrade	104.4	18.2	0.7	99.7
7	U/10	Subgrade	93.8	27.2	1.3	101.2

Table 3: INACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
5	U/6	Subgrade	87.1	26.2	-1.5	98.2
5	U.5/6.5	Subgrade	85.1	30.1	2.4	95.9
3	U/11	Subgrade	97.5	21.9	1.4	100.2
8	U/25	Subgrade	104.7	18.0	0.5	100.0
8	U/26	Subgrade	99.8	19.3	1.8	95.3
12	U/5	Subgrade	102.4	16.1	-1.1	95.0
7	U/7	Subgrade	89.2	26.3	0.4	96.2
8	U/8	Subgrade	102.4	18.5	1.0	97.8
3	U/9	Subgrade	95.6	21.1	0.6	98.3
10	V/10	Subgrade	92.4	25.9	1.0	101.4
12	V/11	Subgrade	102.7	17.5	0.3	95.3
5	V/12	Subgrade	89.3	28.8	1.1	100.7
12	V/6	Subgrade	102.4	15.8	-1.4	95.0
11	V/7	Subgrade	113.8	14.3	-1.0	101.7
12	V/8	Subgrade	104.6	17.3	0.1	97.0
9	V/9	Subgrade	94.1	23.5	2.2	97.0
9	V.5/9.5	Subgrade	97.3	22.8	1.5	100.3
12	V/5	Subgrade	106.4	15.7	-1.5	98.7
12	W/5	Subgrade	102.8	15.2	-2.0	95.4
12	W/6	Subgrade	104.4	16.3	-0.9	96.8
9	W/8	Subgrade	92.9	23.5	2.2	95.8
9	W/7	Subgrade	97.1	21.9	0.6	100.1
12	X/5.2	Subgrade	102.7	15.8	-1.4	95.3

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
6	AA.5/10.5	1st Lift Clay	87.3	28.6	2.2	97.5
2	AA.5/10.5	2nd Lift Clay	85.5	29.6	3.0	97.4
7	AA.8/16	1st Lift Clay	92.3	25.1	-0.8	99.6
7	AA.8/16	2nd Lift Clay	95.1	24.8	-1.1	102.6
7	AA.8/9	1st Lift Clay	89.5	27.4	1.5	96.5
2	AA.8/9	2nd Lift Clay	88.4	29.4	2.8	100.7
7	AA/10	1st Lift Clay	88.8	27.6	1.7	95.8
2	AA/10	2nd Lift Clay	84.5	28.2	1.6	96.2
7	AA/11	1st Lift Clay	94.9	24.6	-1.3	102.4
7	AA/11	2nd Lift Clay	90.9	25.1	-0.8	98.1
3	AA/12	1st Lift Clay	93.3	23.3	2.8	95.9
7	AA/12	2nd Lift Clay	92.4	24.8	-1.1	99.7
3	AA/13	1st Lift Clay	94.1	23.5	3.0	96.7
7	AA/13	2nd Lift Clay	91.5	25.8	-0.1	98.7
7	AA/14	1st Lift Clay	88.1	23.9	-2.0	95.0
7	AA/14	2nd Lift Clay	90.1	27.0	1.1	97.2
6	AA/15	1st Lift Clay	85.7	27.6	1.2	95.8
7	AA/15	2nd Lift Clay	91.8	25.8	-0.1	99.0
7	AA/16	1st Lift Clay	92.8	24.8	-1.1	100.1
7	AA/16	2nd Lift Clay	92.3	26.0	0.1	99.6
3	AA/17	1st Lift Clay	96.7	22.2	1.7	99.4
3	AA/17	2nd Lift Clay	95.5	22.8	2.3	98.2
7	AA/9	1st Lift Clay	89.0	26.3	0.4	96.0
2	AA/9	2nd Lift Clay	84.3	29.8	3.2	96.0
6	AB.8/11	1st Lift Clay	87.5	28.1	1.7	97.8
7	AB.8/11	2nd Lift Clay	92.0	27.1	1.2	99.2
7	AB/10	1st Lift Clay	90.2	27.5	1.6	97.3
2	AB/10	2nd Lift Clay	86.2	28.7	2.1	98.2
6	AB/11	1st Lift Clay	85.0	27.4	1.0	95.0
2	AB/11	2nd Lift Clay	86.4	27.9	1.3	98.4
6	AB/12	1st Lift Clay	89.1	27.3	0.9	99.6
2	AB/12	2nd Lift Clay	83.8	29.5	2.9	95.4
7	AB/13	1st Lift Clay	94.2	25.0	-0.9	101.6
7	AB/13	2nd Lift Clay	89.4	26.7	0.8	96.4
2	AB/14	1st Lift Clay	88.0	28.4	1.8	100.2
2	AB/14	2nd Lift Clay	86.7	27.1	0.5	98.7
7	AB/15	1st Lift Clay	89.0	24.0	-1.9	96.0
7	AB/15	2nd Lift Clay	88.5	26.6	0.7	95.5
7	AC/12	1st Lift Clay	89.4	25.9	0.0	96.4
2	AC/12	2nd Lift Clay	88.3	29.0	2.4	100.6
6	AC/13	1st Lift Clay	87.5	28.6	2.2	97.8
7	AC/13	2nd Lift Clay	89.2	28.0	2.1	96.2
6	AC/14	1st Lift Clay	88.5	27.1	0.7	98.9
7	AC/14	2nd Lift Clay	91.2	25.8	-0.1	98.4
5	P.2/22.8	1st Lift Clay	90.9	25.8	-1.9	102.5
3	P.2/22.8	2nd Lift Clay	96.3	22.9	2.4	99.0
3	Q.5/19.5	1st Lift Clay	95.3	19.1	-1.4	97.9
7	Q.5/19.5	2nd Lift Clay	88.4	27.6	1.7	95.4
7	Q.5/22.5	1st Lift Clay	89.8	24.0	-1.9	96.9
7	Q.5/22.5	2nd Lift Clay	92.5	26.1	0.2	99.8
7	Q/18	1st Lift Clay	92.7	24.9	-1.0	100.0
2	Q/18	2nd Lift Clay	87.2	28.6	2.0	99.3
3	Q/19	1st Lift Clay	97.1	21.0	0.5	99.8

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
7	Q/19	2nd Lift Clay	89.1	27.9	2.0	96.1
3	Q/20	1st Lift Clay	94.1	23.5	3.0	96.7
7	Q/20	2nd Lift Clay	89.4	27.0	1.1	96.4
7	Q/21	1st Lift Clay	89.7	24.7	-1.2	96.8
7	Q/21	2nd Lift Clay	91.8	27.8	1.9	99.0
3	Q/22	1st Lift Clay	96.1	19.3	-1.2	98.8
7	Q/22	2nd Lift Clay	92.7	25.6	-0.3	100.0
3	Q/23	1st Lift Clay	92.9	22.6	2.1	95.5
7	Q/23	2nd Lift Clay	93.4	25.6	-0.3	100.8
8	Q/24	1st Lift Clay	99.5	18.3	0.8	95.0
2	Q/24	2nd Lift Clay	87.5	28.1	1.5	99.7
2	Q/25	1st Lift Clay	85.3	26.3	-0.3	97.2
7	Q/25	2nd Lift Clay	92.0	24.2	-1.7	99.2
2	Q/26	1st Lift Clay	86.7	26.7	0.1	98.7
3	Q/26	2nd Lift Clay	97.0	23.0	2.5	99.7
3	R.5/16.5	1st Lift Clay	94.1	22.4	1.9	96.7
3	R.5/16.5	2nd Lift Clay	94.4	23.5	3.0	97.0
3	R/16	1st Lift Clay	92.5	23.3	2.8	95.1
3	R/16	2nd Lift Clay	94.8	23.1	2.6	97.4
3	R/17	1st Lift Clay	94.3	19.5	-1.0	96.9
7	R/17	2nd Lift Clay	89.2	27.3	1.4	96.2
3	R/18	1st Lift Clay	93.7	22.7	2.2	96.3
7	R/18	2nd Lift Clay	90.5	27.7	1.8	97.6
8	R/19	1st Lift Clay	100.7	16.9	-0.6	96.2
7	R/19	2nd Lift Clay	91.6	25.4	-0.5	98.8
12	R/20	1st Lift Clay	106.8	15.7	-1.5	99.1
11	R/20	2nd Lift Clay	109.8	15.4	0.1	98.1
9	R/21	1st Lift Clay	95.0	23.2	1.9	97.9
11	R/21	2nd Lift Clay	107.3	14.7	-0.6	95.9
3	R/22	1st Lift Clay	95.2	19.2	-1.3	97.8
7	R/22	2nd Lift Clay	92.6	26.6	0.7	99.9
3	R/23	1st Lift Clay	97.0	20.6	0.1	99.7
7	R/23	2nd Lift Clay	88.5	25.2	-0.7	95.5
3	R/24	1st Lift Clay	92.5	20.4	-0.1	95.1
2	R/24	2nd Lift Clay	88.7	28.8	2.2	101.0
2	R/25	1st Lift Clay	87.6	26.3	-0.3	99.8
2	R/25	2nd Lift Clay	85.2	29.5	2.9	97.0
7	R/25.7	1st Lift Clay	91.4	25.8	-0.1	98.6
3	R/25.7	2nd Lift Clay	95.2	21.6	1.1	97.8
9	S.5/19.5	1st Lift Clay	92.3	23.9	2.6	95.2
12	S.5/19.5	2nd Lift Clay	102.4	15.6	-1.6	95.0
8	S.5/24.5	1st Lift Clay	101.9	20.2	2.7	97.3
12	S.5/24.5	2nd Lift Clay	103.7	16.4	-0.8	96.2
3	S/14	1st Lift Clay	97.4	23.1	2.6	100.1
7	S/14	2nd Lift Clay	88.2	28.0	2.1	95.1
2	S/15	1st Lift Clay	87.7	27.3	0.7	99.9
7	S/15	2nd Lift Clay	91.4	26.9	1.0	98.6
7	S/16	1st Lift Clay	89.9	25.0	-0.9	97.0
7	S/16	2nd Lift Clay	89.4	28.1	2.2	96.4
12	S/17	1st Lift Clay	103.2	19.9	2.7	95.7
9	S/17	2nd Lift Clay	96.9	21.5	0.2	99.9
9	S/18	1st Lift Clay	97.5	20.9	-0.4	100.5

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
9	S/18	2nd Lift Clay	93.7	20.5	-0.8	96.6
12	S/19	1st Lift Clay	104.0	18.1	0.9	96.5
9	S/19	2nd Lift Clay	97.3	21.3	0.0	100.3
11	S/20	1st Lift Clay	110.9	14.5	-0.8	99.1
12	S/20	2nd Lift Clay	102.9	16.2	-1.0	95.5
9	S/21	1st Lift Clay	93.2	21.9	0.6	96.1
11	S/21	2nd Lift Clay	111.3	14.6	-0.7	99.5
12	S/22	1st Lift Clay	105.1	16.8	-0.4	97.5
11	S/22	2nd Lift Clay	112.4	14.8	-0.5	100.4
9	S/23	1st Lift Clay	99.9	19.4	-1.9	103.0
11	S/23	2nd Lift Clay	106.6	16.1	0.8	95.3
2	S/24	1st Lift Clay	88.6	25.1	-1.5	100.9
7	S/24	2nd Lift Clay	92.2	24.1	-1.8	99.5
3	S/25	1st Lift Clay	96.1	22.5	2.0	98.8
7	S/25	2nd Lift Clay	92.1	25.1	-0.8	99.4
3	S/26	1st Lift Clay	94.7	21.7	1.2	97.3
3	S/26	2nd Lift Clay	96.2	23.5	3.0	98.9
9	T.5/12.5	1st Lift Clay	96.1	19.6	-1.7	99.1
10	T.5/12.5	2nd Lift Clay	87.7	27.4	2.5	96.3
10	T.5/16.5	2nd Lift Clay	86.5	28.0	3.1	95.0
9	T.5/16.5	1st Lift Clay	97.0	19.3	-2.0	100.0
9	T.5/21.5	1st Lift Clay	96.8	21.6	0.3	99.8
9	T.5/21.5	2nd Lift Clay	94.4	19.7	-1.6	97.3
7	T/11	1st Lift Clay	90.4	24.9	-1.0	97.5
7	T/11	2nd Lift Clay	88.9	28.3	2.4	95.9
7	T/12	1st Lift Clay	88.4	26.1	0.2	95.4
7	T/12	2nd Lift Clay	88.7	28.6	2.7	95.7
2	T/13	1st Lift Clay	86.9	26.1	-0.5	99.0
9	T/13	2nd Lift Clay	93.6	24.3	3.0	96.5
12	T/14	1st Lift Clay	103.1	19.9	2.7	95.6
9	T/14	2nd Lift Clay	98.5	21.0	-0.3	101.5
9	T/15	1st Lift Clay	92.5	23.4	2.1	95.4
11	T/15	2nd Lift Clay	108.2	14.5	-0.8	96.7
9	T/16	1st Lift Clay	93.0	22.6	1.3	95.9
9	T/16	2nd Lift Clay	93.8	23.5	2.2	96.7
9	T/17	1st Lift Clay	99.7	19.3	-2.0	102.8
10	T/17	2nd Lift Clay	88.3	24.6	-0.3	96.9
9	T/18	1st Lift Clay	92.7	22.6	1.3	95.6
11	T/18	2nd Lift Clay	107.4	15.0	-0.3	96.0
3	T/19	1st Lift Clay	96.4	18.5	-2.0	99.1
10	T/19	2nd Lift Clay	86.6	24.9	0.0	95.1
12	T/20	1st Lift Clay	106.5	16.5	-0.7	98.8
12	T/20	2nd Lift Clay	102.4	16.3	-0.9	95.0
9	T/21	1st Lift Clay	98.9	21.1	-0.2	102.0
9	T/21	2nd Lift Clay	96.2	20.0	-1.3	99.2
12	T/22	1st Lift Clay	105.7	15.7	-1.5	98.1
12	T/22	2nd Lift Clay	105.6	15.2	-2.0	98.0
12	T/23	1st Lift Clay	105.1	16.8	-0.4	97.5
11	T/23	2nd Lift Clay	111.3	13.4	-1.9	99.5
12	T/24	1st Lift Clay	102.5	19.2	2.0	95.1
12	T/24	2nd Lift Clay	106.9	16.1	-1.1	99.2
9	U.5/18.5	1st Lift Clay	93.1	20.5	-0.8	96.0
11	U.5/18.5	2nd Lift Clay	107.5	15.8	0.5	96.1

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
10	U.5/20.5	1st Lift Clay	89.9	22.9	-2.0	98.7
9	U.5/20.5	2nd Lift Clay	96.8	19.3	-2.0	99.8
12	U.5/22.5	1st Lift Clay	102.3	18.2	1.0	94.9
12	U.5/22.5	2nd Lift Clay	108.5	16.5	-0.7	100.6
10	U/13	1st Lift Clay	88.9	24.9	0.0	97.6
10	U/13	2nd Lift Clay	89.0	24.4	-0.5	97.7
12	U/14	1st Lift Clay	102.8	15.5	-1.7	95.4
9	U/14	2nd Lift Clay	95.9	24.0	2.7	98.9
9	U/15	1st Lift Clay	93.7	19.9	-1.4	96.6
9	U/15	2nd Lift Clay	94.9	24.3	3.0	97.8
8	U/16	1st Lift Clay	102.4	15.5	-2.0	97.8
9	U/16	2nd Lift Clay	93.1	22.3	1.0	96.0
8	U/17	1st Lift Clay	104.2	17.2	-0.3	99.5
9	U/17	2nd Lift Clay	97.9	20.6	-0.7	100.9
9	U/18	1st Lift Clay	97.2	22.5	1.2	100.2
11	U/18	2nd Lift Clay	107.1	15.4	0.1	95.7
10	U/19	1st Lift Clay	87.3	23.2	-1.7	95.8
11	U/19	2nd Lift Clay	108.3	15.5	0.2	96.8
12	U/20	1st Lift Clay	103.8	18.4	1.2	96.3
12	U/20	2nd Lift Clay	106.6	16.2	-1.0	98.9
9	U/21	1st Lift Clay	92.4	20.8	-0.5	95.3
9	U/21	2nd Lift Clay	93.3	20.6	-0.7	96.2
11	U/22	1st Lift Clay	109.1	14.5	-0.8	97.5
8	U/22	2nd Lift Clay	100.7	18.5	1.0	96.2
12	U/23	1st Lift Clay	107.1	17.0	-0.2	99.4
12	U/23	2nd Lift Clay	107.3	15.4	-1.8	99.5
11	U/24	1st Lift Clay	110.0	15.0	-0.3	98.3
12	U/24	2nd Lift Clay	105.4	16.4	-0.8	97.8
9	V.5/17.5	1st Lift Clay	99.9	20.2	-1.1	103.0
10	V.5/17.5	2nd Lift Clay	87.1	27.0	2.1	95.6
9	V/13	1st Lift Clay	95.2	22.0	0.7	98.1
9	V/13	2nd Lift Clay	94.8	23.0	1.7	97.7
12	V/14	1st Lift Clay	103.2	16.5	-0.7	95.7
9	V/14	2nd Lift Clay	92.3	19.8	-1.5	95.2
9	V/15	1st Lift Clay	92.2	22.3	1.0	95.1
9	V/15	2nd Lift Clay	92.2	22.5	1.2	95.1
9	V/16	1st Lift Clay	92.5	23.0	1.7	95.4
9	V/16	2nd Lift Clay	94.2	22.8	1.5	97.1
9	V/17	1st Lift Clay	93.8	23.1	1.8	96.7
9	V/17	2nd Lift Clay	97.2	20.7	-0.6	100.2
9	V/18	1st Lift Clay	99.0	20.9	-0.4	102.1
12	V/18	2nd Lift Clay	103.7	15.8	-1.4	96.2
12	V/19	1st Lift Clay	104.4	18.3	1.1	96.8
11	V/19	2nd Lift Clay	106.9	14.8	-0.5	95.5
9	V/20	1st Lift Clay	99.3	20.4	-0.9	102.4
9	V/20	2nd Lift Clay	95.0	19.9	-1.4	97.9
12	V/21	1st Lift Clay	107.9	16.4	-0.8	100.1
12	V/21	2nd Lift Clay	105.7	15.2	-2.0	98.1
12	V/22	1st Lift Clay	102.4	18.0	0.8	95.0
12	V/22	2nd Lift Clay	108.6	16.8	-0.4	100.7
12	V/23	1st Lift Clay	102.5	16.9	-0.3	95.1
12	V/23	2nd Lift Clay	106.7	16.7	-0.5	99.0
9	V/24	1st Lift Clay	97.8	19.9	-1.4	100.8

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
12	V/24	2nd Lift Clay	104.1	18.0	0.8	96.6
5	W.5/13.5	1st Lift Clay	86.9	29.2	1.5	98.0
7	W.5/13.5	2nd Lift Clay	88.9	25.3	-0.6	95.9
9	W.5/15.5	1st Lift Clay	90.4	23.9	2.6	93.2
5	W.5/15.5	2nd Lift Clay	84.3	27.3	-0.4	95.0
9	W.5/19.5	1st Lift Clay	97.9	19.7	-1.6	100.9
12	W.5/19.5	2nd Lift Clay	104.6	17.5	0.3	97.0
11	W.5/21.5	1st Lift Clay	106.3	14.7	-0.6	95.0
11	W.5/21.5	2nd Lift Clay	106.4	14.4	-0.9	95.1
3	W.5/7.5	1st Lift Clay	97.3	22.1	1.6	100.0
3	W.5/7.5	2nd Lift Clay	93.5	23.5	3.0	96.1
9	W.8/22	1st Lift Clay	95.3	19.4	-1.9	98.2
9	W.8/22	2nd Lift Clay	96.2	20.3	-1.0	99.2
7	W/10	1st Lift Clay	88.6	24.8	-1.1	95.6
7	W/10	2nd Lift Clay	88.1	24.6	-1.3	95.0
3	W/11	1st Lift Clay	94.6	23.5	3.0	97.2
7	W/11	2nd Lift Clay	88.1	25.8	-0.1	95.0
3	W/12	1st Lift Clay	96.6	21.5	1.0	99.3
7	W/12	2nd Lift Clay	89.7	25.2	-0.7	96.8
10	W/15	1st Lift Clay	88.3	23.0	-1.9	96.9
10	W/15	2nd Lift Clay	87.3	24.7	-0.2	95.8
9	W/16	1st Lift Clay	97.3	20.2	-1.1	100.3
9	W/16	2nd Lift Clay	93.7	21.3	0.0	96.6
9	W/17	1st Lift Clay	99.3	20.4	-0.9	102.4
9	W/17	2nd Lift Clay	94.4	23.8	2.5	97.3
8	W/18	1st Lift Clay	99.5	18.1	0.6	95.0
9	W/18	2nd Lift Clay	94.2	22.8	1.5	97.1
9	W/19	1st Lift Clay	98.9	22.9	1.6	102.0
11	W/19	2nd Lift Clay	109.2	14.1	-1.2	97.6
11	W/20	1st Lift Clay	109.7	16.0	0.7	98.0
11	W/20	2nd Lift Clay	110.3	15.9	0.6	98.6
12	W/21	1st Lift Clay	102.4	18.5	1.3	95.0
11	W/21	2nd Lift Clay	108.3	14.3	-1.0	96.8
11	W/22	1st Lift Clay	107.0	14.2	-1.1	95.6
8	W/22	2nd Lift Clay	101.8	17.8	0.3	97.2
12	W/23	1st Lift Clay	102.8	17.5	0.3	95.4
11	W/23	2nd Lift Clay	106.9	15.8	0.5	95.5
7	W/9	1st Lift Clay	91.1	25.0	-0.9	98.3
3	W/9	2nd Lift Clay	92.4	22.9	2.4	95.0
6	X.5/11.5	1st Lift Clay	85.1	28.1	1.7	95.1
3	X.5/11.5	2nd Lift Clay	94.8	23.8	3.3	97.4
3	X.5/14.5	1st Lift Clay	95.4	23.5	3.0	98.0
2	X.5/14.5	2nd Lift Clay	87.9	27.5	0.9	100.1
6	X/10	1st Lift Clay	85.8	28.8	2.4	95.9
7	X/10	2nd Lift Clay	89.5	25.2	-0.7	96.5
4	X/11	1st Lift Clay	83.7	30.8	1.0	98.9
7	X/11	2nd Lift Clay	92.0	25.3	-0.6	99.2
3	X/12	1st Lift Clay	92.4	23.3	2.8	95.0
3	X/12	2nd Lift Clay	92.5	23.1	2.6	95.1
3	X/13	1st Lift Clay	95.5	22.4	1.9	98.2
2	X/13	2nd Lift Clay	89.2	26.7	0.1	101.6
3	X/14	1st Lift Clay	98.3	20.5	0.0	101.0
7	X/14	2nd Lift Clay	88.2	26.9	1.0	95.1

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
7	X/15	1st Lift Clay	88.2	25.8	-0.1	95.1
7	X/15	2nd Lift Clay	88.8	26.4	0.5	95.8
12	X/16	1st Lift Clay	102.4	15.8	-1.4	95.0
10	X/16	2nd Lift Clay	86.6	23.3	-1.6	95.1
9	X/17	1st Lift Clay	99.9	21.3	0.0	103.0
9	X/17	2nd Lift Clay	98.2	21.1	-0.2	101.2
9	X/18	1st Lift Clay	97.6	21.1	-0.2	100.6
9	X/18	2nd Lift Clay	93.8	21.7	0.4	96.7
8	X/19	1st Lift Clay	101.9	19.6	2.1	97.3
12	X/19	2nd Lift Clay	103.4	17.2	0.0	95.9
9	X/20	1st Lift Clay	98.1	21.3	0.0	101.1
12	X/20	2nd Lift Clay	102.4	15.5	-1.7	95.0
9	X/21	1st Lift Clay	92.2	20.0	-1.3	95.1
11	X/21	2nd Lift Clay	112.2	14.3	-1.0	100.3
6	X/6	1st Lift Clay	90.5	27.5	1.1	101.1
7	X/6	2nd Lift Clay	91.7	26.1	0.2	98.9
3	X/7	1st Lift Clay	96.8	22.5	2.0	99.5
3	X/7	2nd Lift Clay	95.0	23.7	3.2	97.6
3	X/8	1st Lift Clay	100.2	21.6	1.1	103.0
7	X/8	2nd Lift Clay	92.7	26.1	0.2	100.0
6	X/9	1st Lift Clay	87.6	27.1	0.7	97.9
7	X/9	2nd Lift Clay	90.1	27.1	1.2	97.2
3	Y.5/16.5	1st Lift Clay	94.6	23.0	2.5	97.2
7	Y.5/16.5	2nd Lift Clay	88.2	26.1	0.2	95.1
3	Y.5/9.5	1st Lift Clay	94.3	23.2	2.7	96.9
7	Y.5/9.5	2nd Lift Clay	89.5	28.3	2.4	96.5
11	Y.8/19	2nd Lift Clay	109.4	15.3	0.0	97.8
10	Y.8/19.0	1st Lift Clay	89.4	23.2	-1.7	98.1
6	Y/10	1st Lift Clay	85.4	27.9	1.5	95.4
7	Y/10	2nd Lift Clay	94.8	27.7	1.8	102.3
6	Y/11	1st Lift Clay	86.0	28.8	2.4	96.1
7	Y/11	2nd Lift Clay	91.8	27.5	1.6	99.0
4	Y/12	1st Lift Clay	83.3	30.8	1.0	98.5
7	Y/12	2nd Lift Clay	88.3	28.0	2.1	95.3
6	Y/13	1st Lift Clay	89.8	26.4	0.0	100.3
7	Y/13	2nd Lift Clay	92.9	24.7	-1.2	100.2
3	Y/14	1st Lift Clay	96.6	23.0	2.5	99.3
3	Y/14	2nd Lift Clay	94.1	22.6	2.1	96.7
3	Y/15	1st Lift Clay	97.8	22.7	2.2	100.5
7	Y/15	2nd Lift Clay	89.2	26.3	0.4	96.2
3	Y/16	1st Lift Clay	96.8	22.2	1.7	99.5
7	Y/16	2nd Lift Clay	88.9	28.1	2.2	95.9
9	Y/18	1st Lift Clay	95.7	23.4	2.1	98.7
9	Y/18	2nd Lift Clay	98.7	20.4	-0.9	101.8
8	Y/19	1st Lift Clay	101.0	19.3	1.8	96.5
12	Y/19	2nd Lift Clay	102.5	16.7	-0.5	95.1
8	Y/20	1st Lift Clay	101.5	19.4	1.9	96.9
12	Y/20	2nd Lift Clay	107.3	17.0	-0.2	99.5
6	Y/6.2	1st Lift Clay	89.7	27.9	1.5	100.2
2	Y/6.2	2nd Lift Clay	83.4	26.5	-0.1	95.0
7	Y/7	1st Lift Clay	93.8	24.0	-1.9	101.2
2	Y/7	2nd Lift Clay	85.7	29.5	2.9	97.6
3	Y/8	1st Lift Clay	97.3	20.1	-0.4	100.0

Table 4: ACTIVE AREA: Summary of Passing Moisture/Density Tests - GCERG Site F Landfill Closure Cap

Proctor #	Grid Location	Subgrade / Lift #	Dry Density, pcf	Moisture Content, %	Mois. Diff. from Optimum, %	% Compaction
3	Y/8	2nd Lift Clay	94.9	23.5	3.0	97.5
3	Y/9	1st Lift Clay	92.5	23.2	2.7	95.1
7	Y/9	2nd Lift Clay	91.5	25.7	-0.2	98.7
6	Z.5/14.5	1st Lift Clay	85.5	28.8	2.4	95.5
7	Z.5/14.5	2nd Lift Clay	88.8	26.9	1.0	95.8
3	Z.8/8.1	1st Lift Clay	96.7	19.0	-1.5	99.4
2	Z.8/8.1	2nd Lift Clay	86.4	27.5	0.9	98.4
2	Z/10	1st Lift Clay	87.4	28.7	2.1	99.5
7	Z/10	2nd Lift Clay	92.6	25.2	-0.7	99.9
3	Z/11	1st Lift Clay	94.8	22.4	1.9	97.4
7	Z/11	2nd Lift Clay	88.3	28.0	2.1	95.3
2	Z/12	1st Lift Clay	89.3	26.5	-0.1	101.7
7	Z/12	2nd Lift Clay	93.6	26.4	0.5	101.0
6	Z/13	1st Lift Clay	86.7	27.5	1.1	96.9
7	Z/13	2nd Lift Clay	89.7	28.1	2.2	96.8
6	Z/14	1st Lift Clay	85.0	29.2	2.8	95.0
7	Z/14	2nd Lift Clay	88.4	28.0	2.1	95.4
3	Z/15	1st Lift Clay	93.6	22.9	2.4	96.2
3	Z/15	2nd Lift Clay	94.1	22.9	2.4	96.7
3	Z/16	1st Lift Clay	94.5	22.9	2.4	97.1
7	Z/16	2nd Lift Clay	92.0	25.0	-0.9	99.2
7	Z/17	1st Lift Clay	92.9	25.0	-0.9	100.2
3	Z/17	2nd Lift Clay	97.7	20.6	0.1	100.4
9	Z/18	1st Lift Clay	96.1	22.0	0.7	99.1
9	Z/18	2nd Lift Clay	99.6	20.6	-0.7	102.7
7	Z/7.2	1st Lift Clay	91.3	24.8	-1.1	98.5
7	Z/7.2	2nd Lift Clay	89.9	25.7	-0.2	97.0
7	Z/8	1st Lift Clay	88.7	25.4	-0.5	95.7
2	Z/8	2nd Lift Clay	84.0	29.7	3.1	95.7
7	Z/9	1st Lift Clay	91.0	25.9	0.0	98.2
2	Z/9	2nd Lift Clay	85.3	26.3	-0.3	97.2

ATTACHMENT E

Verification Soil Sample Results, with Lab Data Sheets

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	447	Sample Date:	6/3/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-12" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Philip Cadarette	Method: **A,B,C**	
Material Description:	Grayish-Brown Clayey Sand		
Type of Structure:	ASI Sand		
Sample Location:	SF-14 Pit-1		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A75		140.63	99.07	30.44		37.7
-40							

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C35	24.01	19.86	24	6.17	30.3	30
2	C19	30.08	24.49	26	6.17	30.5	31
3							
						Liquid Limit	**31**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C47	41.47	36.61	6.16	4.86	16
2	C46	34.81	30.95	6.19	3.86	16
					Plastic Limit	**16**

Plasticity Index - Tex-106-E

Plasticity Index:	**15**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	448	Sample Date:	6/3/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-12" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Philip Cadarette	Method: **A,B,C**	
Material Description:	Grayish-Brown Silty, Clayey Sand		
Type of Structure:	ASI Sand		
Sample Location:	SF-15 Pit-3		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A67		177.41	116.14	30.38		41.7
-40							

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C31	25.84	22.97	24	6.21	17.1	17
2	C30	25.61	22.76	23	6.16	17.2	17
3							
						Liquid Limit	**17**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C87	36.12	32.65	6.08	3.47	13
2	C85	28.52	25.95	6.05	2.57	13
					Plastic Limit	**13**

Plasticity Index - Tex-106-E

Plasticity Index:	**4**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	06/07/22
TX105	Craig Moore	06/07/22
TX106	Craig Moore	06/07/22

Completed Date:	Reviewed By:
06/07/22	Craig Moore

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	521	Sample Date:	6/27/2022
Test Number:	1	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown Fat Clay with Sand		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-16, Grid Location E.5/15.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A88		146.61	57.58	30.65		76.8
-40	A88		146.61	32.23	30.65		98.6

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C2	25.9	18.07	21	6.11	65.5	64
2	C1	22.57	16.09	22	6.18	65.4	64
3							
						Liquid Limit	**64**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C4	51.7	42.52	6.2	9.18	25
2	C3	42.88	35.45	6.14	7.43	25
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**39**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Chase Gibson	06/29/22
TX105	Chase Gibson	06/29/22
TX106	Chase Gibson	06/29/22

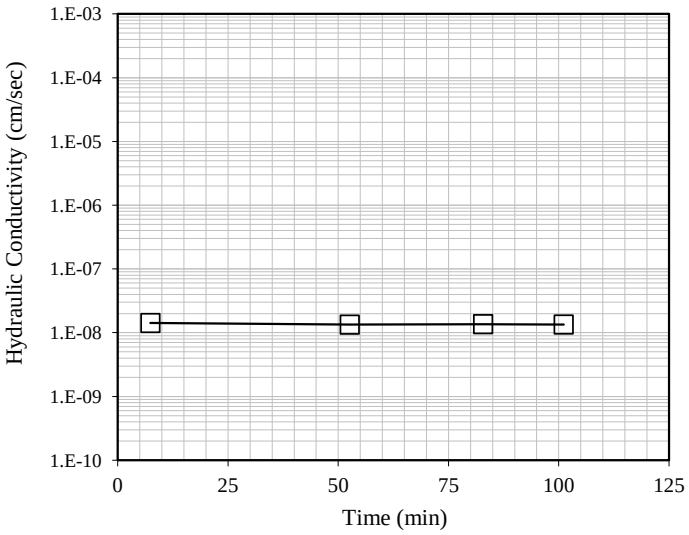
Completed Date:	Reviewed By:
06/29/22	Craig Moore

Hydraulic Conductivity

Client: JBS Engineering & Environmental
Project: 22011.250 - Gibbons Creek - Site F
Sample ID: SF-16

TRI Log #: 72752.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.86
Height (in)	3.30	3.30
Mass (g)	639.8	650.8
Sample Area (in^2)	6.32	6.40
Water Content (%)	24.8	33.8
Total Unit Weight (pcf)	116.9	117.4
Dry Unit Weight (pcf)	93.7	87.7
Specific Gravity (Assumed)	2.75	
Degree of Saturation	81.9	97.3
Void Ratio	0.83	0.96
Porosity	0.45	0.49
1 Pore Volume (cc)	155.0	169.2



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.98
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head
by mercury, rising tailwater elevation

Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
7.4	15.3	22.9	1.4E-08
52.6	15.1	22.6	1.3E-08
82.8	13.9	20.9	1.4E-08
101.1	13.2	19.8	1.3E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.4E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 6/28/2022
Analysis & Quality Review/Date

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	522	Sample Date:	6/27/2022
Test Number:	2	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown Fat Clay with Sand		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-17, Grid Location J.0/23.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A57		120.23	51.63	30.25		76.2
-40	A57		120.23	31.43	30.25		98.7

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C21	33.61	22.5	25	6.15	68.0	68
2	C20	30.87	20.94	24	6.2	67.4	67
3							
						Liquid Limit	**68**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C70	35.42	29.39	6.17	6.03	26
2	C72	31.41	26.17	6.21	5.24	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**42**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	06/29/22
TX105	Taavon Purdie	06/29/22
TX106	Taavon Purdie	06/29/22

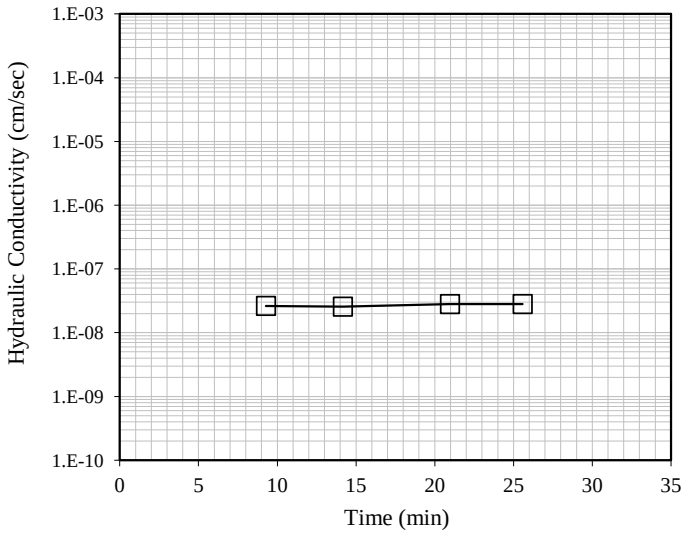
Completed Date:	Reviewed By:
06/29/22	Craig Moore

Hydraulic Conductivity

Client: JBS Eng & Environmental (Soils)
Project: 22011.250 - Gibbons Crk - Site F LF Closure
Sample ID: SF-17

TRI Log #: 72896.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.87
Height (in)	3.39	3.38
Mass (g)	649.7	668.6
Sample Area (in^2)	6.37	6.48
Water Content (%)	27.9	34.3
Total Unit Weight (pcf)	114.4	116.2
Dry Unit Weight (pcf)	89.5	86.5
Specific Gravity (Assumed)	2.75	
Degree of Saturation	83.5	95.9
Void Ratio	0.92	0.98
Porosity	0.48	0.50
1 Pore Volume (cc)	169.6	178.1



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.92
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head
by mercury, rising tailwater elevation

Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
9.3	14.3	20.8	2.6E-08
14.2	13.8	20.2	2.6E-08
21.0	13.6	19.9	2.8E-08
25.6	13.3	19.4	2.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**2.8E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 7/5/2022
Analysis & Quality Review/Date

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	523	Sample Date:	6/27/2022
Test Number:	3	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown Fat Clay with Sand		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-18, Grid Location H.0/17.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A57		120.23	51.63	30.25		76.2
-40	A51		120.23	31.43	30.13		98.6

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C5	27.94	19.41	24	6.21	64.6	64
2	C6	30.96	21.24	24	6.22	64.7	64
3							
						Liquid Limit	**64**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C74	40.87	33.62	6	7.25	26
2	C75	34.39	28.58	6.03	5.81	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**38**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	06/30/22
TX105	Joe DeCoste	06/30/22
TX106	Joe DeCoste	06/30/22

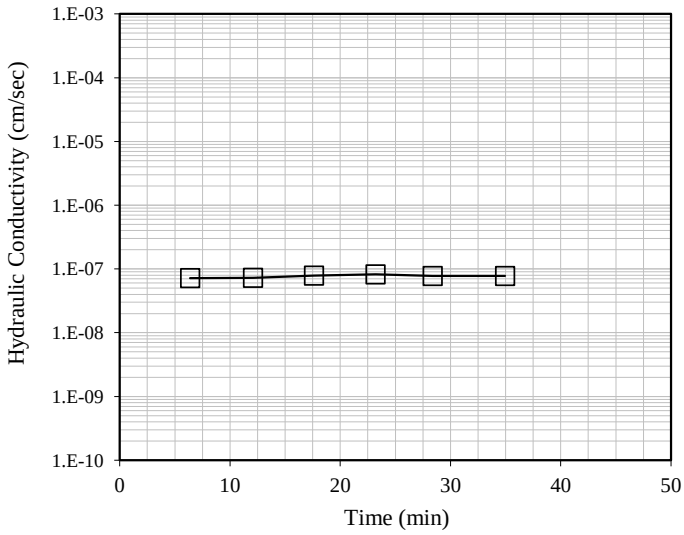
Completed Date:	Reviewed By:
06/30/22	Craig Moore

Hydraulic Conductivity

Client: JBS Eng & Environmental (Soils)
Project: 22011.250- Gibbons Crk - Site F
Sample ID: SF-18

TRI Log #: 72969.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.83	2.82
Height (in)	3.42	3.39
Mass (g)	642.2	652.2
Sample Area (in^2)	6.31	6.26
Water Content (%)	26.1	33.1
Total Unit Weight (pcf)	113.3	117.1
Dry Unit Weight (pcf)	89.9	87.9
Specific Gravity (Assumed)	2.75	
Degree of Saturation	78.8	95.8
Void Ratio	0.91	0.95
Porosity	0.48	0.49
1 Pore Volume (cc)	168.4	169.5



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.95
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
6.4	13.8	20.0	7.2E-08
12.1	13.1	18.9	7.3E-08
17.6	12.5	18.0	7.9E-08
23.2	11.9	17.1	8.2E-08
28.4	11.2	16.2	7.8E-08
35.0	10.7	15.5	7.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**7.8E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 7/7/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	524	Sample Date:	6/27/2022
Test Number:	4	Field Contact:	Bill Cullen
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown Fat Clay with Sand		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-19, Grid Location L.0/24.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Bill Cullen	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A40		137.87	52.99	30.27		78.9
-40	A40		137.87	34.47	30.27		96.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C8	25.35	17.46	23	6.18	69.9	69
2	C7	27.03	18.45	21	6.18	69.9	68
3							
						Liquid Limit	**69**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C22	38.86	31.98	6.17	6.88	27
2	C23	35.56	29.38	6.15	6.18	27
					Plastic Limit	**27**

Plasticity Index - Tex-106-E

Plasticity Index:	**42**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	06/30/22
TX105	Joe DeCoste	06/30/22
TX106	Joe DeCoste	06/30/22

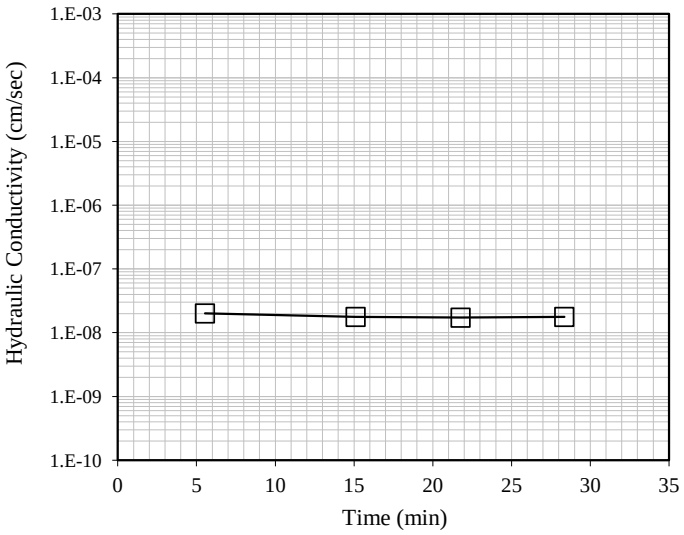
Completed Date:	Reviewed By:
06/30/22	Craig Moore

Hydraulic Conductivity

Client: JBS Eng & Environmental
Project: 22011.250- Gibbons Crk- Site F
Sample ID: SF-19

TRI Log #: 72969.2
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.85
Height (in)	3.33	3.29
Mass (g)	616.3	634.5
Sample Area (in^2)	6.40	6.39
Water Content (%)	28.2	34.9
Total Unit Weight (pcf)	110.0	114.9
Dry Unit Weight (pcf)	85.8	85.2
Specific Gravity (Assumed)	2.75	
Degree of Saturation	77.6	94.7
Void Ratio	1.00	1.02
Porosity	0.50	0.50
1 Pore Volume (cc)	174.7	173.6



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head
by mercury, rising tailwater elevation

Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.5	15.4	22.8	2.0E-08
15.1	15.2	22.5	1.8E-08
21.8	14.9	22.1	1.7E-08
28.4	14.7	21.8	1.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.7E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 7/7/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	552	Sample Date:	7/11/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10"B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Brown and Red Fat Clay with Sand		
Type of Structure:	Subbase for Clay Cap		
Sample Location:	SF-20, Grid Location J.0/19.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A41		123.66	50.12	30.26		78.7
-40	A41		123.66	31.21	30.26		99.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C7	30.07	21.15	28	6.18	59.6	60
2	C8	30.08	21.18	28	6.18	59.3	60
3							
						Liquid Limit	**60**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C9	30.09	25.69	6.2	4.4	23
2	C10	30.1	25.68	6.17	4.42	23
					Plastic Limit	**23**

Plasticity Index - Tex-106-E

Plasticity Index:	**37**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	07/25/22
TX105	Joe DeCoste	07/25/22
TX106	Joe DeCoste	07/25/22

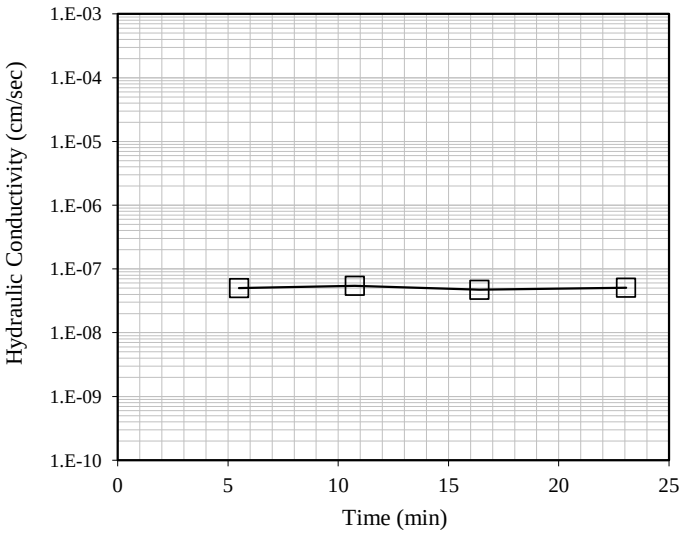
Completed Date:	Reviewed By:
07/25/22	Craig Moore

Hydraulic Conductivity

Client: JBS Engineering
Project: 22011.250 - Gibbons Creek Site F
Sample ID: SF-20

TRI Log #: 73219.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.86
Height (in)	3.34	3.36
Mass (g)	637.1	652.5
Sample Area (in^2)	6.32	6.41
Water Content (%)	28.7	34.9
Total Unit Weight (pcf)	114.8	115.2
Dry Unit Weight (pcf)	89.2	85.4
Specific Gravity (Assumed)	2.75	
Degree of Saturation	85.4	95.1
Void Ratio	0.92	1.01
Porosity	0.48	0.50
1 Pore Volume (cc)	166.3	177.5



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head
by mercury, rising tailwater elevation

Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.5	15.2	22.5	5.0E-08
10.8	14.7	21.7	5.4E-08
16.4	14.2	20.9	4.7E-08
23.1	13.7	20.2	5.1E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**4.9E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 7/15/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	553	Sample Date:	7/11/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Brown and Red Fat Clay with Sand		
Type of Structure:	Subbase for Clay Cap		
Sample Location:	SF-21, Grid Location N.0/26		
Project Name:	TMPA Site F Landfil Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A105		128.92	49.38	30.4		80.7
-40	A105		128.92	34.06	30.4		96.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C44	30.44	20.38	25	6.2	70.9	71
2	C45	30.45	20.4	25	6.17	70.6	71
3							
						Liquid Limit	**71**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C46	30.46	25.68	6.19	4.78	25
2	C47	30.47	25.56	6.16	4.91	25
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**46**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	07/25/22
TX105	Joe DeCoste	07/25/22
TX106	Joe DeCoste	07/25/22

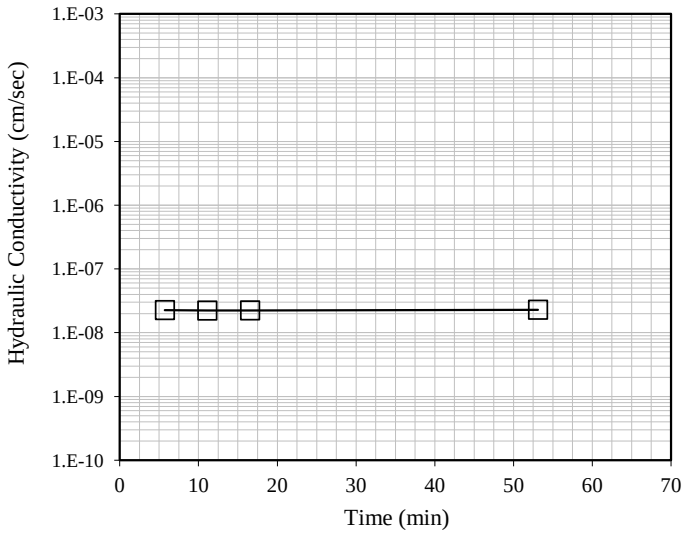
Completed Date:	Reviewed By:
07/25/22	Craig Moore

Hydraulic Conductivity

Client: JBS Engineering and Environmental
Project: Gibbons Creek Site F - 22011.250
Sample ID: SF-21

TRI Log #: 73329.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.88
Height (in)	3.43	3.48
Mass (g)	667.4	698.8
Sample Area (in^2)	6.34	6.49
Water Content (%)	23.1	32.6
Total Unit Weight (pcf)	116.7	117.8
Dry Unit Weight (pcf)	94.8	88.8
Specific Gravity (Assumed)	2.75	
Degree of Saturation	78.3	96.3
Void Ratio	0.81	0.93
Porosity	0.45	0.48
1 Pore Volume (cc)	159.6	178.6



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.98
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.7	14.4	20.7	2.3E-08
11.1	14.2	20.4	2.2E-08
16.6	13.9	20.1	2.2E-08
53.1	13.7	19.8	2.3E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**2.3E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 7/25/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	613	Sample Date:	7/25/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay with Sand		
Type of Structure:	Interim Liner		
Sample Location:	SF-23, Grid Location I.0/15.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A45		134.81	53.03	30.06		78.1
-40	A45		134.81	30.16	30.06		99.9

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C46	31.1	21.88	30	6.19	58.8	60
2	C47	34.23	23.85	29	6.16	58.7	60
3							
						Liquid Limit	**60**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C50	31.31	26.37	6.22	4.94	25
2	C51	33.12	27.89	6.21	5.23	24
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**35**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	07/27/22
TX105	Taavon Purdie	07/27/22
TX106	Taavon Purdie	07/27/22

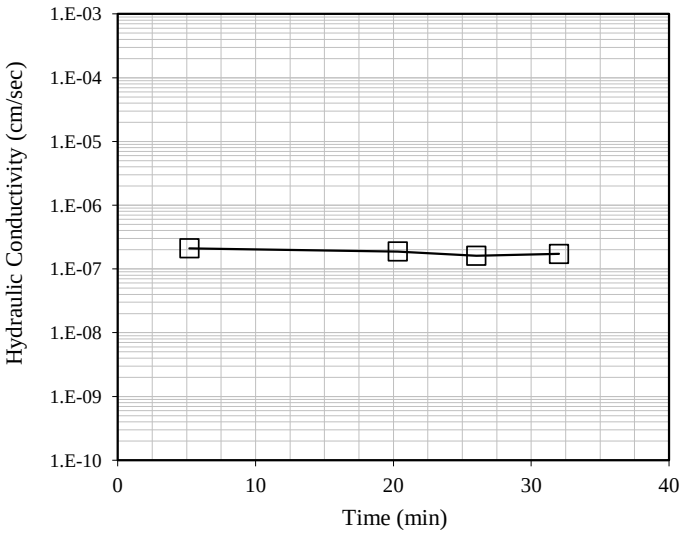
Completed Date:	Reviewed By:
07/27/22	Craig Moore

Hydraulic Conductivity

Client: JBS ENG & Environmental
Project: 22011.250- Gibbons Crk- Site F
Sample ID: SF-23

TRI Log #: 73795.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.82	2.82
Height (in)	3.53	3.50
Mass (g)	669.1	679.7
Sample Area (in^2)	6.24	6.26
Water Content (%)	29.9	15.8
Total Unit Weight (pcf)	115.6	118.1
Dry Unit Weight (pcf)	89.0	102.0
Specific Gravity (Assumed)	2.75	
Degree of Saturation	88.7	63.6
Void Ratio	0.93	0.68
Porosity	0.48	0.41
1 Pore Volume (cc)	173.8	145.6



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.2	14.5	20.3	2.1E-07
20.3	12.7	17.8	1.9E-07
26.0	9.1	12.7	1.6E-07
32.0	8.1	11.4	1.7E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.7E-07**

Jeffrey A. Kuhn, Ph.D, P.E. 8/11/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	622	Sample Date:	7/29/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown & Gray Fat Clay with Sand		
Type of Structure:	Site F Insitu Final Grade		
Sample Location:	SF-24, Grid Location M.0/21.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A1		94.95	41.69	30.16		82.2
-40	A1		94.95	30.46	30.16		99.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C1	22.61	15.9	22	6.18	69.0	68
2	C2	23.39	16.31	24	6.11	69.4	69
3							
						Liquid Limit	**69**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C6	30.75	25.67	6.22	5.08	26
2	C7	32.32	26.95	6.18	5.37	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**43**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	08/01/22
TX105	Craig Moore	08/01/22
TX106	Craig Moore	08/01/22

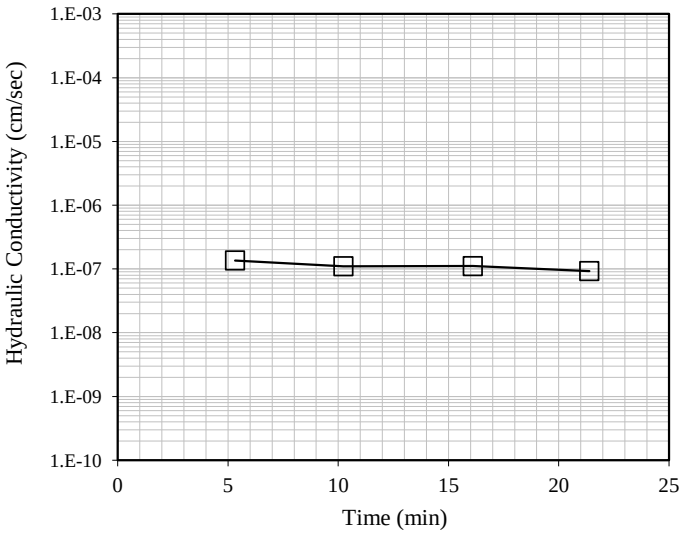
Completed Date:	Reviewed By:
08/01/22	Craig Moore

Hydraulic Conductivity

Client: JBS Eng & Environmental
Project: 22011.250- Gibbons Crk- Site F
Sample ID: SF-24

TRI Log #: 73795.2
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.83	2.84
Height (in)	3.40	3.40
Mass (g)	633.3	653.2
Sample Area (in^2)	6.31	6.34
Water Content (%)	31.3	0.0
Total Unit Weight (pcf)	112.5	115.5
Dry Unit Weight (pcf)	85.7	115.5
Specific Gravity (Assumed)	2.75	
Degree of Saturation	85.8	0.0
Void Ratio	1.00	0.49
Porosity	0.50	0.33
1 Pore Volume (cc)	175.8	115.4



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.85
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.3	15.4	22.4	1.4E-07
10.2	14.1	20.5	1.1E-07
16.1	13.1	19.1	1.1E-07
21.4	12.1	17.6	9.3E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.0E-07**

Jeffrey A. Kuhn, Ph.D, P.E. 8/11/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	642	Sample Date:	8/5/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Red Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base Final Grade		
Sample Location:	SF-25, Grid Location I.0/11.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A45		135.49	49.31	30.06		81.7
-40	A45		135.49	32.18	30.06		98.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C12	30.12	20.23	23	6.18	70.4	70
2	C13	30.09	20.24	25	6.18	70.1	70
3							
						Liquid Limit	**70**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C1	37.27	30.99	6.18	6.28	25
2	C2	32.94	27.69	6.11	5.25	24
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**45**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	08/10/22
TX105	Joe DeCoste	08/10/22
TX106	Joe DeCoste	08/10/22

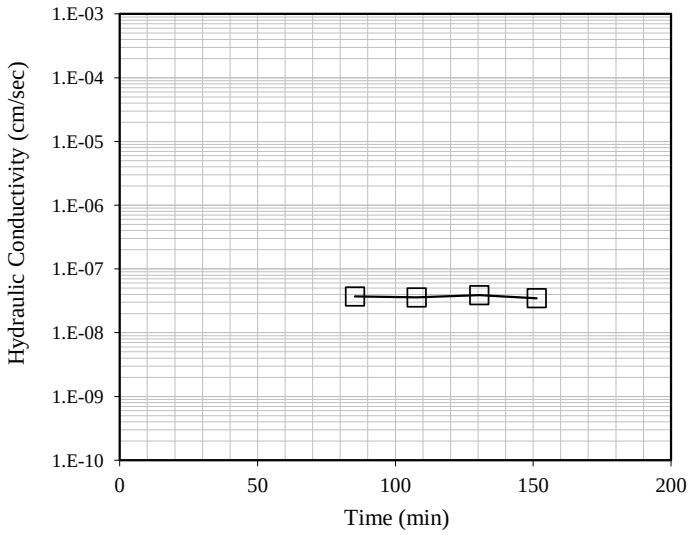
Completed Date:	Reviewed By:
08/10/22	Craig Moore

Hydraulic Conductivity

Client: JBS Eng & Environmental
Project: 22011.250- Gibbons Crk- Site F LF Closure
Sample ID: SF-25

TRI Log #: 73991.1
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.90
Height (in)	3.75	3.60
Mass (g)	688.4	739.9
Sample Area (in^2)	6.35	6.60
Water Content (%)	19.8	34.4
Total Unit Weight (pcf)	109.9	118.6
Dry Unit Weight (pcf)	91.8	88.3
Specific Gravity (Assumed)	2.75	
Degree of Saturation	62.5	100.0
Void Ratio	0.87	0.94
Porosity	0.47	0.49
1 Pore Volume (cc)	181.7	189.1



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.98
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head
by mercury, rising tailwater elevation

Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
85.4	6.8	8.9	3.7E-08
107.7	4.7	6.2	3.6E-08
130.4	4.3	5.6	3.9E-08
151.3	3.9	5.1	3.5E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**3.7E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 8/16/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	643	Sample Date:	8/5/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown and Tan Fat Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-26, Grid Location L.0/16.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A1		135.31	44.5	30.16		86.4
-40	A1		135.31	30.42	30.16		99.8

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C14	31.76	21.18	22	6.21	70.7	70
2	C15	29.3	19.71	24	6.2	71.0	71
3							
						Liquid Limit	**71**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C3	46.52	37.99	6.14	8.53	27
2	C4	35.87	29.68	6.2	6.19	26
					Plastic Limit	**27**

Plasticity Index - Tex-106-E

Plasticity Index:	**44**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Joe DeCoste	08/10/22
TX105	Joe DeCoste	08/10/22
TX106	Joe DeCoste	08/10/22

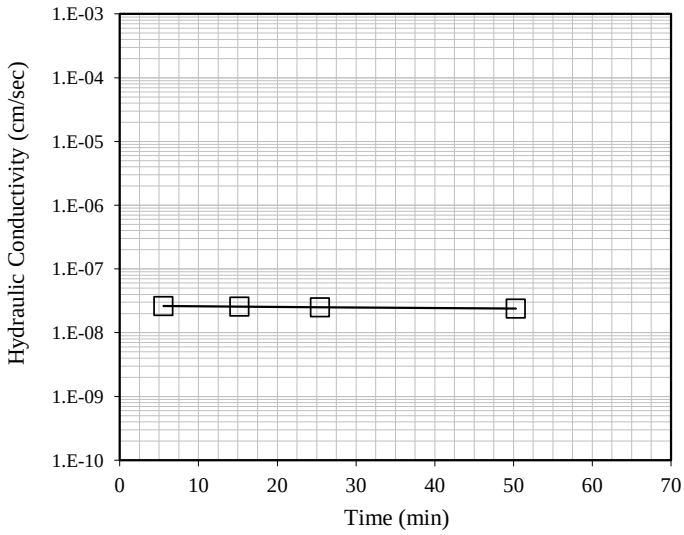
Completed Date:	Reviewed By:
08/10/22	Craig Moore

Hydraulic Conductivity

Client: JBS Eng & Environmental
Project: 22011.250- Gibbons Crk- Site F LF Closure
Sample ID: SF-26

TRI Log #: 73991.2
Test Method: ASTM D5084

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.82	2.85
Height (in)	3.34	3.33
Mass (g)	623.3	644.6
Sample Area (in^2)	6.25	6.36
Water Content (%)	28.2	33.8
Total Unit Weight (pcf)	113.8	115.9
Dry Unit Weight (pcf)	88.7	86.6
Specific Gravity (Assumed)	2.75	
Degree of Saturation	83.1	94.7
Void Ratio	0.93	0.98
Porosity	0.48	0.50
1 Pore Volume (cc)	165.1	171.9



Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.99
Permeant	De-Aired Tap Water

Specimen Image



Method F—Constant Volume–Falling Head
by mercury, rising tailwater elevation

Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	1.7
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.5	16.9	25.0	2.6E-08
15.2	16.6	24.5	2.6E-08
25.4	16.0	23.7	2.5E-08
50.3	15.5	23.0	2.4E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**2.4E-08**

Jeffrey A. Kuhn, Ph.D, P.E. 8/16/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	825	Sample Date:	10/24/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base Final Grade		
Sample Location:	SF-27, Grid Location K.0/11.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A93		121.43	52.56	30.52		75.8
-40	A93		121.43	31.88	30.52		98.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C44	32.09	22.02	29	6.2	63.7	65
2	C30	27.29	19.15	30	6.16	62.7	64
3							
						Liquid Limit	**65**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C37	25.4	21.49	6.13	3.91	25
2	C3	24.04	20.36	6.14	3.68	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**39**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	10/27/22
TX105	Taavon Purdie	10/27/22
TX106	Taavon Purdie	10/27/22

Completed Date:	Reviewed By:
10/27/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

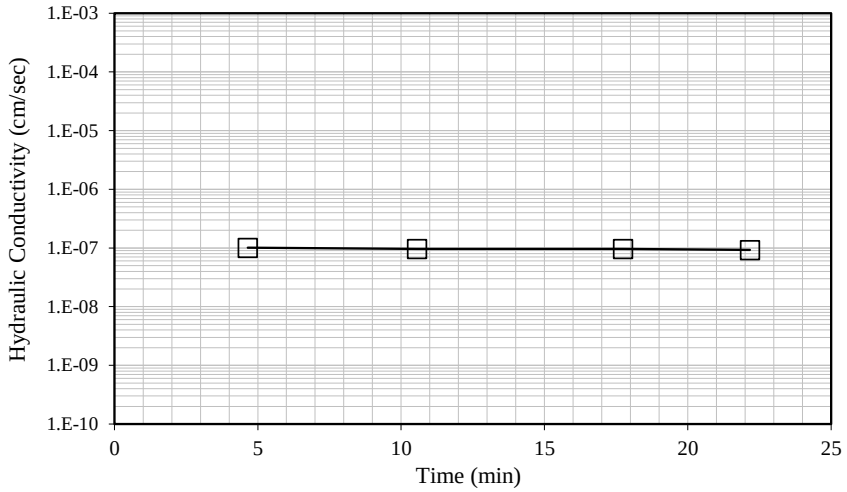
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-27

TRI Log #: 22-000015.1

Sample Condition	Initial	Final
	Select	Post-Test
Diameter (in)	2.81	2.86
Height (in)	3.45	3.51
Mass (g)	641.0	695.3
Sample Area (in^2)	6.22	6.42
Water Content (%)	26.9	32.2
Total Unit Weight (pcf)	113.9	117.4
Dry Unit Weight (pcf)	89.7	88.8
Specific Gravity (Assumed)	2.75	
Degree of Saturation	81.1	95.0
Void Ratio	0.91	0.93
Porosity	0.48	0.48
1 Pore Volume (cc)	167.6	178.3

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.89
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
4.7	13.5	19.4	1.0E-07
10.6	12.8	18.4	9.7E-08
17.7	12.0	17.2	9.6E-08
22.2	11.0	15.8	9.3E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**9.5E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 11/2/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	826	Sample Date:	10/24/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base Final Grade		
Sample Location:	SF-28, Grid Location N.0/13.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A38		115.1	47.88	30.34		79.3
-40	A38		115.1	31.63	30.34		98.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C28	28.1	19.55	30	6.16	63.9	65
2	C29	30.64	20.96	28	6.16	65.4	66
3							
						Liquid Limit	**66**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C35	27.72	23.24	6.17	4.48	26
2	C33	28.04	23.59	6.17	4.45	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**40**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	10/27/22
TX105	Taavon Purdie	10/27/22
TX106	Taavon Purdie	10/27/22

Completed Date:	Reviewed By:
10/27/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

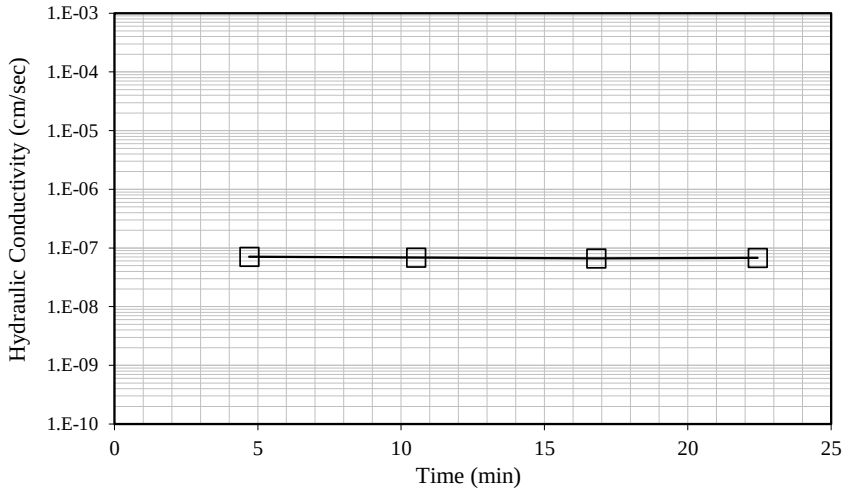
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-28

TRI Log #: 22-000015.2

Sample Condition	Initial	Final
	Select	Post-Test
Diameter (in)	2.81	2.82
Height (in)	3.41	3.39
Mass (g)	612.3	632.8
Sample Area (in^2)	6.21	6.26
Water Content (%)	30.4	39.1
Total Unit Weight (pcf)	110.1	113.6
Dry Unit Weight (pcf)	84.4	81.7
Specific Gravity (Assumed)	2.75	
Degree of Saturation	81.0	97.6
Void Ratio	1.03	1.10
Porosity	0.51	0.52
1 Pore Volume (cc)	176.3	182.2

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.95
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
4.7	18.7	27.2	7.1E-08
10.5	18.0	26.1	6.8E-08
16.8	17.2	24.9	6.6E-08
22.4	16.3	23.7	6.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**6.7E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 11/2/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	846	Sample Date:	11/2/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base Final Grade		
Sample Location:	SF-29, Grid Location O.0/16.0		
Project Name:	TMPA Sife F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A105		119.32	50.3	30.4		77.6
-40	A105		119.32	32.22	30.4		98.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C67	28.04	19.82	28	6.18	60.3	61
2	C63	32.66	22.74	30	6.17	59.9	61
3							
						Liquid Limit	**61**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C72	28.2	23.75	6.21	4.45	25
2	C66	28.57	24	6.17	4.57	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**35**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	11/04/22
TX105	Taavon Purdie	11/04/22
TX106	Taavon Purdie	11/04/22

Completed Date:	Reviewed By:
11/04/22	Craig Moore

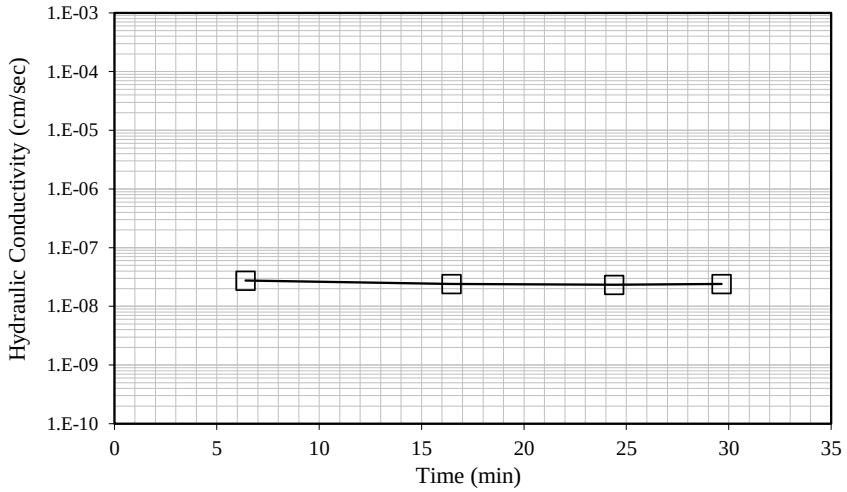
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-29
TRI Log #: 22-32-1

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.88
Height (in)	3.38	3.40
Mass (g)	644.9	676.9
Sample Area (in^2)	6.35	6.52
Water Content (%)	25.4	34.8
Total Unit Weight (pcf)	114.6	116.1
Dry Unit Weight (pcf)	91.3	86.1
Specific Gravity (Assumed)	2.75	
Degree of Saturation	79.6	96.4
Void Ratio	0.88	0.99
Porosity	0.47	0.50
1 Pore Volume (cc)	164.2	181.4

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.64
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
6.4	14.7	21.5	2.8E-08
16.5	14.4	21.0	2.4E-08
24.4	13.9	20.4	2.3E-08
29.7	13.6	20.0	2.4E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**2.4E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 11/14/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	847	Sample Date:	11/2/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Brown Fat Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-30, Grid Location O.0/11.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A47		117.84	42.48	30		85.8
-40	A47		117.84	31.54	30		98.2

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C64	28.17	19.66	30	6.17	63.1	65
2	C87	30.16	20.67	28	6.08	65.0	66
3							
						Liquid Limit	**66**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C81	49.51	40.21	6.01	9.3	27
2	C82	46.37	37.91	6.1	8.46	27
					Plastic Limit	**27**

Plasticity Index - Tex-106-E

Plasticity Index:	**39**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	11/04/22
TX105	Taavon Purdie	11/04/22
TX106	Taavon Purdie	11/04/22

Completed Date:	Reviewed By:
11/04/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

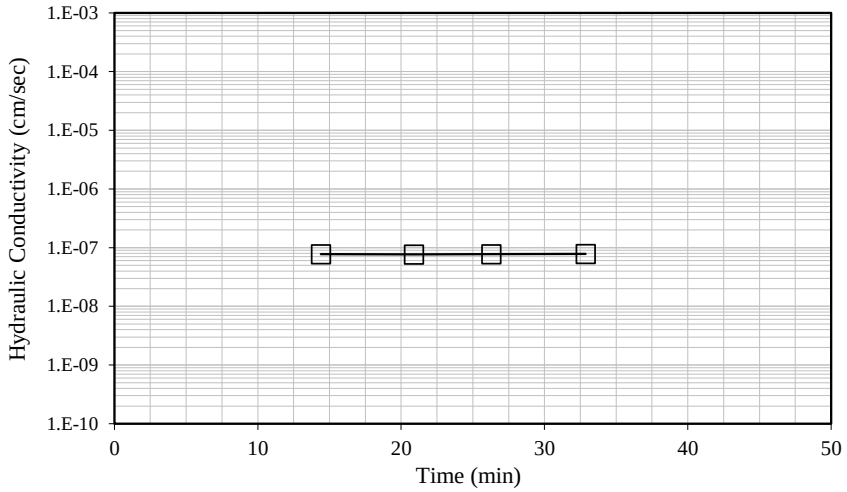
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-30

TRI Log #: 22-32-2

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.91
Height (in)	2.52	2.54
Mass (g)	478.5	511.5
Sample Area (in^2)	6.39	6.64
Water Content (%)	25.5	33.7
Total Unit Weight (pcf)	113.3	115.7
Dry Unit Weight (pcf)	90.3	86.6
Specific Gravity (Assumed)	2.75	
Degree of Saturation	77.9	94.2
Void Ratio	0.90	0.98
Porosity	0.47	0.50
1 Pore Volume (cc)	124.8	136.7

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
14.4	14.4	28.2	7.7E-08
20.9	12.0	23.5	7.7E-08
26.3	11.0	21.7	7.7E-08
32.9	10.3	20.2	7.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**7.8E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 11/14/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	880	Sample Date:	11/17/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Brown & Red Fat Clay with Sand		
Type of Structure:	1st Lift of General Fill for Sub-Base		
Sample Location:	SF-31, Grid Location Z.0/14.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A53		100.3	47.15	30.08		75.7
-40	A53		100.3	31.18	30.08		98.4

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C29	30.49	21.54	24	6.16	58.2	58
2	C28	32.68	22.82	25	6.16	59.2	59
3							
						Liquid Limit	**59**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C31	31.27	26.44	6.21	4.83	24
2	C30	34.09	28.49	6.16	5.6	25
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**34**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	11/22/22
TX105	Taavon Purdie	11/22/22
TX106	Taavon Purdie	11/22/22

Completed Date:	Reviewed By:
11/22/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

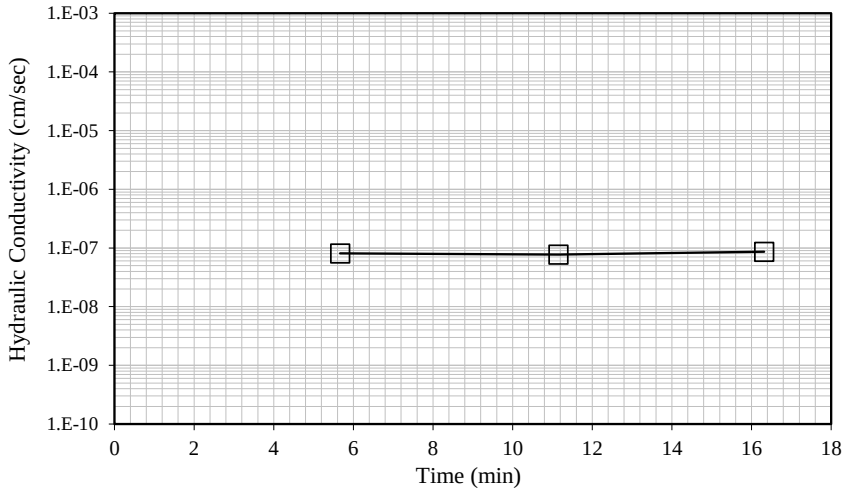
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-31

TRI Log #: 22-000065.1

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.81	2.79
Height (in)	3.32	3.28
Mass (g)	585.8	590.5
Sample Area (in^2)	6.20	6.13
Water Content (%)	32.7	43.1
Total Unit Weight (pcf)	108.4	111.8
Dry Unit Weight (pcf)	81.7	78.1
Specific Gravity (Assumed)	2.75	
Degree of Saturation	81.7	99.1
Void Ratio	1.10	1.20
Porosity	0.52	0.54
1 Pore Volume (cc)	176.7	179.5

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.7	15.4	23.0	8.1E-08
11.2	14.6	21.7	7.7E-08
16.3	13.8	20.6	8.6E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**8.2E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/16/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	881	Sample Date:	11/17/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Brown & Red Sandy Fat Clay		
Type of Structure:	1st Lift of General Fill for Sub-Base		
Sample Location:	SF-32, Grid Location X.0/6.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A102		118.1	57.6	30.7		69.2
-40	A102		118.1	32.87	30.7		97.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C23	33.13	23.77	25	6.15	53.1	53
2	C27	33.45	24.02	27	6.21	52.9	53
3							
						Liquid Limit	**53**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C84	39.36	32.82	6.04	6.54	24
2	C3	40.73	33.75	6.14	6.98	25
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**28**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	11/22/22
TX105	Taavon Purdie	11/22/22
TX106	Taavon Purdie	11/22/22

Completed Date:	Reviewed By:
11/22/22	Craig Moore

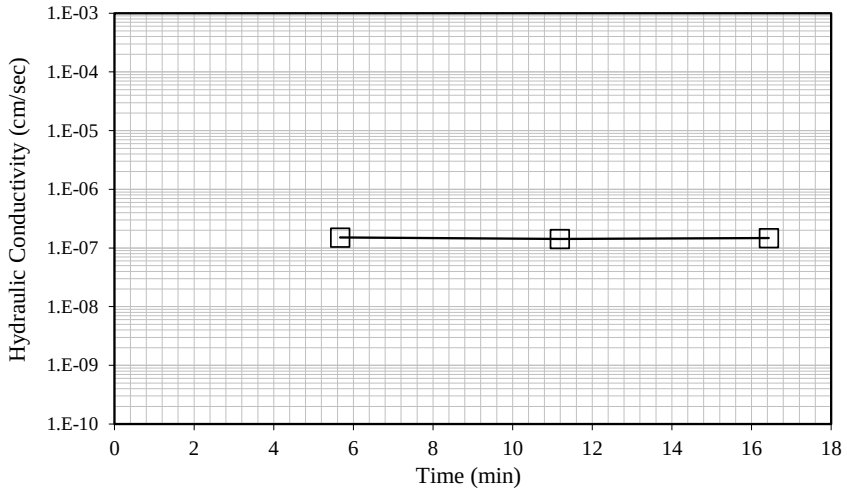
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-32
TRI Log #: 22-000065.2

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.86
Height (in)	3.49	3.50
Mass (g)	690.2	706.4
Sample Area (in^2)	6.36	6.40
Water Content (%)	24.4	30.2
Total Unit Weight (pcf)	118.4	120.0
Dry Unit Weight (pcf)	95.2	92.2
Specific Gravity (Assumed)	2.75	
Degree of Saturation	83.5	96.4
Void Ratio	0.80	0.86
Porosity	0.45	0.46
1 Pore Volume (cc)	162.0	170.0

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.7	13.0	18.4	1.5E-07
11.2	11.8	16.6	1.4E-07
16.4	10.7	15.2	1.5E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.5E-07**



Jeffrey A. Kuhn, Ph.D, P.E. 12/16/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	882	Sample Date:	11/17/2022
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Brown & Red Fat Clay with Sand		
Type of Structure:	1st Lift of General Fill for Sub-Base		
Sample Location:	SF-33, Grid Location AB.0/12.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A26		110.35	47.93	30.33		78.0
-40	A26		110.35	30.9	30.33		99.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C5	29.69	21.42	30	6.21	54.4	56
2	C35	29.83	21.55	28	6.17	53.8	55
3							
						Liquid Limit	**56**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C12	30.95	25.95	6.18	5	25
2	C10	33.73	27.99	6.17	5.74	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**30**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	11/22/22
TX105	Taavon Purdie	11/22/22
TX106	Taavon Purdie	11/22/22

Completed Date:	Reviewed By:
11/22/22	Craig Moore

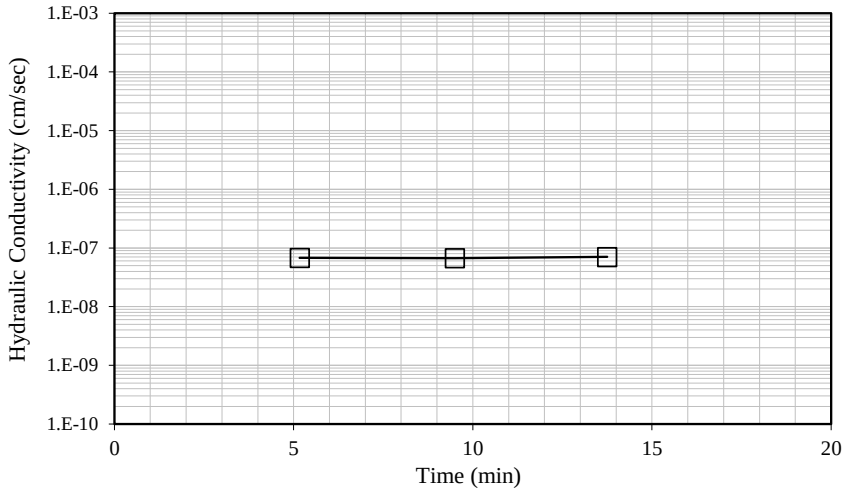
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-33
TRI Log #: 22-000065.3

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.82	2.81
Height (in)	3.52	3.52
Mass (g)	638.6	652.8
Sample Area (in^2)	6.25	6.21
Water Content (%)	27.3	40.5
Total Unit Weight (pcf)	110.4	113.8
Dry Unit Weight (pcf)	86.7	81.0
Specific Gravity (Assumed)	2.75	
Degree of Saturation	76.7	99.6
Void Ratio	0.98	1.12
Porosity	0.49	0.53
1 Pore Volume (cc)	178.5	188.9

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.95
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.2	13.2	18.5	6.8E-08
9.5	12.7	17.8	6.7E-08
13.8	12.3	17.2	7.1E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**6.9E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/16/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	883	Sample Date:	11/17/2022
Test Number:	4	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Brown & Red Fat Clay with Sand		
Type of Structure:	1st Lift of General Fill for Sub-Base		
Sample Location:	SF-34, Grid Location Z.0/9.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A93		124.06	56.93	30.52		71.8
-40	A93		124.06	31.43	30.52		99.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C8	32.85	23.87	28	6.18	50.8	52
2	C9	34.58	24.78	26	6.2	52.7	53
3							
						Liquid Limit	**53**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C44	25.92	21.94	6.2	3.98	25
2	C40	26.52	22.33	6.37	4.19	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**27**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	11/22/22
TX105	Taavon Purdie	11/22/22
TX106	Taavon Purdie	11/22/22

Completed Date:	Reviewed By:
11/22/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

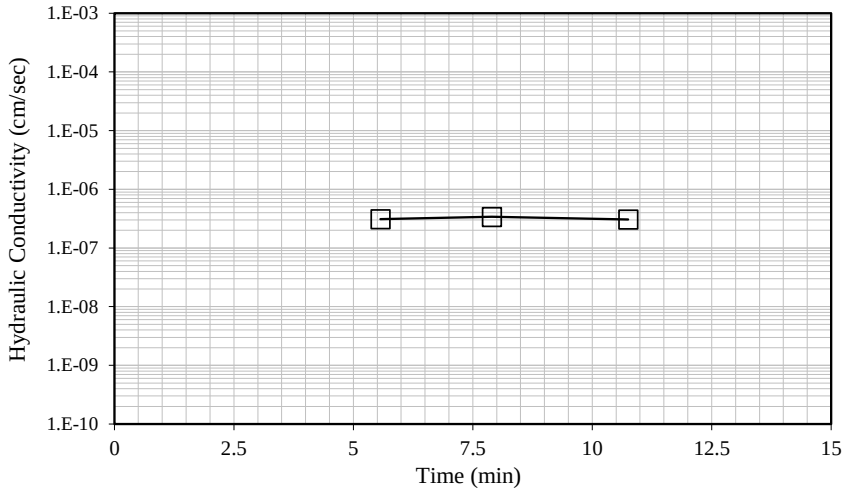
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-34

TRI Log #: 22-000065.4

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.81	2.81
Height (in)	3.59	3.57
Mass (g)	663.3	676.9
Sample Area (in^2)	6.21	6.21
Water Content (%)	28.8	35.1
Total Unit Weight (pcf)	113.4	116.0
Dry Unit Weight (pcf)	88.0	85.9
Specific Gravity (Assumed)	2.75	
Degree of Saturation	83.4	96.7
Void Ratio	0.95	1.00
Porosity	0.49	0.50
1 Pore Volume (cc)	177.8	181.8

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.6	5.9	8.2	3.1E-07
7.9	4.9	6.7	3.4E-07
10.8	4.5	6.2	3.1E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**3.2E-07**



Jeffrey A. Kuhn, Ph.D, P.E. 12/16/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	891	Sample Date:	12/1/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Brown, Tan & Red Sandy Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-35, Grid Location P.0/17.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A2		144.24	71.68	30.17		63.6
-40	A2		144.24	33.45	30.17		97.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C56	32.52	24.14	26	6.19	46.7	47
2	C57	32.12	24.01	24	6.16	45.4	45
3							
						Liquid Limit	**46**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C3	31.24	27.67	6.14	3.57	17
2	C4	32.42	28.68	6.2	3.74	17
					Plastic Limit	**17**

Plasticity Index - Tex-106-E

Plasticity Index:	**29**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/13/22
TX105	Taavon Purdie	12/13/22
TX106	Taavon Purdie	12/13/22

Completed Date:	Reviewed By:
12/13/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

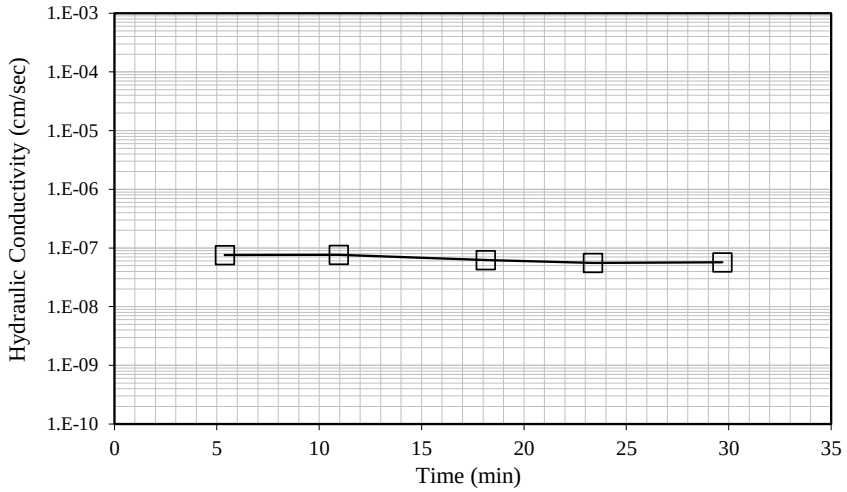
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-35

TRI Log #: 22-000104.1

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.81	2.79
Height (in)	3.59	3.59
Mass (g)	645.5	655.2
Sample Area (in^2)	6.18	6.13
Water Content (%)	28.2	29.6
Total Unit Weight (pcf)	110.8	113.5
Dry Unit Weight (pcf)	86.5	87.6
Specific Gravity (Assumed)	2.75	
Degree of Saturation	78.8	84.9
Void Ratio	0.98	0.96
Porosity	0.50	0.49
1 Pore Volume (cc)	180.3	176.2

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.97
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.4	18.7	25.8	7.5E-08
11.0	17.9	24.7	7.6E-08
18.1	17.1	23.5	6.2E-08
23.4	16.2	22.4	5.6E-08
29.7	15.7	21.7	5.7E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**5.7E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/19/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	892	Sample Date:	12/1/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Brown, Red & Tan Sandy Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-36, Grid Location Q.0/13.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A42		130.26	74.44	30.03		55.7
-40	A42		130.26	31.14	30.03		98.9

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C53	20.29	16.22	23	6.18	40.5	40
2	C55	25.32	19.78	23	6.19	40.8	40
3							
						Liquid Limit	**40**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C1	30.98	27.57	6.18	3.41	16
2	C2	32.18	28.59	6.11	3.59	16
					Plastic Limit	**16**

Plasticity Index - Tex-106-E

Plasticity Index:	**24**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	12/13/22
TX105	Craig Moore	12/13/22
TX106	Craig Moore	12/13/22

Completed Date:	Reviewed By:
12/13/22	Craig Moore

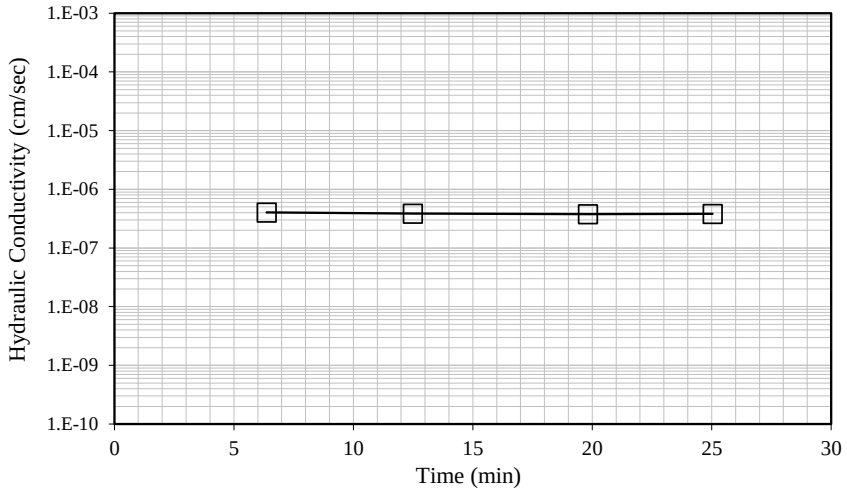
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-36
TRI Log #: 22-000104.2

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.83	2.83
Height (in)	4.14	3.43
Mass (g)	699.2	702.9
Sample Area (in^2)	6.28	6.28
Water Content (%)	24.4	22.5
Total Unit Weight (pcf)	102.6	124.2
Dry Unit Weight (pcf)	82.5	101.4
Specific Gravity (Assumed)	2.75	
Degree of Saturation	62.1	89.3
Void Ratio	1.08	0.69
Porosity	0.52	0.41
1 Pore Volume (cc)	220.8	144.5

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.95
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
6.4	14.9	17.8	4.0E-07
12.5	11.6	13.8	3.9E-07
19.8	9.2	10.9	3.8E-07
25.0	7.0	8.3	3.8E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**3.8E-07**



Jeffrey A. Kuhn, Ph.D, P.E. 12/19/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	893	Sample Date:	12/1/2022
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-37, Grid Location S.0/12.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A7		134.51	51.24	30.41		80.0
-40	A7		134.51	30.62	30.41		99.8

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C58	24.61	17.85	20	6.13	57.7	56
2	C59	20.87	15.47	20	6.18	58.1	57
3							
						Liquid Limit	**57**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C6	30.81	27.02	6.22	3.79	18
2	C5	30.49	26.76	6.21	3.73	18
					Plastic Limit	**18**

Plasticity Index - Tex-106-E

Plasticity Index:	**39**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/13/22
TX105	Taavon Purdie	12/13/22
TX106	Taavon Purdie	12/13/22

Completed Date:	Reviewed By:
12/13/22	Craig Moore

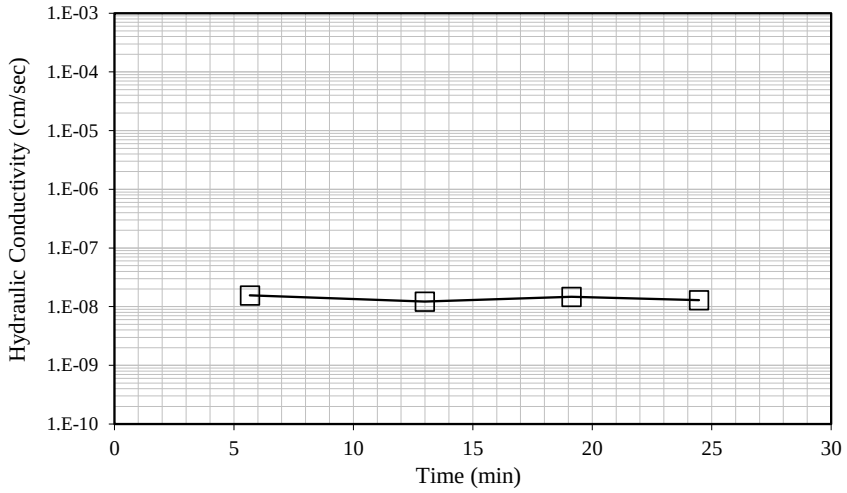
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-37
TRI Log #: 22-000104.3

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.88
Height (in)	3.17	3.24
Mass (g)	617.6	659.5
Sample Area (in^2)	6.38	6.51
Water Content (%)	16.9	31.5
Total Unit Weight (pcf)	116.5	119.1
Dry Unit Weight (pcf)	99.6	90.6
Specific Gravity (Assumed)	2.75	
Degree of Saturation	64.3	96.9
Void Ratio	0.72	0.89
Porosity	0.42	0.47
1 Pore Volume (cc)	138.8	163.0

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.90
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.7	18.1	28.3	1.6E-08
13.0	17.9	28.0	1.2E-08
19.1	17.7	27.6	1.5E-08
24.5	17.5	27.3	1.3E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.4E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/19/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	901	Sample Date:	12/5/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Dark Brown Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-38, Grid Location Q.0/11.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A100		110.94	51.69	30.37		73.5
-40	A100		110.94	31.73	30.37		98.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C32	33.63	24.16	30	6.15	52.6	54
2	C33	32.74	23.58	29	6.17	52.6	54
3							
						Liquid Limit	**54**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C30	31.13	26.06	6.16	5.07	25
2	C31	26.22	22.2	6.21	4.02	25
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**29**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/13/22
TX105	Taavon Purdie	12/13/22
TX106	Taavon Purdie	12/13/22

Completed Date:	Reviewed By:
12/13/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

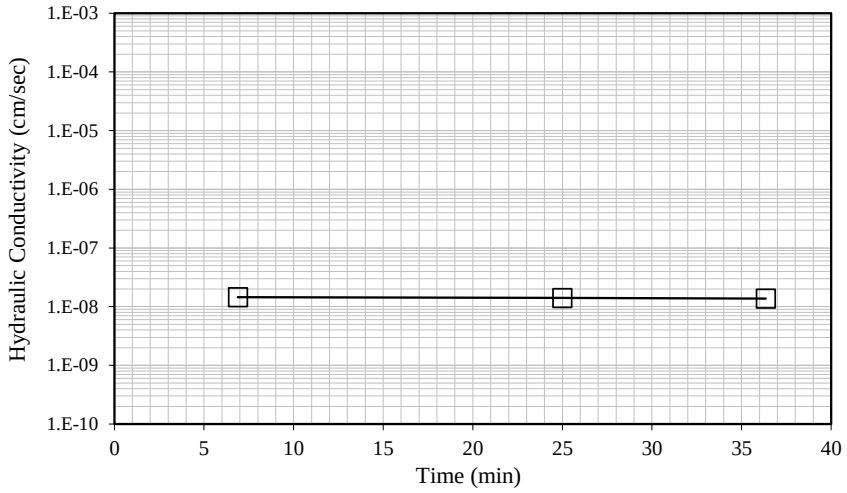
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-38

TRI Log #: 22-000122.01

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.81	2.81
Height (in)	3.76	3.74
Mass (g)	709.9	717.9
Sample Area (in^2)	6.19	6.20
Water Content (%)	26.7	32.0
Total Unit Weight (pcf)	116.1	118.0
Dry Unit Weight (pcf)	91.7	89.4
Specific Gravity (Assumed)	2.75	
Degree of Saturation	84.1	95.8
Void Ratio	0.87	0.92
Porosity	0.47	0.48
1 Pore Volume (cc)	177.6	181.7

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.95
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
6.9	19.4	25.5	1.5E-08
25.0	19.2	25.2	1.4E-08
36.3	18.6	24.5	1.4E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.4E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/19/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	902	Sample Date:	12/5/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Craig Moore	Method: **A,B,C**	
Material Description:	Reddish-Dark Brown Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-39, Grid Location N.0/8.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A16		112.62	47.24	30.3		79.4
-40	A16		112.62	30.63	30.3		99.6

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C50	28.02	20.51	29	6.22	52.6	54
2	C51	29.98	21.77	23	6.21	52.8	52
3							
						Liquid Limit	**53**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C49	32.85	27.56	6.19	5.29	25
2	C48	29.5	25.02	6.23	4.48	24
					Plastic Limit	**25**

Plasticity Index - Tex-106-E

Plasticity Index:	**28**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/13/22
TX105	Taavon Purdie	12/13/22
TX106	Taavon Purdie	12/13/22

Completed Date:	Reviewed By:
12/13/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

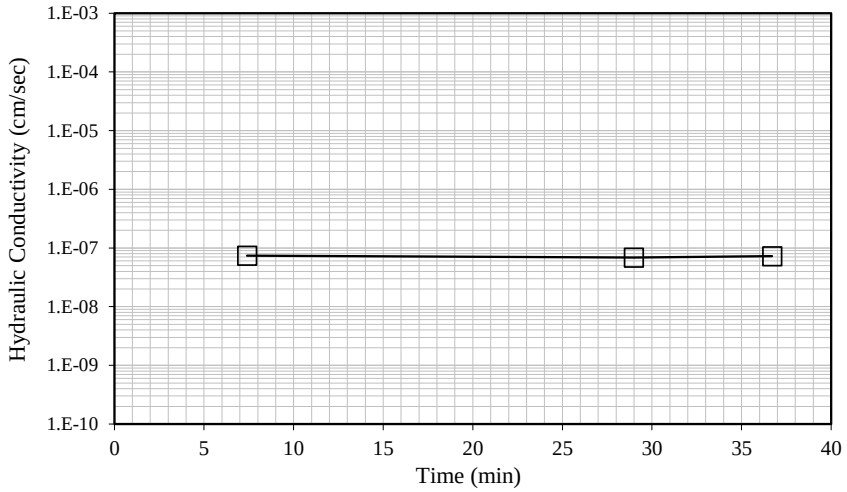
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-39

TRI Log #: 22-000122.02

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.81	2.83
Height (in)	3.38	3.34
Mass (g)	629.4	644.3
Sample Area (in^2)	6.22	6.30
Water Content (%)	26.3	33.8
Total Unit Weight (pcf)	114.2	116.7
Dry Unit Weight (pcf)	90.4	87.3
Specific Gravity (Assumed)	2.75	
Degree of Saturation	80.6	96.1
Void Ratio	0.90	0.97
Porosity	0.47	0.49
1 Pore Volume (cc)	162.7	169.3

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.97
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
7.4	16.2	23.8	7.4E-08
29.0	15.2	22.2	6.9E-08
36.7	12.7	18.6	7.3E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**7.1E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/19/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	912	Sample Date:	12/8/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Dark Brown, Brown & Gray Sandy Fat Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-40, Grid Location Z.0/14.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A85		115.48	59.05	30.57		66.5
-40	A85		115.48	40.54	30.57		88.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C38	33.5	24.17	23	6.2	51.9	51
2	C37	32.89	23.7	22	6.18	52.5	52
3							
						Liquid Limit	**52**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C52	36.47	30.19	6.16	6.28	26
2	C35	31.87	26.59	6.17	5.28	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**26**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/13/22
TX105	Taavon Purdie	12/13/22
TX106	Taavon Purdie	12/13/22

Completed Date:	Reviewed By:
12/13/22	Craig Moore

Hydraulic Conductivity (ASTM D5084)

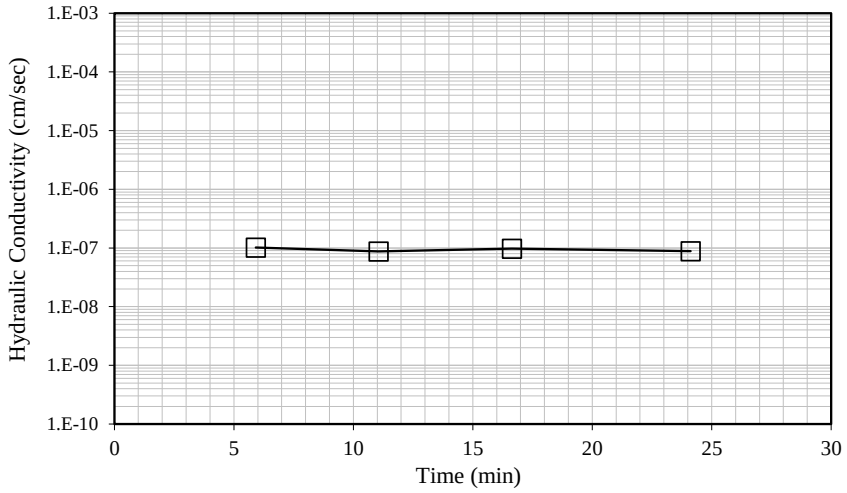
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-40

TRI Log #: 22-000143.1

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.82	2.83
Height (in)	3.52	3.48
Mass (g)	669.7	678.1
Sample Area (in^2)	6.26	6.31
Water Content (%)	26.6	29.7
Total Unit Weight (pcf)	115.8	117.7
Dry Unit Weight (pcf)	91.5	90.7
Specific Gravity (Assumed)	2.75	
Degree of Saturation	83.5	91.6
Void Ratio	0.88	0.89
Porosity	0.47	0.47
1 Pore Volume (cc)	168.5	169.5

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.97
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.9	15.0	21.1	1.0E-07
11.1	13.9	19.6	8.7E-08
16.6	13.2	18.6	9.7E-08
24.1	12.4	17.4	8.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**9.3E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 12/19/2022
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	936	Sample Date:	12/16/2022
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-41, Grid Location X.0/6.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A16		116.46	52.7	30.3		74.0
-40	A16		116.46	33.17	30.3		96.7

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C40	33.93	24.67	21	6.37	50.6	50
2	C35	29.52	21.63	22	6.17	51.0	50
3							
						Liquid Limit	**50**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C8	30.87	26.86	6.18	4.01	19
2	C7	34.25	29.5	6.18	4.75	20
					Plastic Limit	**20**

Plasticity Index - Tex-106-E

Plasticity Index:	**30**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/27/22
TX105	Taavon Purdie	12/27/22
TX106	Taavon Purdie	12/27/22

Completed Date:	Reviewed By:
12/27/22	Craig Moore

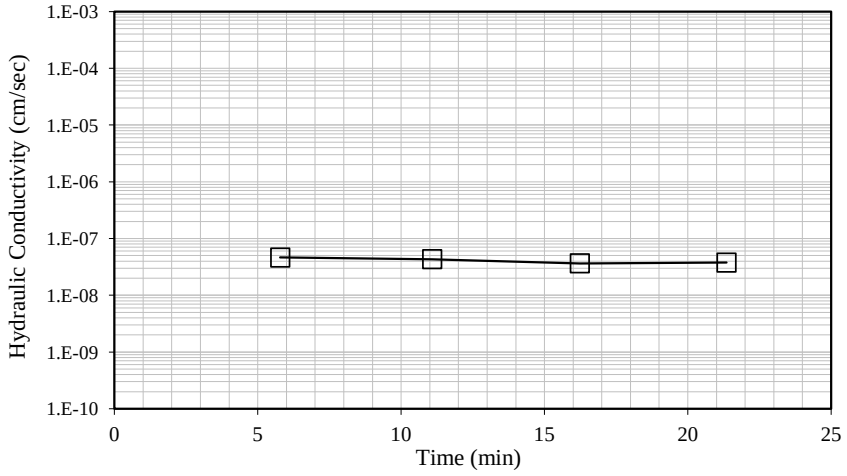
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
TRI Log #: 22-000184-01
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-41

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.83	2.85
Height (in)	3.45	3.42
Mass (g)	667.7	676.5
Sample Area (in^2)	6.31	6.37
Water Content (%)	28.8	30.4
Total Unit Weight (pcf)	117.0	118.1
Dry Unit Weight (pcf)	90.9	90.6
Specific Gravity (Assumed)	2.75	
Degree of Saturation	89.0	93.5
Void Ratio	0.89	0.89
Porosity	0.47	0.47
1 Pore Volume (cc)	167.5	168.8

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.96
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.8	19.7	28.2	4.6E-08
11.1	19.0	27.3	4.3E-08
16.2	18.5	26.6	3.7E-08
21.4	18.1	26.0	3.8E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**3.7E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 1/10/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	937	Sample Date:	12/16/2022
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Sandy Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-42, Grid Location AB.0/12.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A85		106.11	54.09	30.57		68.9
-40	A85		106.11	39.1	30.57		88.7

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C4	30.59	22.68	24	6.2	48.0	48
2	C5	31.52	23.04	21	6.21	50.4	49
3							
						Liquid Limit	**49**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C6	32.45	27.58	6.22	4.87	23
2	C3	34.2	28.91	6.14	5.29	23
					Plastic Limit	**23**

Plasticity Index - Tex-106-E

Plasticity Index:	**26**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/27/22
TX105	Taavon Purdie	12/27/22
TX106	Taavon Purdie	12/27/22

Completed Date:	Reviewed By:
12/27/22	Craig Moore

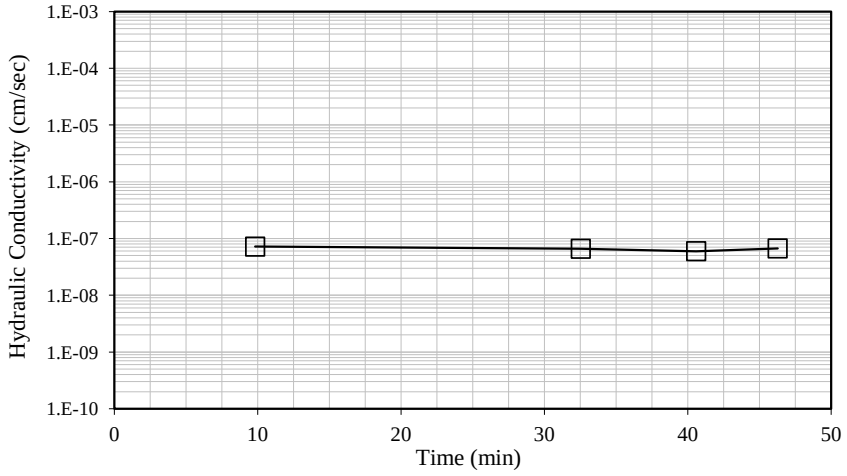
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
TRI Log #: 22-000184-02
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-42

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.87
Height (in)	3.60	3.54
Mass (g)	658.6	689.7
Sample Area (in^2)	6.37	6.45
Water Content (%)	29.4	35.9
Total Unit Weight (pcf)	109.4	114.9
Dry Unit Weight (pcf)	84.6	84.6
Specific Gravity (Assumed)	2.75	
Degree of Saturation	78.4	95.9
Void Ratio	1.03	1.03
Porosity	0.51	0.51
1 Pore Volume (cc)	190.6	190.0

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.91
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
9.8	19.7	27.0	7.2E-08
32.5	18.1	24.9	6.6E-08
40.6	15.2	20.9	6.0E-08
46.3	14.4	19.7	6.7E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**6.3E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 1/10/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	938	Sample Date:	12/16/2022
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-43, Grid Location Z.0/9.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A100		123.32	54.11	30.37		74.5
-40	A100		123.32	34.69	30.37		95.4

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C2	33.73	24.59	29	6.11	49.5	50
2	C1	33.5	24.33	28	6.18	50.5	51
3							
						Liquid Limit	**51**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C42	31.02	26.22	6.15	4.8	24
2	C44	33.94	28.52	6.2	5.42	24
					Plastic Limit	**24**

Plasticity Index - Tex-106-E

Plasticity Index:	**27**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	12/27/22
TX105	Taavon Purdie	12/27/22
TX106	Taavon Purdie	12/27/22

Completed Date:	Reviewed By:
12/27/22	Craig Moore

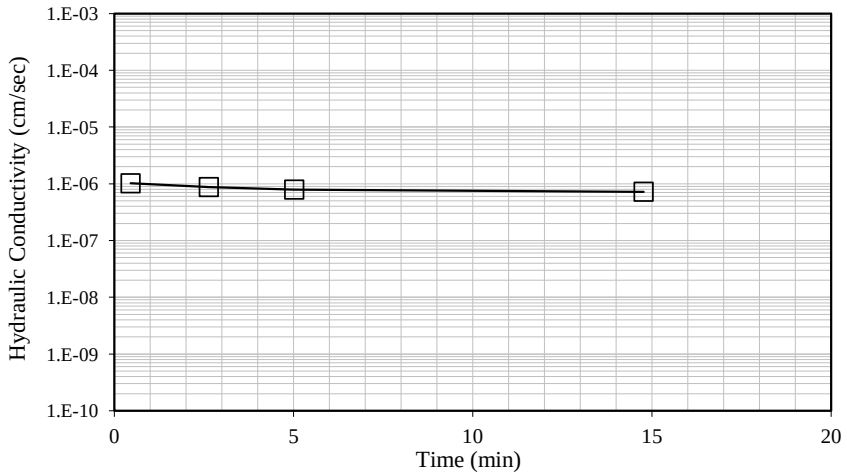
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
TRI Log #: 22-000184-03
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-43

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.89
Height (in)	3.39	3.40
Mass (g)	620.3	654.6
Sample Area (in^2)	6.38	6.54
Water Content (%)	27.5	34.3
Total Unit Weight (pcf)	109.1	112.1
Dry Unit Weight (pcf)	85.6	83.4
Specific Gravity (Assumed)	2.75	
Degree of Saturation	75.3	89.4
Void Ratio	1.01	1.06
Porosity	0.50	0.51
1 Pore Volume (cc)	177.8	187.2

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.89
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
0.5	18.7	27.3	1.0E-06
2.6	17.7	25.8	8.8E-07
5.0	13.9	20.3	7.9E-07
14.8	11.0	16.1	7.2E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**7.6E-07**



Jeffrey A. Kuhn, Ph.D, P.E. 1/10/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	54	Sample Date:	1/23/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-44, Grid Location Q.0/26.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A66		139.55	37.41	30.13		93.3
-40	A66		139.55	31.42	30.13		98.8

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C38	37.58	27.47	22	6.18	47.5	47
2	C40	40.17	29.29	22	6.37	47.5	47
3							
						Liquid Limit	**47**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C53	26.72	22.99	6.18	3.73	22
2	C55	26.12	22.4	6.19	3.72	23
					Plastic Limit	**23**

Plasticity Index - Tex-106-E

Plasticity Index:	**24**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	01/30/23
TX105	Taavon Purdie	01/30/23
TX106	Taavon Purdie	01/30/23

Completed Date:	Reviewed By:
01/30/23	Craig Moore

Hydraulic Conductivity (ASTM D5084)

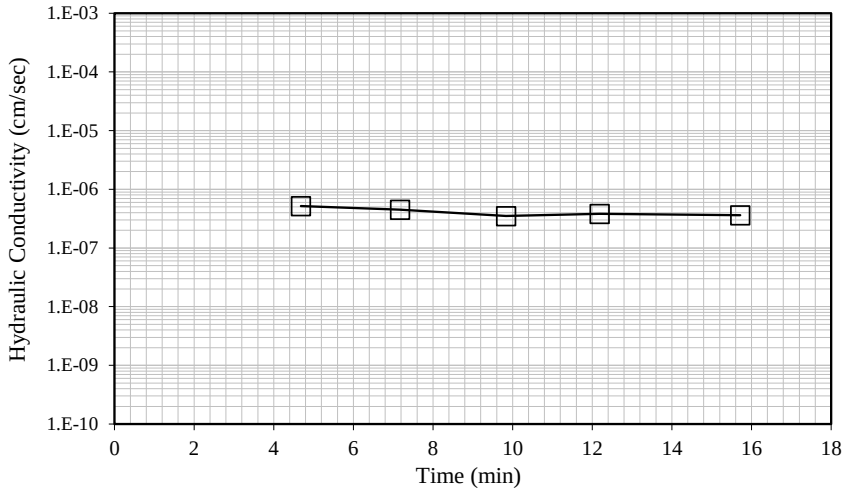
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-44

TRI Log #: 23-000285-01

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.85
Height (in)	3.48	3.49
Mass (g)	706.7	717.5
Sample Area (in^2)	6.33	6.36
Water Content (%)	25.8	23.4
Total Unit Weight (pcf)	122.3	123.2
Dry Unit Weight (pcf)	97.2	99.8
Specific Gravity (Assumed)	2.75	
Degree of Saturation	92.7	89.4
Void Ratio	0.77	0.72
Porosity	0.43	0.42
1 Pore Volume (cc)	156.4	152.0

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.97
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
4.7	20.9	29.8	5.2E-07
7.2	15.6	22.2	4.5E-07
9.8	13.6	19.4	3.5E-07
12.2	12.2	17.3	3.8E-07
15.7	10.9	15.5	3.6E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**3.7E-07**



Kelby Broussard 2/13/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	55	Sample Date:	1/23/2023
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-45, Grid Location R.0/25.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A105		109.28	34.51	30.4		94.8
-40	A105		109.28	31.05	30.4		99.2

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C8	34.45	25.04	22	6.18	49.9	49
2	C7	35.6	25.81	24	6.18	49.9	50
3							
						Liquid Limit	**50**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C49	23.73	20.81	6.19	2.92	20
2	C52	26.08	22.79	6.16	3.29	20
					Plastic Limit	**20**

Plasticity Index - Tex-106-E

Plasticity Index:	**30**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	01/30/23
TX105	Taavon Purdie	01/30/23
TX106	Taavon Purdie	01/30/23

Completed Date:	Reviewed By:
01/30/23	Craig Moore

Hydraulic Conductivity (ASTM D5084)

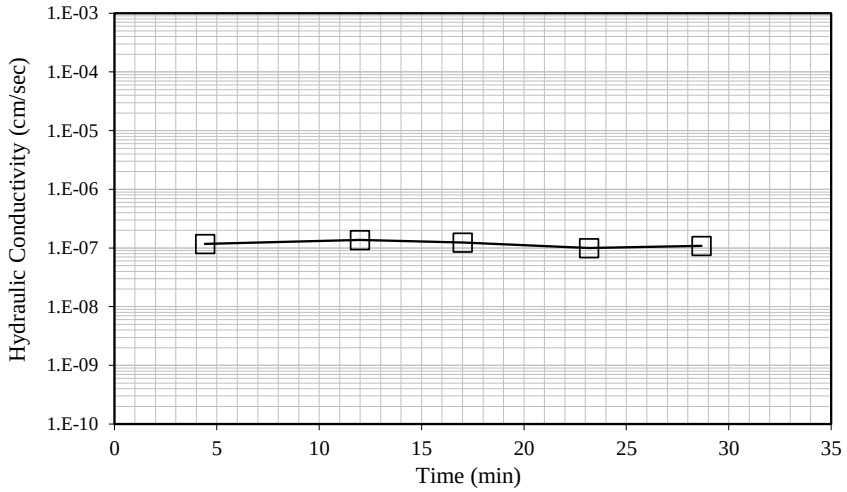
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-45

TRI Log #: 23-000285-02

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.83	2.83
Height (in)	3.55	3.51
Mass (g)	670.2	673.7
Sample Area (in^2)	6.29	6.27
Water Content (%)	30.7	33.2
Total Unit Weight (pcf)	114.3	116.6
Dry Unit Weight (pcf)	87.4	87.5
Specific Gravity (Assumed)	2.75	
Degree of Saturation	87.7	95.1
Void Ratio	0.96	0.96
Porosity	0.49	0.49
1 Pore Volume (cc)	179.5	176.7

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.95
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
4.4	21.2	29.6	1.2E-07
12.0	20.0	27.8	1.4E-07
17.0	17.7	24.6	1.2E-07
23.2	16.4	22.9	1.0E-07
28.7	15.3	21.3	1.1E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.0E-07**



Kelby Broussard 2/13/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	56	Sample Date:	1/23/2023
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-46, Grid Location Q.0/18.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A102		116.84	34.14	30.7		96.0
-40	A102		116.84	31.06	30.7		99.6

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C44	34.63	24.48	21	6.2	55.5	54
2	C42	36.96	25.95	23	6.15	55.6	55
3							
						Liquid Limit	**55**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C56	25.43	21.95	6.19	3.48	22
2	C47	24.92	21.65	6.16	3.27	21
					Plastic Limit	**22**

Plasticity Index - Tex-106-E

Plasticity Index:	**33**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	01/30/23
TX105	Taavon Purdie	01/30/23
TX106	Taavon Purdie	01/30/23

Completed Date:	Reviewed By:
01/30/23	Craig Moore

Hydraulic Conductivity (ASTM D5084)

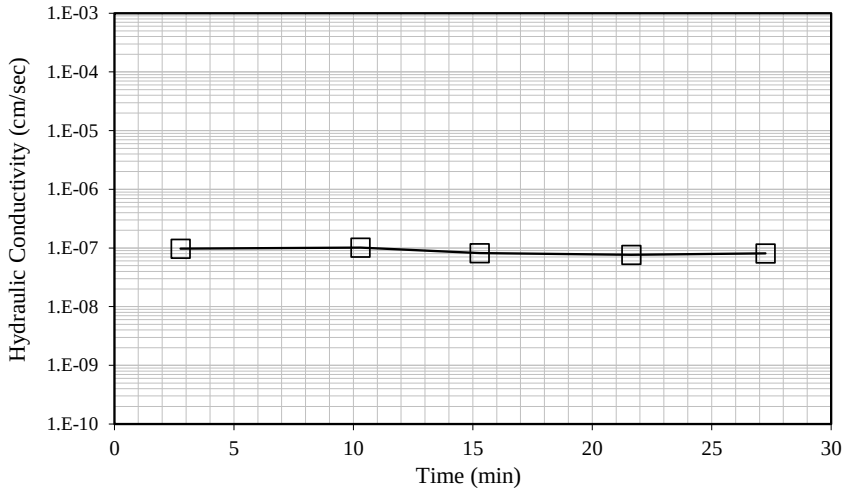
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-46

TRI Log #: 23-000285-03

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.85	2.86
Height (in)	3.57	3.56
Mass (g)	674.1	683.5
Sample Area (in^2)	6.38	6.44
Water Content (%)	33.3	32.8
Total Unit Weight (pcf)	112.7	113.4
Dry Unit Weight (pcf)	84.6	85.4
Specific Gravity (Assumed)	2.75	
Degree of Saturation	89.0	89.5
Void Ratio	1.03	1.01
Porosity	0.51	0.50
1 Pore Volume (cc)	189.2	188.8

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.90
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
2.8	19.9	27.5	9.8E-08
10.3	19.3	26.7	1.0E-07
15.3	17.6	24.4	8.2E-08
21.6	16.8	23.2	7.7E-08
27.3	15.8	21.9	8.1E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**7.9E-08**



Kelby Broussard 2/13/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	57	Sample Date:	1/23/2023
Test Number:	4	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Fat Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-47, Grid Location S.0/15.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A56		134.2	36.61	30.32		93.9
-40	A56		134.2	31.1	30.32		99.2

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C46	33.68	23.91	27	6.19	55.1	56
2	C45	35.94	25.34	23	6.17	55.3	55
3							
						Liquid Limit	**56**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C47	24.92	21.65	6.16	3.27	21
2	C48	26.28	22.7	6.23	3.58	22
					Plastic Limit	**22**

Plasticity Index - Tex-106-E

Plasticity Index:	**34**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	01/30/23
TX105	Taavon Purdie	01/30/23
TX106	Taavon Purdie	01/30/23

Completed Date:	Reviewed By:
01/30/23	Craig Moore

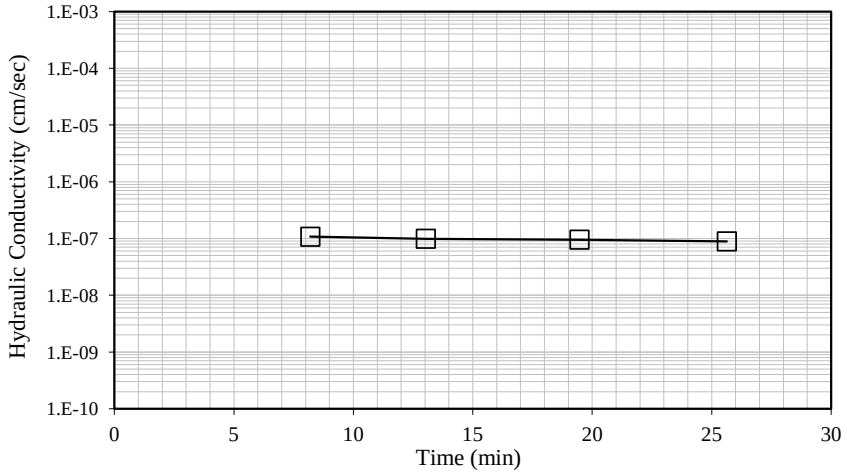
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
TRI Log #: 23-000285-04
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-47

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.84	2.84
Height (in)	3.48	3.47
Mass (g)	672.9	681.2
Sample Area (in^2)	6.35	6.35
Water Content (%)	29.5	31.3
Total Unit Weight (pcf)	116.1	117.8
Dry Unit Weight (pcf)	89.6	89.7
Specific Gravity (Assumed)	2.75	
Degree of Saturation	88.8	94.4
Void Ratio	0.91	0.91
Porosity	0.48	0.48
1 Pore Volume (cc)	172.8	172.1

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.94
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
8.2	20.6	29.3	1.1E-07
13.0	18.5	26.3	9.9E-08
19.5	17.5	24.8	9.5E-08
25.6	16.2	23.1	8.9E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**9.2E-08**



Jeffrey A. Kuhn, Ph.D, P.E. 1/31/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	166	Sample Date:	3/6/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Brown & Light Brown Fat Clay with Sand		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-48, Grid Location P.0/6.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A59		135.09	48.18	30.1		82.8
-40	A59		135.09	34.11	30.1		96.2

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C16	32.38	22.58	28	6.2	59.8	61
2	C18	29.27	20.66	25	6.17	59.4	59
3							
						Liquid Limit	**60**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C20	40.41	33.39	6.2	7.02	26
2	C19	37.42	31.06	6.17	6.36	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**34**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Anthony Muzny	03/08/23
TX105	Anthony Muzny	03/08/23
TX106	Anthony Muzny	03/08/23

Completed Date:	Reviewed By:
03/08/23	Craig Moore

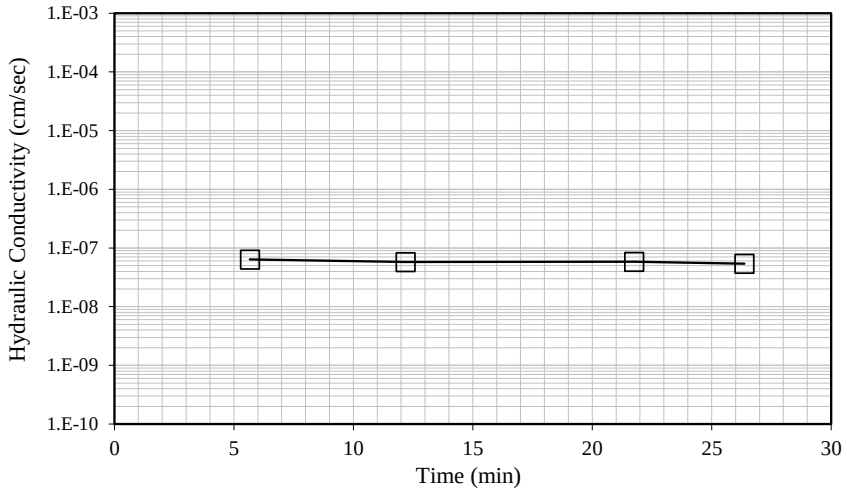
Hydraulic Conductivity (ASTM D5084)

Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-48
TRI Log #: 23-000811.1

Sample Condition	Initial	Final
	Select	Post-Test
Diameter (in)	2.85	2.83
Height (in)	3.69	3.70
Mass (g)	702.3	731.5
Sample Area (in^2)	6.38	6.31
Water Content (%)	26.1	33.6
Total Unit Weight (pcf)	113.7	119.4
Dry Unit Weight (pcf)	90.1	89.4
Specific Gravity (Assumed)	2.75	
Degree of Saturation	79.4	100.4
Void Ratio	0.90	0.92
Porosity	0.47	0.48
1 Pore Volume (cc)	183.1	183.1

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.90
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
5.7	13.1	17.6	6.4E-08
12.2	12.6	16.9	5.8E-08
21.8	12.1	16.2	5.8E-08
26.4	11.3	15.2	5.4E-08
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**5.6E-08**



Kelby Broussard 3/16/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	188	Sample Date:	3/13/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Dark Brown & Brown Sandy Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-49, Grid Location Q.0/7.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A75		123.86	75.21	30.44		52.1
-40	A75		123.86	37.25	30.44		92.7

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C23	32.71	24.62	23	6.15	43.8	43
2	C27	36.3	27.06	25	6.21	44.3	44
3							
						Liquid Limit	**44**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C30	39.44	34.43	6.16	5.01	18
2	C31	32.61	28.73	6.21	3.88	17
					Plastic Limit	**18**

Plasticity Index - Tex-106-E

Plasticity Index:	**26**	**PH:**	
Use Bar Linear Shrinkage to Calculate Plasticity Index?			

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Anthony Muzny	03/20/23
TX105	Anthony Muzny	03/20/23
TX106	Anthony Muzny	03/20/23

Completed Date:	Reviewed By:
03/20/23	Craig Moore

Hydraulic Conductivity (ASTM D5084)

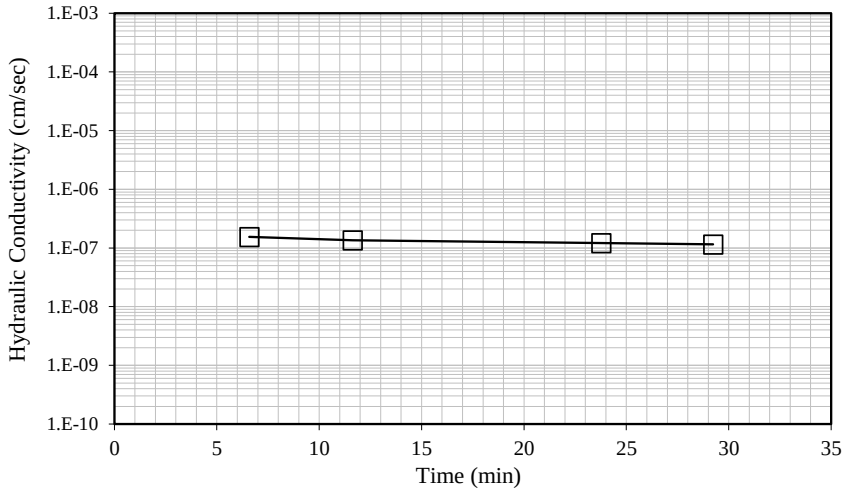
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-49

TRI Log #: 23-000908.1

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.81	2.80
Height (in)	3.59	3.54
Mass (g)	683.3	687.6
Sample Area (in^2)	6.18	6.14
Water Content (%)	17.4	28.2
Total Unit Weight (pcf)	117.4	120.6
Dry Unit Weight (pcf)	100.0	94.1
Specific Gravity (Assumed)	2.75	
Degree of Saturation	66.7	94.3
Void Ratio	0.72	0.82
Porosity	0.42	0.45
1 Pore Volume (cc)	151.6	160.7

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.97
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
6.6	17.5	24.1	1.5E-07
11.6	15.6	21.5	1.4E-07
23.8	14.5	19.9	1.2E-07
29.2	12.3	16.9	1.2E-07
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.2E-07**



Kelby Broussard 3/23/2023
Analysis & Quality Review/Date

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	189	Sample Date:	3/13/2023
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Bobby Rodgers	Method: **A,B,C**	
Material Description:	Brown Sandy Lean Clay		
Type of Structure:	Site F Insitu Sub-Base		
Sample Location:	SF-50, Grid Location T.0/8.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A52		124.09	75.21	29.96		51.9
-40	A52		124.09	34.9	29.96		94.8

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C28	42.79	33.26	29	6.16	35.2	36
2	C29	39.65	30.88	27	6.16	35.5	36
3							
						Liquid Limit	**36**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C32	33.05	29.45	6.15	3.6	15
2	C33	35.09	31.25	6.17	3.84	15
					Plastic Limit	**15**

Plasticity Index - Tex-106-E

Plasticity Index:	**21**	**PH:**	
Use Bar Linear Shrinkage to Calculate Plasticity Index?			

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Anthony Muzny	03/20/23
TX105	Anthony Muzny	03/20/23
TX106	Anthony Muzny	03/20/23

Completed Date:	Reviewed By:
03/20/23	Craig Moore

Hydraulic Conductivity (ASTM D5084)

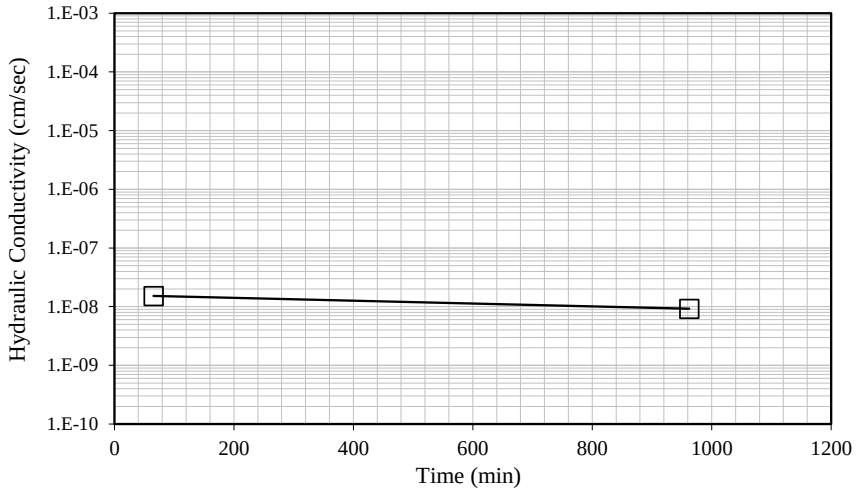
Client: JBS Engineering & Environmental, LLC
Project: 22011.250 Gibbons Crk - Site F LF Closure
Sample ID: SF-50

TRI Log #: 23-000908.2

Sample Condition	Initial	Final
	Intact	Post-Test
Diameter (in)	2.82	2.83
Height (in)	3.33	3.24
Mass (g)	683.4	680.8
Sample Area (in^2)	6.24	6.31
Water Content (%)	19.6	19.6
Total Unit Weight (pcf)	125.2	126.9
Dry Unit Weight (pcf)	104.7	106.1
Specific Gravity (Assumed)	2.75	
Degree of Saturation	84.3	87.5
Void Ratio	0.64	0.62
Porosity	0.39	0.38
1 Pore Volume (cc)	132.8	127.7

Eff. Confining Stress (psi)	5.0
Back-Pressure	80.0
B-Value Prior to Permeation	0.92
Permeant	De-Aired Tap Water

Method F—Constant Volume–Falling Head by mercury, rising tailwater elevation			
Manometer Constants		Aa (cm^2)	0.767
M1	0.0302	Ap (cm^2)	0.0314
M2	1.041	Z_p (cm)	0
Time, t	Trial Constant, Z_1	Gradient	K_{20}
Min	-	-	cm/s
65.4	9.3	13.7	1.5E-08
962.4	8.2	12.2	9.2E-09
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Average, Last 2 Readings			**1.2E-08**



Kelby Broussard 3/23/2023
Analysis & Quality Review/Date

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	656	Sample Date:	9/7/2023
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-4' B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Chris Marshall	Method: **A,B,C**	
Material Description:	Brown Clayey Sand		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-52 East Borrow Area Pit-2		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A105		142.37	89.42	30.4		47.3
-40	A105		142.37	32.62	30.4		98.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C20	24	19.57	21	6.2	33.1	32
2	C21	26.71	21.58	22	6.15	33.2	33
3							
						Liquid Limit	**33**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C28	25.66	22.26	6.19	3.4	21
2	C27	22.35	19.5	6.17	2.85	21
					Plastic Limit	**21**

Plasticity Index - Tex-106-E

Plasticity Index:	**12**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	09/13/23
TX105	Craig Moore	09/13/23
TX106	Craig Moore	09/13/23

Completed Date:	Reviewed By:
09/13/23	Craig Moore

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	658	Sample Date:	9/7/2023
Test Number:	4	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-5' B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Chris Marshall	Method: **A,B,C**	
Material Description:	Brown Sandy Fat Clay		
Type of Structure:	General Fill for Clay Cap		
Sample Location:	SF-54 East Borrow Area Pit-4		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A27		111.33	66.52	30.2		55.2
-40	A27		111.33	43.82	30.2		83.2

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C103	22.76	16.63	25	6.04	57.9	58
2	C102	22.6	16.52	25	6.05	58.1	58
3							
						Liquid Limit	**58**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C38	20.9	17.91	6.2	2.99	26
2	C37	25.37	21.46	6.18	3.91	26
					Plastic Limit	**26**

Plasticity Index - Tex-106-E

Plasticity Index:	**32**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	09/13/23
TX105	Craig Moore	09/13/23
TX106	Craig Moore	09/13/23

Completed Date:	Reviewed By:
09/13/23	Craig Moore

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	838	Sample Date:	11/18/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	Std.
Sampled By:	Juan Vasquez	Method: **A,B,C**	A
Material Description:	Brown & Gray Clayey Sand		
Type of Structure:	1st Lift of General Fill for Clay Cap		
Sample Location:	SF-57, Grid Location U.0/18.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A14		128.65	94.78	30.27		34.4
-40	A14		128.65	38.2	30.27		91.9

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C23	22.49	18.21	27	6.15	35.5	36
2	C27	22.21	18.02	27	6.21	35.5	36
3							
						Liquid Limit	**36**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C31	22.67	20.3	6.21	2.37	17
2	C30	23.89	21.31	6.16	2.58	17
					Plastic Limit	**17**

Plasticity Index - Tex-106-E

Plasticity Index:	**19**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	11/27/23
TX105	Craig Moore	11/27/23
TX106	Craig Moore	11/27/23

Completed Date:	Reviewed By:
11/28/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	11/18/23	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location U.0/18.0	Lab Start Date:	12/7/23
Material:	Brown & Gray Clayey Sand	Lab Completion Date:	12/8/23
Sample Location:	SF-57	Technician	Juan Vasquez
Lab #:	838	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	1
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	3.16 in	b. Avg. Diameter of Specimen:	2.795 in.
c. Sample Volume: (0.7854 * b^2 * a):	19.388 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	123.5 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	628.4 gms	k. Wet Weight Soil + Tare:	642.5 gms
f. Wet Weight Soil + Tare:	628.4 gms	l. Dry Weight Soil + Tare:	535.2 gms
g. Dry Weight Soil + Tare:	535.2 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	20.1 %
l. Moisture Content [(f-g)/(g-h)]*100	17.4 %		
j. Unit Dry Wt. [d/l + (l/100)]	105.2 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3
DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
12/7/2023	8:02		3.00	20.00					
12/7/2023	11:58	14160	4.40	18.60	1.40	1.40	22	0.953	1.21E-07
12/8/2023	5:11	61980	10.10	12.90	5.70	5.70	22	0.953	1.18E-07
12/8/2023	12:30	26340	12.60	10.40	2.50	2.50	22	0.953	1.30E-07
12/8/2023	15:16	9960	13.50	9.50	0.90	0.90	22	0.953	1.27E-07
12/9/2023	6:26	54600	17.40	5.60	3.90	3.90	22	0.953	1.05E-07
								AVERAGE	1.20E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	839	Sample Date:	11/18/2023
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-10" B.E.G.S.	Procedure: **STD MOD TEX**	Std.
Sampled By:	Juan Vasquez	Method: **A,B,C**	A
Material Description:	Brown Sandy Lean Clay		
Type of Structure:	Final Lift of General Fill for Clay Cap		
Sample Location:	SF-58, Grid Location U.0/5.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A50		146.66	87.42	30.3		50.9
-40	A50		146.66	31.38	30.3		99.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C4	20.78	16.61	27	6.2	40.1	40
2	C5	20.03	16.02	27	6.21	40.9	41
3							
						Liquid Limit	**41**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C1	37.32	32.96	6.18	4.36	16
2	C9	38.38	33.76	6.2	4.62	17
					Plastic Limit	**17**

Plasticity Index - Tex-106-E

Plasticity Index:	**24**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Rick Garcia	11/27/23
TX105	Rick Garcia	11/27/23
TX106	Rick Garcia	11/27/23

Completed Date:	Reviewed By:
11/27/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	11/18/23	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location U.0/5.0	Lab Start Date:	12/4/23
Material:	Brown Sandy Lean Clay	Lab Completion Date:	12/4/23
Sample Location:	SF-58	Technician	Craig Moore
Lab #:	839	Lift	Final Lift
Sample Orientation	H _____ V ___X__	Spl.	2
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	2.87 in	b. Avg. Diameter of Specimen:	2.851 in.
c. Sample Volume: (0.7854 * b^2 * a):	18.303 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	114.8 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	551.7 gms	k. Wet Weight Soil + Tare:	578.2 gms
f. Wet Weight Soil + Tare:	551.7 gms	l. Dry Weight Soil + Tare:	474.3 gms
g. Dry Weight Soil + Tare:	474.3 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	21.9 %
l. Moisture Content [(f-g)/(g-h)]*100	16.3 %		
j. Unit Dry Wt. [d/l + (l/100)]	98.7 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
12/4/2023	9:23		0.00	25.00					
12/4/2023	10:11	2880	2.60	22.40	2.60	2.60	22	0.953	9.15E-07
12/4/2023	11:54	6180	7.30	17.70	4.70	4.70	22	0.953	8.12E-07
12/4/2023	13:12	4680	10.20	14.80	2.90	2.90	22	0.953	7.00E-07
12/4/2023	13:34	1320	11.10	13.90	0.90	0.90	22	0.953	7.93E-07
12/4/2023	15:04	5400	14.00	11.00	2.90	2.90	22	0.953	6.44E-07
								AVERAGE	7.73E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	847	Sample Date:	11/22/2023
Test Number:	59	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Gray Sandy Fat Clay		
Type of Structure:	2nd Lift of General Fill for Clay Cap		
Sample Location:	SF-59, Grid Location U.0/18.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	Norman Construction	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A68		125.66	68.28	30.1		60.0
-40	A68		125.66	32.88	30.1		97.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C7	20.56	15.71	29	6.18	50.9	52
2	C8	21.38	16.26	29	6.18	50.8	52
3							
						Liquid Limit	**52**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C13	25.92	22.06	6.18	3.86	24
2	C12	22.74	19.51	6.18	3.23	24
					Plastic Limit	**24**

Plasticity Index - Tex-106-E

Plasticity Index:	**28**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	12/12/23
TX105	Craig Moore	12/12/23
TX106	Craig Moore	12/12/23

Completed Date:	Reviewed By:
12/12/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	11/22/23	No. of Sps Del. On This Date	1
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location U.0/18.0	Lab Start Date:	12/7/23
Material:	Brown & Gray Sandy Fat Clay	Lab Completion Date:	12/8/23
Sample Location:	SF-59	Technician	Juan Vasquez
Lab #:	847	Lift	2nd Lift
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	4.77 in	b. Avg. Diameter of Specimen:	2.82 in.
c. Sample Volume: (0.7854 * b^2 * a):	29.768 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	116.3 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	908.4 gms	k. Wet Weight Soil + Tare:	930.4 gms
f. Wet Weight Soil + Tare:	908.4 gms	l. Dry Weight Soil + Tare:	744.6 gms
g. Dry Weight Soil + Tare:	744.6 gms	m. Tare Weight:	0.0. gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	24.9 %
l. Moisture Content [(f-g)/(g-h)]*100	22.0 %		
j. Unit Dry Wt. [d/l + (l/100)]	95.3 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
12/7/23	8:05 Am		4.00	21.00					
12/7/2023	11:59	647940	5.80	19.20	1.80	1.80	22	0.953	5.03E-09
12/7/2023	15:48	13740	7.70	17.30	1.90	1.90	22	0.953	2.57E-07
12/8/2023	5:12	48240	16.70	8.30	9.00	9.00	22	0.953	3.79E-07
12/8/2023	12:35	26580	22.70	2.30	6.00	6.00	22	0.953	5.21E-07
12/8/2023	15:20	9900	24.90	0.10	2.20	2.20	22	0.953	5.54E-07
								AVERAGE	3.43E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	879	Sample Date:	12/5/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Clayey Sand		
Type of Structure:	1st of General Fill for Clay Cap		
Sample Location:	SF-60, Grid Location R.0/20.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A84		138.42	114.2	30.51		22.4
-40	A84		138.42	60.41	30.51		72.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C4	26.35	21.88	21	6.2	28.5	28
2	C6	24.87	20.74	21	6.22	28.4	28
3							
						Liquid Limit	**28**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C8	26.63	23.49	6.18	3.14	18
2	C7	25.01	22.15	6.18	2.86	18
					Plastic Limit	**18**

Plasticity Index - Tex-106-E

Plasticity Index:	**10**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Anthony Muzny	
TX105	Anthony Muzny	
TX106	Anthony Muzny	

Completed Date:	Reviewed By:
	Anthony Muzny

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/05/23	No. of Sps Del. On This Date	1
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location R.0/20.0	Lab Start Date:	12/12/23
Material:	Brown & Tan Clayey Sand	Lab Completion Date:	12/14/23
Sample Location:	SF-60	Technician	Craig Moore
Lab #:	879	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L: 4.74 in

b. Avg. Diameter of Specimen: 2.761 in.

c. Sample Volume: (0.7854 * b^2 * a): 28.361 cu. in.

d. Wet Unit Weight [(e * 3.8095)/c]: 123.6 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	919.9 gms	k. Wet Weight Soil + Tare:	942.6 gms
f. Wet Weight Soil + Tare:	919.9 gms	l. Dry Weight Soil + Tare:	786.4 gms
g. Dry Weight Soil + Tare:	786.4 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	19.9 %
l. Moisture Content [(f-g)/(g-h)]*100	17.0 %		
j. Unit Dry Wt. [d/l + (l/100)]	105.6 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
12/14/2023	11:46		0.00	25.00					
12/14/2023	11:48	120	0.60	24.40	0.60	0.60	22	0.953	8.81E-06
12/14/2023	11:52	240	1.80	23.20	1.20	1.20	22	0.953	8.92E-06
12/14/2023	11:57	300	3.20	21.80	1.40	1.40	22	0.953	8.47E-06
12/14/2023	12:12	900	7.20	17.80	4.00	4.00	22	0.953	8.39E-06
12/14/2023	13:00	2880	18.50	7.50	11.30	10.30	22	0.953	7.95E-06
								AVERAGE	8.51E-06

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	919	Sample Date:	12/11/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Gray Fat Clay with Sand		
Type of Structure:	1st Lift of General Fill for Clay Cap		
Sample Location:	SF-61, Grid Location S.0/23.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A19		112.3	51.4	30.08		74.1
-40	A19		112.3	33.29	30.08		96.1

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C48	25.21	18.65	30	6.23	52.8	54
2	C46	21.29	16.07	30	6.19	52.8	54
3							
						Liquid Limit	**54**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C37	19.2	16.81	6.13	2.39	22
2	C19	22.13	19.22	6.17	2.91	22
					Plastic Limit	**22**

Plasticity Index - Tex-106-E

Plasticity Index:	**32**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Craig Moore	12/26/23
TX105	Craig Moore	12/26/23
TX106	Craig Moore	12/26/23

Completed Date:	Reviewed By:
12/26/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/11/23	No. of Sps Del. On This Date	3
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid LocationS.0- 23.0	Lab Start Date:	12/20/23
Material:	Brown & Gray Fat Clay with Sand	Lab Completion Date:	12/27/23
Sample Location:	SF-61	Technician	Anthony Muzny
Lab #:	919	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	1
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	5.29 in	b. Avg. Diameter of Specimen:	2.826 in.
c. Sample Volume: (0.7854 * b^2 * a):	33.187 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	115.3 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	1004.8 gms	k. Wet Weight Soil + Tare:	1046.6 gms
f. Wet Weight Soil + Tare:	1004.8 gms	l. Dry Weight Soil + Tare:	793.8 gms
g. Dry Weight Soil + Tare:	793.8 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	31.8 %
l. Moisture Content [(f-g)/(g-h)]*100	26.6 %		
j. Unit Dry Wt. [d/l + (l/100)]	91.1 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
12/26/2023	6:19		0.00	25.00					
12/26/2023	13:08	24540	1.00	24.00	1.00	1.00	22	0.953	7.68E-08
12/26/2023	15:28	8400	1.30	23.70	0.30	0.30	22	0.953	6.79E-08
12/27/2023	6:01	52380	3.10	21.90	1.80	1.80	22	0.953	6.63E-08
12/27/2023	15:25	33840	4.20	20.80	1.10	1.10	22	0.953	6.40E-08
12/28/2023	6:15	53400	5.90	19.10	1.70	1.70	22	0.953	6.39E-08
								AVERAGE	6.78E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	920	Sample Date:	12/20/2023
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Sandy Lean Clay		
Type of Structure:	1st Lift of General Fill for Clay Cap		
Sample Location:	SF-62, Grid Location S.5/24.5		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A14		134.71	80.84	30.27		51.6
-40	A14		134.71	36.22	30.27		94.3

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C10	21.49	17.2	25	6.17	38.9	39
2	C12	17.36	14.26	25	6.18	38.4	38
3							
						Liquid Limit	**39**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C35	40.34	36.16	6.17	4.18	14
2	C53	39.35	35.04	6.18	4.31	15
					Plastic Limit	**15**

Plasticity Index - Tex-106-E

Plasticity Index:	**24**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Roy Robinson	12/29/23
TX105	Roy Robinson	12/29/23
TX106	Roy Robinson	12/29/23

Completed Date:	Reviewed By:
12/29/23	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/11/23	No. of Sps Del. On This Date	3
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location S.5/24.5	Lab Start Date:	12/21/23
Material:	Brown & Tan Sandy Lean Clay	Lab Completion Date:	12/27/23
Sample Location:	SF- 62	Technician	Anthony Muzny
Lab #:	920	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	2
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	3.61 in	b. Avg. Diameter of Specimen:	2.845 in.
c. Sample Volume: (0.7854 * b^2 * a):	22.974 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	127.4 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	768.5 gms	k. Wet Weight Soil + Tare:	811.5 gms
f. Wet Weight Soil + Tare:	768.5 gms	l. Dry Weight Soil + Tare:	679.2 gms
g. Dry Weight Soil + Tare:	679.2 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	19.5 %
l. Moisture Content [(f-g)/(g-h)]*100	13.1 %		
j. Unit Dry Wt. [d/l + (l/100)]	112.6 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
12/26/2023	6:19		0.00	25.00					
12/26/2023	7:08	2940	2.00	23.00	2.00	2.00	22	0.953	8.70E-07
12/26/2023	8:13	3900	4.50	20.50	2.50	2.50	22	0.953	8.45E-07
12/26/2023	10:03	6600	8.40	16.60	3.90	3.90	22	0.953	8.16E-07
12/26/2023	12:25	8520	13.10	11.90	4.70	4.70	22	0.953	8.14E-07
12/26/2023	15:11	9960	18.10	6.90	5.00	5.00	22	0.953	8.02E-07
								AVERAGE	8.29E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	921	Sample Date:	12/11/2023
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Tan & Brown Sandy Lean Clay		
Type of Structure:	1st Lift of General Fill for Clay Cap		
Sample Location:	SF-63, Grid Location V.0/23.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A34		129.48	78.02	30.27		51.9
-40	A34		129.48	36.2	30.27		94.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C40	20.12	16.37	26	6.37	37.5	38
2	C45	18.84	15.38	26	6.17	37.6	38
3							
						Liquid Limit	**38**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C61	37.12	32.36	6.2	4.76	18
2	C63	38.56	33.63	6.17	4.93	18
					Plastic Limit	**18**

Plasticity Index - Tex-106-E

Plasticity Index:	**20**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	01/05/24
TX105	Taavon Purdie	01/05/24
TX106	Taavon Purdie	01/05/24

Completed Date:	Reviewed By:
01/05/24	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/06/23	No. of Sps Del. On This Date	3
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location V.0/23.0	Lab Start Date:	12/27/23
Material:	Tan & Brown Sandy Lean Clay	Lab Completion Date:	1/4/23
Sample Location:	SF-63	Technician	Anthony Muzny
Lab #:	921	Lift	1st Lift
Sample Orientation	H _____ V ___X__	Spl.	3
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	3.42 in	b. Avg. Diameter of Specimen:	2.814 in.
c. Sample Volume: (0.7854 * b^2 * a):	21.257 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	112.4 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	627.2 gms	k. Wet Weight Soil + Tare:	647.2 gms
f. Wet Weight Soil + Tare:	627.2 gms	l. Dry Weight Soil + Tare:	485.4 gms
g. Dry Weight Soil + Tare:	485.4 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	33.3 %
l. Moisture Content [(f-g)/(g-h)]*100	29.2 %		
j. Unit Dry Wt. [d/l + (l/100)]	87.0 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
1/2/2024	6:05		0.00	25.00					
1/2/2024	8:05	7200	1.00	24.00	1.00	1.00	22	0.953	1.70E-07
1/2/2024	15:16	25860	3.20	21.80	2.20	2.20	22	0.953	1.07E-07
1/3/2024	6:22	54360	7.20	17.80	4.00	4.00	22	0.953	9.65E-08
1/3/2024	15:02	31200	9.30	15.70	2.10	2.10	22	0.953	9.23E-08
1/4/2024	6:45	56580	12.90	12.10	3.60	3.60	22	0.953	9.12E-08
								AVERAGE	1.11E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	932	Sample Date:	12/15/2023
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Juan Vasquez	Method: **A,B,C**	
Material Description:	Brown & Gray Sandy Lean Clay		
Type of Structure:	2nd Lift of General Fill for Clay Cap		
Sample Location:	SF-64, Grid Location R.0/20.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A87		149.62	80.43	30.55		58.1
-40	A87		149.62	35.03	30.55		96.2

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C44	20.07	16.74	28	6.2	31.6	32
2	C47	18.41	15.5	28	6.16	31.2	32
3							
						Liquid Limit	**32**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C23	40.36	35.89	6.15	4.47	15
2	C29	40.1	35.66	6.16	4.44	15
					Plastic Limit	**15**

Plasticity Index - Tex-106-E

Plasticity Index:	**17**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Rick Garcia	01/04/24
TX105	Rick Garcia	01/04/24
TX106	Rick Garcia	01/04/24

Completed Date:	Reviewed By:
01/04/24	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/15/23	No. of Sps Del. On This Date	3
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location SF-64	Lab Start Date:	12/28/23
Material:	Brown & Gray Sandy Lean Clay	Lab Completion Date:	1/2/24
Sample Location:	R.0/20.0	Technician	Craig Moore
Lab #:	932	Lift	2nd Lift
Sample Orientation	H _____ V ___X__	Spl.	1
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	2.94 in	b. Avg. Diameter of Specimen:	2.823 in.
c. Sample Volume: (0.7854 * b^2 * a):	18.389 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	128.2 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	618.9 gms	k. Wet Weight Soil + Tare:	638.0 gms
f. Wet Weight Soil + Tare:	618.9 gms	l. Dry Weight Soil + Tare:	542.4 gms
g. Dry Weight Soil + Tare:	542.4 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	17.6 %
l. Moisture Content [(f-g)/(g-h)]*100	14.1 %		
j. Unit Dry Wt. [d/l + (l/100)]	112.4 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
1/2/2024	7:20		0.00	25.00					
1/2/2024	8:07	2820	3.00	22.00	3.00	3.00	22	0.953	1.13E-06
1/2/2024	8:45	2280	5.20	19.80	2.20	2.20	22	0.953	1.06E-06
1/2/2024	11:19	9240	12.50	12.50	7.30	7.30	22	0.953	9.35E-07
1/2/2024	12:36	4620	15.70	9.30	3.20	3.20	22	0.953	8.90E-07
1/2/2024	13:52	4560	18.50	6.50	2.80	2.80	22	0.953	8.31E-07
								AVERAGE	9.70E-07

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	933	Sample Date:	12/15/2023
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Juan Vasquez	Method: **A,B,C**	
Material Description:	Brown & Gray Sandy Lean Clay		
Type of Structure:	2nd Lift of General fill for Clay Cap		
Sample Location:	SF-65, Grid Location S.0/23.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A30		152.43	81.32	29.89		58.0
-40	A30		152.43	55.57	29.89		79.0

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C14	19.6	16.38	26	6.21	31.7	32
2	C8	22.63	18.72	26	6.18	31.2	31
3							
						Liquid Limit	**32**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C55	42.75	37.63	6.19	5.12	16
2	C53	44.69	39.48	6.18	5.21	16
					Plastic Limit	**16**

Plasticity Index - Tex-106-E

Plasticity Index:	**16**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Roy Robinson	01/03/24
TX105	Roy Robinson	01/03/24
TX106	Roy Robinson	01/03/24

Completed Date:	Reviewed By:
01/03/24	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/15/23	No. of Sps Del. On This Date	3
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location S.0/23.0	Lab Start Date:	12/28/23
Material:	Brown & Gray Sandy Lean Clay	Lab Completion Date:	1/3/24
Sample Location:	SF-65	Technician	Craig Moore
Lab #:	933	Lift	2nd Lift
Sample Orientation	H _____ V ___X__	Spl.	2
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	3.55 in	b. Avg. Diameter of Specimen:	2.821 in.
c. Sample Volume: (0.7854 * b^2 * a):	22.157 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	130.0 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	755.9 gms	k. Wet Weight Soil + Tare:	775.1 gms
f. Wet Weight Soil + Tare:	755.9 gms	l. Dry Weight Soil + Tare:	663.7 gms
g. Dry Weight Soil + Tare:	663.7 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	16.8 %
l. Moisture Content [(f-g)/(g-h)]*100	13.9 %		
j. Unit Dry Wt. [d/l + (l/100)]	114.1 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
1/2/2024	5:59		0.00	25.00					
1/2/2024	9:25	12360	1.00	24.00	1.00	1.00	22	0.953	1.02E-07
1/2/2024	11:20	6900	1.50	23.50	0.50	0.50	22	0.953	9.27E-08
1/2/2024	15:37	15420	2.60	22.40	1.10	1.10	22	0.953	9.23E-08
1/3/2024	6:11	52440	6.10	18.90	3.50	3.50	22	0.953	8.92E-08
1/3/2024	12:56	24300	7.60	17.40	1.50	1.50	22	0.953	8.56E-08
								AVERAGE	9.24E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	934	Sample Date:	12/15/2023
Test Number:	3	Field Contact:	Philip Cadarette
Project #:	62063	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Juan Vasquez	Method: **A,B,C**	
Material Description:	Brown Clayey Sand		
Type of Structure:	2nd Lift of General Fill for Clay Cap		
Sample Location:	SF-66, Grid Location V.0/21.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A67		145.77	95.25	30.38		43.8
-40	A67		145.77	33.41	30.38		97.4

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C16	34.94	28.83	21	6.2	27.0	26
2	C18	33.71	27.93	23	6.17	26.6	26
3							
						Liquid Limit	**26**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C20	29.88	26.76	6.2	3.12	15
2	C19	28.28	25.35	6.17	2.93	15
					Plastic Limit	**15**

Plasticity Index - Tex-106-E

Plasticity Index:	**11**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Taavon Purdie	01/05/24
TX105	Taavon Purdie	01/05/24
TX106	Taavon Purdie	01/05/24

Completed Date:	Reviewed By:
01/05/24	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	12/15/23	No. of Sps Del. On This Date	3
Project:	TMPA Site F Landfill Closure	Project No.:	62063
Location:	Grid Location V.0/21.0	Lab Start Date:	1/2/23
Material:	Brown Clayey Sand	Lab Completion Date:	1/4/23
Sample Location:	SF- 66	Technician	Craig Moore
Lab #:	934	Lift	2nd Lift
Sample Orientation	H _____ V ___X__	Spl.	3
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	2.90 in	b. Avg. Diameter of Specimen:	2.719 in.
c. Sample Volume: (0.7854 * b^2 * a):	16.850 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	116.2 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	513.8 gms	k. Wet Weight Soil + Tare:	534.7 gms
f. Wet Weight Soil + Tare:	513.8 gms	l. Dry Weight Soil + Tare:	454.1 gms
g. Dry Weight Soil + Tare:	454.1 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	17.8 %
l. Moisture Content [(f-g)/(g-h)]*100	13.2 %		
j. Unit Dry Wt. [d/l + (l/100)]	102.7 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
1/3/2024	8:32		0.00	25.00					
1/3/2024	8:41	540	1.00	24.00	1.00	1.00	22	0.953	2.07E-06
1/3/2024	8:56	900	2.50	22.50	1.50	1.50	22	0.953	1.89E-06
1/3/2024	9:11	900	3.50	21.50	1.00	1.00	22	0.953	1.28E-06
1/3/2024	9:40	1740	5.00	20.00	1.50	1.50	22	0.953	1.01E-06
1/3/2024	10:05	1500	6.20	18.80	1.20	1.20	22	0.953	9.59E-07
								AVERAGE	1.44E-06

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	51	Sample Date:	2/1/2024
Test Number:	1	Field Contact:	Philip Cadarette
Project #:	63158	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Tan Sandy Fat Clay		
Type of Structure:	Subgrade for Clay Cap		
Sample Location:	SF-67, Grid Location V.0/9.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A79		108.63	56.88	30.28		66.0
-40	A79		108.63	32.2	30.28		97.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C20	20.53	15.59	23	6.2	52.6	52
2	C81	18.71	14.35	23	6.01	52.3	52
3							
						Liquid Limit	**52**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C21	41.53	34.95	6.15	6.58	23
2	C22	42.72	35.64	6.17	7.08	24
					Plastic Limit	**24**

Plasticity Index - Tex-106-E

Plasticity Index:	**28**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Rick Garcia	02/06/24
TX105	Rick Garcia	02/06/24
TX106	Rick Garcia	02/06/24

Completed Date:	Reviewed By:
02/06/24	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	02/01/24	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	63158
Location:	Grid Location V.0/9.0	Lab Start Date:	2/12/24
Material:	Brown & Tan Sandy Fat Clay	Lab Completion Date:	2/14/24
Sample Location:	SF-67	Technician	Craig Moore
Lab #:	51	Lift	Subgrade
Sample Orientation	H _____ V ___X__	Spl.	1
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	5.60 in	b. Avg. Diameter of Specimen:	2.834 in.
c. Sample Volume: (0.7854 * b^2 * a):	35.325 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	118.3 pcf

INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	1097.0 gms	k. Wet Weight Soil + Tare:	1114.4 gms
f. Wet Weight Soil + Tare:	1097.0 gms	l. Dry Weight Soil + Tare:	872.3 gms
g. Dry Weight Soil + Tare:	872.3 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	27.8 %
l. Moisture Content [(f-g)/(g-h)]*100	25.8 %		
j. Unit Dry Wt. [d/l + (l/100)]	94.1 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3
DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
2/12/2024	7:47		0.00	25.00					
2/12/2024	14:33	24360	1.00	24.00	1.00	1.00	22	0.953	8.14E-08
2/13/2024	6:55	58920	3.50	21.50	2.50	2.50	22	0.953	8.62E-08
2/13/2024	14:35	27600	4.60	20.40	1.10	1.10	22	0.953	8.30E-08
2/14/2024	6:01	55560	6.70	18.30	2.10	2.10	22	0.953	8.06E-08
2/14/2024	15:15	33240	7.90	17.10	1.20	1.20	22	0.953	7.88E-08
								AVERAGE	8.20E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a

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ATTERBERG LIMITS
Tex-104-E, Tex-105-E, Tex-106-E, ASTM C136

LAB #:	52	Sample Date:	2/1/2024
Test Number:	2	Field Contact:	Philip Cadarette
Project #:	63158	PI requirements:	
Represents Soils from:	0-6" B.E.G.S.	Procedure: **STD MOD TEX**	
Sampled By:	Anthony Muzny	Method: **A,B,C**	
Material Description:	Brown & Gray Fat Clay with Sand		
Type of Structure:	Subgrade for Clay Cap		
Sample Location:	SF-68, Grid Location V.0/12.0		
Project Name:	TMPA Site F Landfill Closure		
Requested by:	Philip Cadarette	With:	JBS

Course\Lift:		Station:		Distance From Center Line:	

Sieve Analysis - ASTM C136

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Mass of Washed Dry Sample + Tare (g)	Tare Mass (g)	Moisture Content (%)	Passing (%)
-200	A38		95.42	49.46	30.34		70.6
-40	A38		95.42	33.28	30.34		95.5

Liquid Limit - Tex-104-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Number of Blows	Tare Mass (g)	Moisture Content (%)	Liquid Limit (%)
1	C23	19.83	14.97	26	6.15	55.1	55
2	C27	21.1	15.79	26	6.21	55.4	56
3							
						Liquid Limit	**56**

Plastic Limit - Tex-105-E

	Dish No.	Mass of Wet Sample + Tare (g)	Mass of Dry Sample + Tare (g)	Tare Mass (g)	Mass of Water (g)	Plastic Limit (%)
1	C28	38.98	32.92	6.16	6.06	23
2	C29	41.01	34.52	6.16	6.49	23
					Plastic Limit	**23**

Plasticity Index - Tex-106-E

Plasticity Index:	**33**
Use Bar Linear Shrinkage to Calculate Plasticity Index?	

Remarks:

Test Method:	Tested By:	Tested Date:
TX104	Rick Garcia	02/06/24
TX105	Rick Garcia	02/06/24
TX106	Rick Garcia	02/06/24

Completed Date:	Reviewed By:
02/06/24	Craig Moore

HYDRAULIC CONDUCTIVITY WORKSHEET

FALLING HEAD, RISING TAILWATER - FLEXIBLE WALL PERMEAMETER

Date Del.	02/01/24	No. of Sps Del. On This Date	2
Project:	TMPA Site F Landfill Closure	Project No.:	63158
Location:	Grid Location V.0/12.0	Lab Start Date:	2/20/24
Material:	Brown & Gray Fat Clay with Sand	Lab Completion Date:	2/23/24
Sample Location:	SF-68	Technician	Craig Moore
Lab #:	52	Lift	Subgrade
Sample Orientation	H _____ V ___X__	Spl.	2
Sample Designation:		Perm Fluid Used:	De-aired Tap Water

a. Length of Specimen, L:	5.35 in	b. Avg. Diameter of Specimen:	2.776 in.
c. Sample Volume: (0.7854 * b^2 * a):	32.368 cu. in.	d. Wet Unit Weight [(e * 3.8095)/c]:	115.2 pcf

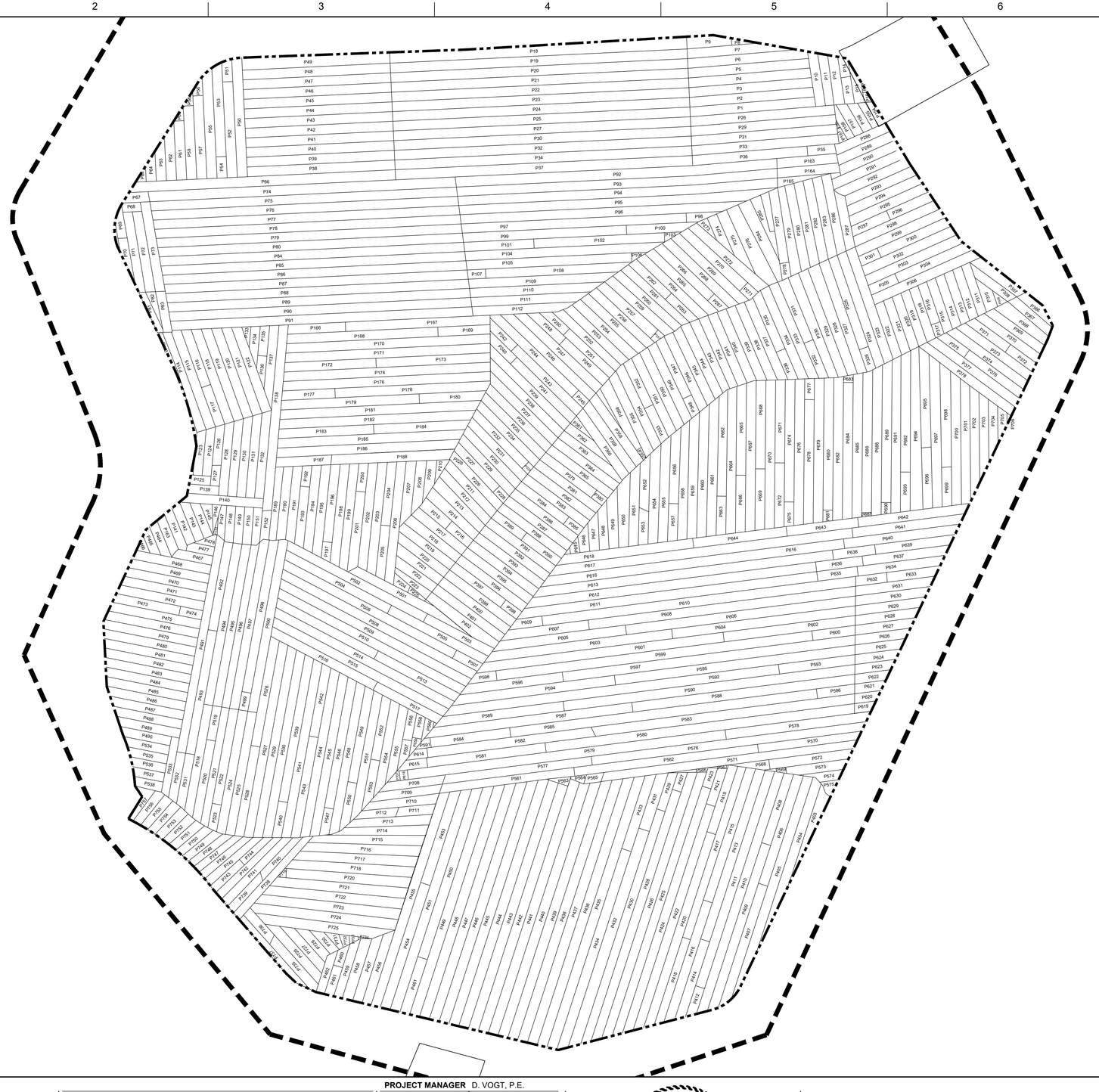
INITIAL CONDITIONS		FINAL CONDITIONS	
e. Wet Weight Soil:	979.1 gms	k. Wet Weight Soil + Tare:	992.5 gms
f. Wet Weight Soil + Tare:	979.1 gms	l. Dry Weight Soil + Tare:	732.6 gms
g. Dry Weight Soil + Tare:	732.6 gms	m. Tare Weight:	0.0 gms
h. Tare Weight:	0.0 gms	n. Moisture Content [(k-l)/(l-m)]*100	35.5 %
l. Moisture Content [(f-g)/(g-h)]*100	33.6 %		
j. Unit Dry Wt. [d/l + (l/100)]	86.2 pcf		

B COEFFICIENT DETERMINATION						PRESSURE, psi			
DATE	P3	DELTA PRESSURE	BACK PRESSURE bp	PORE PRESSURE	B COEFF.	TRAIL	P3 cp	Inflow ha in	Outflow ha out
							10	5	3

DATE	TIME	DELTA t sec	INFLOW Vin, cc	OUTFLOW Vout, cc	DELTA in cc	DELTA out cc	TEMP C	Rt	k @ 20C cm/sec
2/20/2024	6:04		0.00	25.00					
2/20/2024	15:26	33720	1.00	24.00	1.00	1.00	22	0.953	5.85E-08
2/21/2024	6:58	55920	2.50	22.50	1.50	1.50	22	0.953	5.38E-08
2/21/2024	15:36	31080	3.30	21.70	0.80	0.80	22	0.953	5.25E-08
2/22/2024	6:15	52740	4.60	20.40	1.30	1.30	22	0.953	5.10E-08
2/22/2024	16:01	35160	5.40	19.60	0.80	0.80	22	0.953	4.78E-08
								AVERAGE	5.27E-08

Pipet Area: 0.877 sq cm Pipet Volume, Vp: 25 cc Pipet Length, Lp: 28.5 cm

Test Method: ASTM D 5084-16a



THIS RECORD DRAWING IS A COMPILATION OF THE SEALED ENGINEERING DRAWINGS FOR THIS PROJECT, MODIFIED BY ADDENDA AND CHANGE ORDERS, INFORMATION BY THE CONTRACTOR OR OTHER, NOT ASSOCIATED WITH THE DESIGN ENGINEER, CANNOT BE VERIFIED FOR ACCURACY OR COMPLETENESS. THE ORIGINAL SEALED DRAWINGS ARE ON FILE AT THE OFFICES OF LUMINANT.

HDR
Firm Registration No. F-754

17111 Preston Road, Suite 300
Dallas, Texas 75248-1229
972.960.4400

ISSUE	DATE	DESCRIPTION
A	01/31/2025	AS-CONSTRUCTED DRAWINGS

PROJECT MANAGER D. VOGT, P.E.

PROJECT NUMBER 10290148

STATE OF TEXAS
DAVID C. VOGT
93905
LICENSED
PROFESSIONAL ENGINEER
June 5, 2025

633

Gibbons Creek Environmental Redevelopment Group, LLC

SITE F LANDFILL CLOSURE
Anderson, Texas

GEOMEMBRANE PANEL LAYOUT AS-BUILT

0 1" 2"

FILENAME SITE LAYOUT AS-BUILT.dwg

SCALE 1"=130'

SHEET GEOMEMBRANE PANEL AS-BUILT

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
7/11/2022	P-1	3995	232	22	5,104
7/11/2022	P-2	3995	232	22	5,104
7/11/2022	P-3	4056	232	22	5,104
7/11/2022	P-4	4056	232	22	5,104
7/11/2022	P-5	4056	232	22	5,104
7/11/2022	P-6	3995	232	22	5,104
7/11/2022	P-7	4089	184	22	4,048
7/11/2022	P-8	4089	50	7	350
7/11/2022	P-9	4089	108	22	2,376
7/11/2022	P-10	4089	126	22	2,772
7/11/2022	P-11	4089	120	22	2,640
7/11/2022	P-12	4089	112	22	2,464
7/11/2022	P-13	4089	54	22	1,188
7/11/2022	P-14	4089	46	22	1,012
7/11/2022	P-15	4054	81	22	1,782
7/11/2022	P-16	4054	48	22	1,056
7/11/2022	P-17	4054	20	7	140
7/12/2022	P-18	4071	710	22	15,620
7/12/2022	P-19	4068	710	22	15,620
7/12/2022	P-20	4087	710	22	15,620
7/12/2022	P-21	4060	710	22	15,620
7/12/2022	P-22	4081	710	22	15,620
7/12/2022	P-23	4010	710	22	15,620
7/12/2022	P-24	4076	710	22	15,620
7/12/2022	P-25	4078	710	22	15,620
7/13/2022	P-26	4054	279	22	6,138

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
7/13/2022	P-27	4070	710	22	15,620
7/13/2022	P-28	4054	225	22	4,950
7/13/2022	P-29	4073	54	22	1,188
7/13/2022	P-30	4080	710	22	15,620
7/15/2022	P-31	4073	278	22	6,116
7/15/2022	P-32	4074	703	22	15,466
7/15/2022	P-33	4073	278	22	6,116
7/15/2022	P-34	4073	703	22	15,466
7/15/2022	P-35	4073	87	22	1,914
7/15/2022	P-36	4063	191	22	4,202
7/15/2022	P-37	4079	703	22	15,466
7/18/2022	P-38	4069	347	22	7,634
7/18/2022	P-39	4069	347	22	7,634
7/18/2022	P-40	4067	347	22	7,634
7/18/2022	P-41	4067	347	22	7,634
7/18/2022	P-42	4066	347	22	7,634
7/18/2022	P-43	4066	347	22	7,634
7/18/2022	P-44	4038	347	22	7,634
7/18/2022	P-45	4038	347	22	7,634
7/18/2022	P-46	4040	347	22	7,634
7/18/2022	P-47	4040	347	22	7,634
7/18/2022	P-48	4037	347	22	7,634
7/18/2022	P-49	4037	347	22	7,634
7/18/2022	P-50	4063	252	22	5,544
7/19/2022	P-51	4063	63	22	1,386
7/19/2022	P-52	4065	186	22	4,092

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
7/19/2022	P-53	4063	187	22	4,114
7/19/2022	P-54	4065	50	22	1,100
7/19/2022	P-55	4065	222	22	4,884
7/19/2022	P-56	4065	31	22	682
7/19/2022	P-57	4065	164	22	3,608
7/19/2022	P-58	4065	34	11	374
7/19/2022	P-59	4063	147	22	3,234
7/19/2022	P-60	4063	33	11	363
7/19/2022	P-61	4063	118	22	2,596
7/19/2022	P-62	4063	104	22	2,288
7/19/2022	P-63	4063	74	22	1,628
7/19/2022	P-64	4063	44	22	968
7/19/2022	P-65	4063	33	11	363
9/15/2022	P-66	4053	586	22	12,892
9/19/2022	P-67	4053	48	22	1,056
9/19/2022	P-68	4053	43	22	946
9/19/2022	P-69	4046	55	22	1,210
9/19/2022	P-70	4044	92	22	2,024
9/19/2022	P-71	4046	195	22	4,290
9/19/2022	P-72	4046	195	22	4,290
9/19/2022	P-73	4046	207	22	4,554
9/19/2022	P-74	4048	703	22	15,466
9/20/2022	P-75	2042	705	22	15,510
9/20/2022	P-76	4042	705	22	15,510
9/20/2022	P-77	4075	705	22	15,510
9/20/2022	P-78	4077	705	22	15,510

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
9/20/2022	P-79	3994	705	22	15,510
9/20/2022	P-80	3808	705	22	15,510
9/20/2022	P-81	4044	705	22	15,510
9/20/2022	P-82	4044	705	11	7,755
9/20/2022	P-83	4044	705	22	15,510
9/21/2022	P-84	3996	697	22	15,334
9/21/2022	P-85	4017	697	22	15,334
9/21/2022	P-86	4041	697	22	15,334
9/21/2022	P-87	4057	697	22	15,334
9/21/2022	P-88	3816	697	22	15,334
9/21/2022	P-89	4086	697	22	15,334
9/22/2022	P-90	4088	697	22	15,334
9/22/2022	P-91	4059	697	22	15,334
9/28/2022	P-92	4005	693	22	15,246
9/28/2022	P-93	4082	693	22	15,246
9/28/2022	P-94	3804	693	22	15,246
9/28/2022	P-95	3806	693	22	15,246
9/29/2022	P-96	4018	618	22	13,596
9/29/2022	P-97	4018	528	22	11,616
9/29/2022	P-98	3812	48	22	1,056
9/29/2022	P-99	4024	381	22	8,382
9/29/2022	P-100	4018	149	22	3,278
9/29/2022	P-101	4024	165	22	3,630
9/29/2022	P-102	4024	291	22	6,402
9/29/2022	P-103	4018	44	11	484
9/29/2022	P-104	4055	434	22	9,548

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
9/30/2022	P-105	4031	365	22	8,030
9/30/2022	P-106	4055	38	22	836
9/30/2022	P-107	3809	42	11	462
9/30/2022	P-108	4031	310	22	6,820
9/30/2022	P-109	3809	319	22	7,018
9/30/2022	P-110	3809	285	22	6,270
9/30/2022	P-111	4035	263	22	5,786
9/30/2022	P-112	4035	210	22	4,620
12/1/2022	P-113	4007	98	22	2,156
12/1/2022	P-114	4007	247	22	5,434
12/1/2022	P-115	4007	140	22	3,080
12/1/2022	P-116	4007	139	22	3,058
12/1/2022	P-117	4027	95	22	2,090
12/1/2022	P-118	4027	237	22	5,214
12/1/2022	P-119	4027	233	22	5,126
12/1/2022	P-120	4045	229	22	5,038
12/1/2022	P-121	4045	214	22	4,708
12/1/2022	P-122	4045	212	22	4,664
12/4/2022	P-123	4035	121	22	2,662
12/4/2022	P-124	4027	121	22	2,662
12/4/2022	P-125	4007	50	22	1,100
12/4/2022	P-126	4035	107	22	2,354
12/4/2022	P-127	4020	73	22	1,606
12/4/2022	P-128	4020	157	22	3,454
12/4/2022	P-129	4020	183	22	4,026
12/4/2022	P-130	4020	196	22	4,312

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
12/4/2022	P-131	3879	209	22	4,598
12/4/2022	P-132	3879	220	22	4,840
12/5/2022	P-133	3879	54	11	594
12/5/2022	P-134	3879	88	22	1,936
12/5/2022	P-135	3879	86	22	1,892
12/5/2022	P-136	3879	50	22	1,100
12/5/2022	P-137	3879	181	22	3,982
12/5/2022	P-138	4036	445	22	9,790
12/7/2022	P-139	4039	78	22	1,716
12/7/2022	P-140	4039	189	22	4,158
12/7/2022	P-141	4039	83	22	1,826
12/7/2022	P-142	4039	87	22	1,914
12/7/2022	P-143	4039	78	22	1,716
12/7/2022	P-144	4039	66	22	1,452
12/7/2022	P-145	4039	55	22	1,210
12/7/2022	P-146	4039	52	11	572
12/7/2022	P-147	4021	71	22	1,562
12/7/2022	P-148	4021	71	22	1,562
12/7/2022	P-149	4021	77	22	1,694
12/7/2022	P-150	4021	83	22	1,826
12/7/2022	P-151	4021	83	22	1,826
12/7/2022	P-152	4021	75	22	1,650
12/7/2022	P-153	4021	23	11	253
12/8/2022	P-154	2591	98	22	2,156
12/8/2022	P-155	2591	101	22	2,222
12/8/2022	P-156	2591	107	22	2,354

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
12/8/2022	P-157	2591	113	22	2,486
12/8/2022	P-158	2591	74	22	1,628
12/8/2022	P-159	4030	47	22	1,034
12/8/2022	P-160	4030	20	6	120
12/8/2022	P-161	4030	83	22	1,826
12/8/2022	P-162	4030	20	8	160
12/8/2022	P-163	4030	150	22	3,300
12/8/2022	P-164	4030	160	22	3,520
12/8/2022	P-165	4030	170	22	3,740
12/16/2022	P-166	4030	144	22	3,168
12/16/2022	P-167	3912	320	22	7,040
12/16/2022	P-168	3912	367	22	8,074
12/16/2022	P-169	4049	111	22	2,442
12/16/2022	P-170	4049	487	22	10,714
12/16/2022	P-171	3871	489	22	10,758
12/17/2022	P-172	3871	208	22	4,576
12/17/2022	P-173	4004	276	22	6,072
12/17/2022	P-174	4004	420	22	9,240
12/17/2022	P-175	4051	68	22	1,496
12/17/2022	P-176	4051	490	22	10,780
12/17/2022	P-177	4051	123	22	2,706
12/17/2022	P-178	4025	373	22	8,206
1/6/2023	P-179	4025	326	22	7,172
1/6/2023	P-180	3919	153	22	3,366
1/6/2023	P-181	3919	469	22	10,318
1/6/2023	P-182	3898	457	22	10,054

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
1/6/2023	P-183	3898	226	22	4,972
1/6/2023	P-184	3850	223	22	4,906
1/6/2023	P-185	3850	425	22	9,350
1/6/2023	P-186	3845	413	22	9,086
1/6/2023	P-187	3845	130	22	2,860
1/6/2023	P-188	3845	278	22	6,116
1/11/2023	P-189	3845	157	22	3,454
1/11/2023	P-190	4039	162	22	3,564
1/11/2023	P-191	4039	166	22	3,652
1/11/2023	P-192	4039	48	22	1,056
1/11/2023	P-193	4015	129	22	2,838
1/11/2023	P-194	4015	138	22	3,036
1/11/2023	P-195	4015	195	22	4,290
1/11/2023	P-196	4015	159	22	3,498
1/11/2023	P-197	3894	50	22	1,100
1/11/2023	P-198	3894	217	22	4,774
1/11/2023	P-199	3894	226	22	4,972
1/11/2023	P-200	3893	65	22	1,430
1/11/2023	P-201	3894	169	22	3,718
1/13/2023	P-202	3894	244	22	5,368
1/13/2023	P-203	3894	258	22	5,676
1/13/2023	P-204	3894	148	22	3,256
1/13/2023	P-205	3887	134	22	2,948
1/13/2023	P-206	3887	290	22	6,380
1/13/2023	P-207	3887	101	22	2,222
1/13/2023	P-208	3887	84	22	1,848

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
1/13/2023	P-209	3887	52	22	1,144
1/13/2023	P-210	3823	38	11	418
1/13/2023	P-211	3823	140	22	3,080
1/13/2023	P-212	3823	138	22	3,036
1/13/2023	P-213	3823	138	22	3,036
1/13/2023	P-214	3823	139	22	3,058
1/13/2023	P-215	3823	73	22	1,606
1/13/2023	P-216	3824	68	22	1,496
1/13/2023	P-217	3824	144	22	3,168
1/13/2023	P-218	3824	148	22	3,256
1/13/2023	P-219	3824	145	22	3,190
1/13/2023	P-220	3824	134	22	2,948
1/13/2023	P-221	3813	120	22	2,640
1/13/2023	P-222	3813	104	22	2,288
1/13/2023	P-223	3813	87	22	1,914
1/13/2023	P-224	3813	30	22	660
1/13/2023	P-225	4008	41	22	902
1/14/2023	P-226	4008	158	22	3,476
1/14/2023	P-227	4008	110	22	2,420
1/14/2023	P-228	4003	50	22	1,100
1/14/2023	P-229	4003	162	22	3,564
1/14/2023	P-230	4003	163	22	3,586
1/14/2023	P-231	4003	165	22	3,630
1/14/2023	P-232	4003	153	22	3,366
1/14/2023	P-233	3892	13	22	286
1/14/2023	P-234	3892	168	22	3,696

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
1/14/2023	P-235	3892	170	22	3,740
1/14/2023	P-236	3892	171	22	3,762
1/17/2023	P-237	4006	205	22	4,510
1/17/2023	P-238	4006	220	22	4,840
1/17/2023	P-239	4006	212	22	4,664
1/17/2023	P-240	4066	30	22	660
1/17/2023	P-241	3875	24	22	528
1/17/2023	P-242	4006	30	22	660
1/17/2023	P-243	3875	255	22	5,610
1/17/2023	P-244	3875	280	22	6,160
1/17/2023	P-245	4023	36	22	792
1/17/2023	P-246	4023	265	22	5,830
1/17/2023	P-247	4023	243	22	5,346
1/17/2023	P-248	4023	83	22	1,826
1/17/2023	P-249	3843	135	22	2,970
1/17/2023	P-250	4023	38	22	836
1/17/2023	P-251	3843	156	22	3,432
1/17/2023	P-252	3843	166	22	3,652
1/17/2023	P-253	3844	176	22	3,872
1/17/2023	P-254	3921	176	22	3,872
1/17/2023	P-255	3921	174	22	3,828
1/17/2023	P-256	3921	174	22	3,828
1/17/2023	P-257	3921	155	22	3,410
1/17/2023	P-258	3882	15	22	330
1/17/2023	P-259	3882	175	22	3,850
1/17/2023	P-260	3882	177	22	3,894

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
1/23/2023	P-261	3882	188	22	4,136
1/23/2023	P-262	3882	91	22	2,002
1/23/2023	P-263	3823	107	22	2,354
1/23/2023	P-264	3823	206	22	4,532
1/23/2023	P-265	3823	212	22	4,664
1/23/2023	P-266	3823	138	22	3,036
1/23/2023	P-267	4032	78	22	1,716
1/23/2023	P-268	4032	213	22	4,686
1/23/2023	P-269	4032	216	22	4,752
1/23/2023	P-270	4032	164	22	3,608
1/23/2023	P-271	4032	52	22	1,144
1/23/2023	P-272	4085	11	22	242
2/7/2023	P-273	4085	65	11	715
2/7/2023	P-274	4085	90	22	1,980
2/7/2023	P-275	4085	143	22	3,146
2/7/2023	P-276	4028	181	22	3,982
2/7/2023	P-277	4028	117	22	2,574
2/7/2023	P-278	4028	70	22	1,540
2/7/2023	P-279	4028	186	22	4,092
2/7/2023	P-280	4084	183	22	4,026
2/7/2023	P-281	4084	178	22	3,916
2/7/2023	P-282	4084	172	22	3,784
2/7/2023	P-283	4084	170	22	3,740
2/11/2023	P-284	4022	164	22	3,608
2/11/2023	P-285	4022	89	22	1,958
2/11/2023	P-286	4022	170	22	3,740

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/13/2023	P-287	4022	123	22	2,706
2/13/2023	P-288	4022	138	22	3,036
2/13/2023	P-289	4026	150	22	3,300
2/15/2023	P-290	4011	160	22	3,520
2/15/2023	P-291	4011	177	22	3,894
2/15/2023	P-292	4011	182	22	4,004
2/18/2023	P-293	4058	180	22	3,960
2/18/2023	P-294	4058	187	22	4,114
2/18/2023	P-295	4058	193	22	4,246
2/18/2023	P-296	4072	97	22	2,134
2/18/2023	P-297	4058	105	22	2,310
2/18/2023	P-298	4072	213	22	4,686
2/18/2023	P-299	4072	220	22	4,840
2/18/2023	P-300	4072	154	22	3,388
2/18/2023	P-301	4047	73	22	1,606
2/18/2023	P-302	4047	233	22	5,126
2/18/2023	P-303	4047	238	22	5,236
2/18/2023	P-304	4047	154	22	3,388
2/18/2023	P-305	3826	102	22	2,244
2/18/2023	P-306	3826	257	22	5,654
2/18/2023	P-307	3826	110	22	2,420
2/18/2023	P-308	3826	98	34	3,332
2/18/2023	P-309	3826	34	22	748
2/18/2023	P-310	3826	53	11	583
2/18/2023	P-311	3842	121	22	2,662
2/18/2023	P-312	3842	122	22	2,684

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/18/2023	P-313	3842	123	22	2,706
2/18/2023	P-314	3842	124	22	2,728
2/18/2023	P-315	3842	125	22	2,750
2/18/2023	P-316	3842	70	22	1,540
2/18/2023	P-317	3842	54	22	1,188
2/18/2023	P-318	3835	126	22	2,772
2/18/2023	P-319	3835	127	22	2,794
2/18/2023	P-320	3835	128	22	2,816
2/18/2023	P-321	3835	129	22	2,838
2/18/2023	P-322	3835	130	22	2,860
2/18/2023	P-323	3880	260	22	5,720
2/19/2023	P-324	3880	270	22	5,940
2/19/2023	P-325	3880	271	22	5,962
2/19/2023	P-326	9877	108	22	2,376
2/19/2023	P-327	9877	270	22	5,940
2/19/2023	P-328	9877	268	22	5,896
2/19/2023	P-329	3883	264	22	5,808
2/19/2023	P-330	3883	267	22	5,874
2/19/2023	P-331	3883	145	22	3,190
2/19/2023	P-332	3891	105	22	2,310
2/19/2023	P-333	3891	242	22	5,324
2/19/2023	P-334	3891	216	22	4,752
2/19/2023	P-335	3891	114	22	2,508
2/19/2023	P-336	4009	95	22	2,090
2/19/2023	P-337	4009	199	22	4,378
2/19/2023	P-338	4009	188	22	4,136

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/19/2023	P-339	4009	179	22	3,938
2/19/2023	P-340	3835	175	22	3,850
2/19/2023	P-341	3835	173	22	3,806
2/19/2023	P-342	3835	173	22	3,806
2/19/2023	P-343	3835	175	22	3,850
2/19/2023	P-344	3922	183	22	4,026
2/19/2023	P-345	3922	186	22	4,092
2/19/2023	P-346	3922	182	22	4,004
2/19/2023	P-347	3922	123	22	2,706
2/19/2023	P-348	3922	72	22	1,584
2/20/2023	P-349	4052	204	22	4,488
2/20/2023	P-350	4052	204	22	4,488
2/20/2023	P-351	4052	202	22	4,444
2/23/2023	P-352	4052	73	22	1,606
2/23/2023	P-353	3920	134	22	2,948
2/23/2023	P-354	3920	209	22	4,598
2/23/2023	P-355	3920	213	22	4,686
2/23/2023	P-356	3920	139	22	3,058
2/23/2023	P-357	4016	59	15	885
2/23/2023	P-358	4016	202	22	4,444
2/23/2023	R-713	4016	39	11	429
2/24/2023	P-359	4016	191	22	4,202
2/24/2023	P-360	4016	191	22	4,202
2/24/2023	P-361	4016	42	11	462
2/24/2023	P-362	4033	67	22	1,474
2/24/2023	P-363	4033	120	22	2,640

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/24/2023	P-364	4033	158	22	3,476
2/24/2023	P-365	4033	169	22	3,718
2/24/2023	P-366	4033	78	22	1,716
2/24/2023	P-367	3834	105	22	2,310
2/24/2023	P-368	3834	135	22	2,970
2/24/2023	P-369	3834	137	22	3,014
2/24/2023	P-370	3834	150	22	3,300
2/24/2023	P-371	4014	84	22	1,848
2/24/2023	P-372	3834	80	22	1,760
2/24/2023	P-373	4014	192	22	4,224
2/24/2023	P-374	4014	207	22	4,554
2/24/2023	P-375	3911	48	22	1,056
2/24/2023	P-376	4014	171	22	3,762
2/24/2023	P-377	3911	222	22	4,884
2/25/2023	P-378	3911	235	22	5,170
2/28/2023	P-379	4033	137	22	3,014
2/28/2023	P-380	3888	37	22	814
2/28/2023	P-381	3888	177	22	3,894
2/28/2023	P-382	3888	181	22	3,982
2/28/2023	P-383	3888	181	22	3,982
2/28/2023	P-384	3888	104	22	2,288
2/28/2023	P-385	4029	78	22	1,716
2/28/2023	P-386	4029	180	22	3,960
2/28/2023	P-387	4029	180	22	3,960
2/28/2023	P-388	4029	180	22	3,960
2/28/2023	P-389	4029	53	22	1,166

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/28/2023	P-390	3923	128	22	2,816
2/28/2023	P-391	3923	157	22	3,454
2/28/2023	P-392	3923	186	22	4,092
2/28/2023	P-393	3923	187	22	4,114
3/1/2023	P-394	4050	188	22	4,136
3/1/2023	P-395	4050	190	22	4,180
3/1/2023	P-396	4050	193	22	4,246
3/1/2023	P-397	4050	120	22	2,640
3/1/2023	P-398	4844	82	22	1,804
3/1/2023	P-399	3844	196	22	4,312
3/1/2023	P-400	3844	195	22	4,290
3/2/2023	P-401	3844	197	22	4,334
3/2/2023	P-402	3914	206	22	4,532
3/9/2023	P-403	3914	188	11	2,068
3/9/2023	P-404	3914	287	22	6,314
3/9/2023	P-405	3927	437	22	9,614
3/9/2023	P-406	3927	220	22	4,840
3/9/2023	P-407	3925	288	22	6,336
3/9/2023	P-408	3925	130	22	2,860
3/9/2023	P-409	3925	404	22	8,888
3/9/2023	P-410	3924	554	22	12,188
3/9/2023	P-411	3924	391	22	8,602
3/9/2023	P-412	3914	72	22	1,584
3/9/2023	P-413	3917	505	22	11,110
3/9/2023	P-414	3832	197	22	4,334
3/10/2023	P-415	4061	301	22	6,622

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
3/10/2023	P-416	3917	297	22	6,534
3/10/2023	P-417	4061	396	22	8,712
3/10/2023	P-418	3829	213	22	4,686
3/10/2023	P-419	3918	140	22	3,080
3/10/2023	P-420	3829	478	22	10,516
3/10/2023	P-421	2691	74	22	1,628
3/10/2023	P-422	3918	455	22	10,010
3/10/2023	P-423	2920	38	22	836
3/10/2023	P-424	2691	604	22	13,288
3/10/2023	P-425	2902	640	22	14,080
3/13/2023	P-426	3910	655	22	14,410
3/13/2023	P-427	3910	40	22	880
3/13/2023	P-428	3830	623	22	13,706
3/13/2023	P-429	3830	75	22	1,650
3/13/2023	P-430	3814	583	22	12,826
3/13/2023	P-431	3814	112	22	2,464
3/13/2023	P-432	3836	540	22	11,880
3/13/2023	P-433	3836	162	22	3,564
3/13/2023	P-434	3833	493	22	10,846
3/13/2023	P-435	3486	657	22	14,454
3/13/2023	P-436	3849	448	22	9,856
3/13/2023	P-437	3849	641	22	14,102
3/13/2023	P-438	3913	641	22	14,102
3/13/2023	P-439	3926	636	22	13,992
3/13/2023	P-440	2954	618	22	13,596
3/13/2023	P-441	2954	605	22	13,310

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
3/13/2023	P-442	3916	600	22	13,200
3/13/2023	P-443	3915	593	22	13,046
3/15/2023	P-444	3853	598	22	13,156
3/15/2023	P-445	3964	586	22	12,892
3/15/2023	P-446	3855	579	22	12,738
3/15/2023	P-447	3985	571	22	12,562
3/15/2023	P-448	3993	564	22	12,408
3/15/2023	P-449	3951	555	22	12,210
3/15/2023	P-450	3928	543	22	11,946
3/15/2023	P-451	3852	376	22	8,272
3/15/2023	P-452	3928	162	22	3,564
3/15/2023	P-453	3928	181	22	3,982
3/15/2023	P-454	3852	334	22	7,348
3/15/2023	P-455	3960	505	22	11,110
3/15/2023	P-456	3965	170	22	3,740
3/15/2023	P-457	3965	170	22	3,740
3/15/2023	P-458	3965	147	22	3,234
3/15/2023	P-459	3965	140	22	3,080
3/15/2023	P-460	3959	41	22	902
3/15/2023	P-461	3965	79	22	1,738
3/15/2023	P-462	3959	100	22	2,200
3/21/2023	P-463	3984	90	22	1,980
3/21/2023	P-464	3984	58	22	1,276
3/21/2023	P-465	3984	35	22	770
3/21/2023	P-466	3984	24	11	264
3/21/2023	P-467	3984	98	22	2,156

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
3/21/2023	P-468	3984	176	22	3,872
3/21/2023	P-469	3984	178	22	3,916
3/21/2023	P-470	3984	181	22	3,982
3/21/2023	P-471	3987	185	22	4,070
3/21/2023	P-472	3987	190	22	4,180
3/21/2023	P-473	3987	140	22	3,080
3/21/2023	P-474	4002	56	22	1,232
3/21/2023	P-475	4002	204	22	4,488
3/21/2023	P-476	40002	201	22	4,422
3/21/2023	P-477	4002	69	22	1,518
3/21/2023	P-478	3172	37	22	814
3/21/2023	P-479	3172	202	22	4,444
3/21/2023	P-480	3172	203	22	4,466
3/21/2023	P-481	3172	202	22	4,444
3/21/2023	P-482	3172	199	22	4,378
3/21/2023	P-483	3172	196	22	4,312
3/21/2023	P-484	3854	189	22	4,158
3/21/2023	P-485	3854	176	22	3,872
3/21/2023	P-486	3854	161	22	3,542
3/21/2023	P-487	3854	145	22	3,190
3/21/2023	P-488	3854	131	22	2,882
3/21/2023	P-489	3854	115	22	2,530
3/21/2023	P-490	3854	76	22	1,672
3/23/2023	P-491	3932	439	22	9,658
3/23/2023	P-492	3932	200	22	4,400
3/23/2023	P-493	3931	288	22	6,336

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
3/23/2023	P-494	3931	315	22	6,930
3/23/2023	P-495	3950	316	22	6,952
3/23/2023	P-496	3950	317	22	6,974
3/23/2023	P-497	3943	369	22	8,118
3/23/2023	P-498	4943	328	22	7,216
3/23/2023	P-499	3950	43	22	946
3/23/2023	P-500	3945	373	22	8,206
3/27/2023	P-501	3847	305	18	5,490
3/27/2023	P-502	3945	321	22	7,062
3/27/2023	P-503	3847	188	21	3,948
3/27/2023	P-504	3847	235	22	5,170
3/27/2023	P-505	2962	268	22	5,896
3/27/2023	P-506	2962	412	22	9,064
3/27/2023	P-507	2859	86	22	1,892
3/27/2023	P-508	3859	486	22	10,692
3/27/2023	P-509	3804	474	22	10,428
3/27/2023	P-510	3837	465	22	10,230
3/27/2023	P-511	3837	99	22	2,178
3/27/2023	P-512	3851	130	22	2,860
3/27/2023	P-513	3851	230	22	5,060
3/27/2023	P-514	3851	151	22	3,322
3/27/2023	P-515	2691	442	22	9,724
3/27/2023	P-516	2691	248	22	5,456
3/27/2023	P-517	3901	188	22	4,136
3/28/2023	P-518	3901	290	22	6,380
3/28/2023	P-519	3966	81	22	1,782

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
3/28/2023	P-520	3901	224	22	4,928
3/28/2023	P-521	3966	305	22	6,710
3/28/2023	P-522	3966	262	22	5,764
3/28/2023	P-523	3969	53	22	1,166
3/28/2023	P-524	3969	316	22	6,952
3/28/2023	P-525	3969	319	22	7,018
3/28/2023	P-526	3939	470	22	10,340
3/28/2023	P-527	3939	229	22	5,038
3/28/2023	P-528	3930	237	22	5,214
3/28/2023	P-529	3930	458	22	10,076
3/28/2023	P-530	3935	448	22	9,856
3/28/2023	P-531	3935	110	22	2,420
3/28/2023	P-532	3935	106	22	2,332
3/28/2023	P-533	3935	115	22	2,530
3/28/2023	P-534	3936	59	22	1,298
3/28/2023	P-535	3936	47	22	1,034
3/28/2023	P-536	3936	35	22	770
3/28/2023	P-537	3936	25	22	550
3/28/2023	P-538	3936	17	22	374
3/29/2023	P-539	3936	339	22	7,458
3/29/2023	P-540	3934	95	22	2,090
3/29/2023	P-541	3934	428	22	9,416
3/29/2023	P-542	3934	160	22	3,520
3/29/2023	P-543	3299	258	22	5,676
3/29/2023	P-544	3299	407	22	8,954
3/29/2023	P-545	3857	398	22	8,756

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
3/29/2023	P-546	3857	293	22	6,446
3/29/2023	P-547	3938	83	22	1,826
3/29/2023	P-548	3938	373	22	8,206
3/29/2023	P-549	3938	206	22	4,532
3/29/2023	P-550	3937	180	22	3,960
3/29/2023	P-551	3937	328	22	7,216
3/29/2023	P-552	3858	127	22	2,794
3/29/2023	P-553	3937	162	22	3,564
3/29/2023	P-554	3937	240	22	5,280
3/29/2023	P-555	3937	186	22	4,092
3/29/2023	P-556	3937	79	22	1,738
3/29/2023	P-557	3953	62	22	1,364
3/29/2023	P-558	3953	56	22	1,232
3/29/2023	P-559	3953	45	10	450
3/29/2023	P-560	3953	35	22	770
11/28/2023	P561	3976	291	22	6,402
11/28/2023	P562	3976	407	22	8,954
11/28/2023	P563	2962	37	11	407
11/28/2023	P564	2962	37	3	111
11/28/2023	P565	2962	137	21	2,877
11/28/2023	P566	2962	36	6	216
11/29/2023	P567	2962	304	22	6,688
11/29/2023	P568	2962	227	22	4,994
11/29/2023	P569	2962	60	17	1,020
11/29/2023	P570	2962	107	22	2,354
11/29/2023	P571	2962	205	22	4,510

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
11/29/2023	P572	2962	162	22	3,564
11/29/2023	P573	2962	125	22	2,750
11/29/2023	P574	2962	83	22	1,826
11/29/2023	P575	4008	60	22	1,320
12/5/2023	P576	4008	628	22	13,816
12/5/2023	P577	3856	338	22	7,436
12/5/2023	P578	3856	355	22	7,810
12/5/2023	P579	3974	646	22	14,212
12/5/2023	P580	3968	707	22	15,554
12/5/2023	P581	3895	275	22	6,050
12/5/2023	P582	3895	414	22	9,108
12/5/2023	P583	3825	554	22	12,188
12/5/2023	P584	3825	153	22	3,366
12/5/2023	P585	3870	700	22	15,400
12/5/2023	P586	3899	108	22	2,376
12/6/2023	P587	3998	596	22	13,112
12/6/2023	P588	4000	377	22	8,294
12/6/2023	P589	4000	323	22	7,106
12/6/2023	P590	3971	635	22	13,970
12/6/2023	P591	3971	52	22	1,144
12/6/2023	P592	3980	708	22	15,576
12/6/2023	P593	3899	227	22	4,994
12/6/2023	P594	3899	473	22	10,406
12/6/2023	P595	4034	495	22	10,890
12/6/2023	P596	4034	265	22	5,830
12/6/2023	P597	3978	631	22	13,882

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
12/7/2023	P598	4034	69	22	1,518
12/7/2023	P599	3863	589	22	12,958
12/7/2023	P600	3861	111	22	2,442
12/7/2023	P601	3861	589	22	12,958
12/7/2023	P602	3867	271	22	5,962
12/7/2023	P603	3867	432	22	9,504
12/7/2023	P604	3997	408	22	8,976
12/7/2023	P605	3997	287	22	6,314
12/7/2023	P606	4001	526	22	11,572
12/7/2023	P607	4001	176	22	3,872
12/7/2023	P608	3848	624	22	13,728
12/7/2023	P609	3848	77	22	1,694
12/8/2023	P610	3982	700	22	15,400
12/8/2023	P611	3976	703	22	15,466
12/8/2023	P612	3981	692	22	15,224
12/8/2023	P613	3827	676	22	14,872
12/8/2023	P614	2962	56	22	1,232
12/8/2023	P615	2962	68	22	1,496
12/8/2023	P579B	2962	27	22	594
12/11/2023	P616	3812	683	22	15,026
12/11/2023	P617	3988	687	22	15,114
12/11/2023	P618	3958	689	22	15,158
12/21/2023	P619	3989	51	22	1,122
12/21/2023	P620	3989	65	22	1,430
12/21/2023	P621	3989	79	22	1,738
12/21/2023	P622	3989	89	22	1,958

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
12/21/2023	P623	3989	100	22	2,200
12/21/2023	P624	3989	109	22	2,398
12/21/2023	P625	3980	117	22	2,574
12/21/2023	P626	3990	129	22	2,838
12/21/2023	P627	3990	140	22	3,080
12/21/2023	P628	3990	150	22	3,300
12/21/2023	P629	3990	158	22	3,476
12/21/2023	P630	3952	178	22	3,916
12/21/2023	P631	3952	190	22	4,180
12/21/2023	P632	3952	93	22	2,046
12/21/2023	P633	2962	105	22	2,310
12/21/2023	P634	2962	207	22	4,554
12/21/2023	P635	3990	55	22	1,210
12/21/2023	P636	3989	80	22	1,760
12/21/2023	P637	2962	193	22	4,246
12/21/2023	P638	2962	90	22	1,980
12/21/2023	P639	3979	160	22	3,520
12/21/2023	P640	3979	235	22	5,170
12/21/2023	P641	3979	220	22	4,840
12/21/2023	P642	3942	225	22	4,950
12/22/2023	P643	3942	471	22	10,362
12/22/2023	P644	3862	455	22	10,010
12/29/2023	P645	3862	32	22	704
12/29/2023	P646	3862	54	22	1,188
12/29/2023	P647	3862	85	22	1,870
12/29/2023	P648	3831	109	22	2,398

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
12/29/2023	P649	3831	132	22	2,904
12/29/2023	P650	3831	156	22	3,432
12/29/2023	P651	3831	171	22	3,762
12/29/2023	P652	3831	112	22	2,464
12/29/2023	P653	3991	76	22	1,672
12/29/2023	P654	3991	207	22	4,554
12/29/2023	P655	3991	229	22	5,038
12/29/2023	P656	3991	160	22	3,520
12/29/2023	P657	3846	83	22	1,826
12/29/2023	P658	3846	253	22	5,566
12/29/2023	P659	3846	273	22	6,006
12/30/2023	P660	3983	291	22	6,402
12/30/2023	P661	3983	315	22	6,930
12/30/2023	P662	XXXX	238	22	5,236
12/30/2023	P663	3983	88	22	1,936
12/30/2023	P664	XXXX	329	22	7,238
12/30/2023	P665	3977	211	22	4,642
12/30/2023	P666	XXXX	128	22	2,816
12/30/2023	P667	3977	341	22	7,502
12/30/2023	P668	3828	203	22	4,466
12/30/2023	P669	3977	138	22	3,036
12/30/2023	P670	3828	338	22	7,436
12/30/2023	P671	3971	190	22	4,180
12/30/2023	P672	3928	148	22	3,256
1/13/2024	P673	3977	215	22	4,730
1/13/2024	P674	3977	282	22	6,204

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
1/13/2024	P675	XXXX	53	22	1,166
1/13/2024	P676	XXXX	334	22	7,348
1/13/2024	P677	3970	30	22	660
1/13/2024	P678	XXXX	293	22	6,446
1/13/2024	P679	3970	333	22	7,326
1/13/2024	P680	3970	306	22	6,732
1/13/2024	P681	3929	27	22	594
1/17/2024	P682	3929	332	22	7,304
1/17/2024	P683	3946	18	22	396
1/17/2024	P684	3929	319	22	7,018
1/17/2024	P685	3946	331	22	7,282
1/17/2024	P686	3946	338	22	7,436
1/17/2024	P687	3992	9	22	198
1/17/2024	P688	3992	352	22	7,744
1/17/2024	P689	3992	337	22	7,414
1/17/2024	P690	3948	28	22	616
1/17/2024	P691	3948	370	22	8,140
1/17/2024	P692	3948	292	22	6,424
1/17/2024	P693	3986	91	22	2,002
1/17/2024	P694	3986	388	22	8,536
1/18/2024	P695	3986	214	22	4,708
1/18/2024	P696	3986	174	22	3,828
1/18/2024	P697	3944	365	22	8,030
1/18/2024	P698	3909	222	22	4,884
1/18/2024	P699	3944	126	22	2,772
1/18/2024	P700	3909	333	22	7,326

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
1/18/2024	P701	3955	313	22	6,886
1/18/2024	P702	3955	263	22	5,786
1/19/2024	P703	3866	205	22	4,510
1/19/2024	P704	3866	151	22	3,322
1/19/2024	P705	3866	93	22	2,046
1/19/2024	P706	3866	42	22	924
2/7/2024	P707	XXXX	33	21	693
2/7/2024	P708	3904	140	22	3,080
2/7/2024	P709	3904	164	22	3,608
2/7/2024	P710	3904	192	22	4,224
2/8/2024	P711	3873	81	22	1,782
2/8/2024	P712	3904	130	22	2,860
2/8/2024	P713	3873	210	22	4,620
2/8/2024	P714	3873	318	22	6,996
2/9/2024	P715	3906	320	22	7,040
2/9/2024	P716	3906	326	22	7,172
2/9/2024	P717	3905	335	22	7,370
2/9/2024	P718	3905	313	22	6,886
2/9/2024	P719	3905	16	22	352
2/9/2024	P720	3907	330	22	7,260
2/9/2024	P721	3907	350	22	7,700
2/9/2024	P722	3869	355	22	7,810
2/9/2024	P723	3869	345	22	7,590
2/9/2024	P724	3864	366	22	8,052
2/9/2024	P725	3864	330	22	7,260
2/9/2024	P726	3908	143	31.5	4,505

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/9/2024	P727	3908	111	31.5	3,497
2/9/2024	P728	3908	80	31.5	2,520
2/9/2024	P729	3908	50	31.5	1,575
2/9/2024	P730	3908	37	31.5	1,166
2/9/2024	P731	3908	25	29	725
2/9/2024	P732	3908	10	22	220
2/9/2024	P733	3908	11	8.5	94
2/9/2024	P734	3908	5	24	120
2/14/2024	P735	3908	118	22	2,596
2/14/2024	P736	3802	81	22	1,782
2/14/2024	P737	3802	193	22	4,246
2/15/2024	P738	3802	280	22	6,160
2/15/2024	P739	3802	129	22	2,838
2/15/2024	P740	3810	131	22	2,882
2/15/2024	P741	3810	231	22	5,082
2/15/2024	P742	3810	217	22	4,774
2/15/2024	P743	3810	115	22	2,530
2/15/2024	P744	3811	77	22	1,694
2/15/2024	P745	3811	170	22	3,740
2/15/2024	P746	3811	159	22	3,498
2/15/2024	P747	3811	146	22	3,212
2/15/2024	P748	3811	130	22	2,860
2/15/2024	P749	3807	117	22	2,574
2/15/2024	P750	3807	105	22	2,310
2/15/2024	P751	3807	96	22	2,112
2/15/2024	P752	3807	94	22	2,068

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Log

Date	Panel	Roll Number	Length	Width	Area
2/15/2024	P753	3807	93	22	2,046
2/15/2024	P754	3807	91	22	2,002
2/15/2024	P755	3807	91	22	2,002
2/15/2024	P756	3865	94	22	2,068
2/15/2024	P757	3865	81	5	405

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1	7/11/2022	1	2	09:35	32	LD	850	232	232		
2	7/11/2022	2	3	10:10	32	LD	850	232	464	DS-1	
3	7/11/2022	3	4	10:05	33	SS	850	232	696		
4	7/11/2022	4	5	10:24	32	LD	850	232	928		
5	7/11/2022	5	6	10:25	33	SS	850	232	1,160	DS-2	
6	7/11/2022	6	7	10:50	33	SS	850	232	1,392		
7	7/11/2022	7	8	10:55	32	LD	850	45	1,437		
8	7/11/2022	7	9	11:01	32	LD	850	108	1,545	DS-3	
9	7/11/2022	8	9	11:10	32	LD	850	8	1,553		
10	7/11/2022	1	10	13:05	33	SS	850	22	1,575		
11	7/11/2022	2	10	13:08	33	SS	850	22	1,597		
12	7/11/2022	3	10	13:11	33	SS	850	22	1,619		
13	7/11/2022	4	10	13:14	33	SS	850	22	1,641		
14	7/11/2022	5	10	13:17	33	SS	850	22	1,663		
15	7/11/2022	6	10	13:20	33	SS	850	17	1,680		
16	7/11/2022	10	11	12:45	33	SS	850	128	1,808	DS-4	
17	7/11/2022	11	12	12:48	32	LD	850	111	1,919		
18	7/11/2022	12	13	13:08	32	LD	850	54	1,973		
19	7/11/2022	12	14	13:15	32	LD	850	50	2,023		
20	7/11/2022	13	14	13:03	32	LD	850	22	2,045		
21	7/11/2022	13	15	13:20	33	SS	850	54	2,099		
22	7/11/2022	14	15	13:30	33	SS	850	33	2,132		
23	7/11/2022	15	16	13:22	32	LD	850	49	2,181		
24	7/11/2022	15	17	13:29	32	LD	850	15	2,196		
25	7/11/2022	16	17	13:28	32	LD	850	9	2,205		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
26	7/12/2022	18	19	10:00	32	LD	850	710	2,915	DS-5	
27	7/12/2022	19	20	09:10	22	SS	850	710	3,625	DS-6, DS-7	
28	7/12/2022	20	21	09:30	31	BM	850	710	4,335	DS-8	
29	7/12/2022	21	22	10:24	33	SS	850	710	5,045	DS-9	
30	7/12/2022	22	23	10:33	32	LD	850	710	5,755	DS-10, DS-11	
31	7/12/2022	23	24	11:10	31	BM	850	710	6,465	DS-12, DS-13	
32	7/12/2022	24	25	13:40	33	SS	850	710	7,175	DS-14	
33	7/12/2022	18	9	12:31	32	LD	850	22	7,197		
34	7/12/2022	19	7	12:34	32	LD	850	22	7,219		
35	7/12/2022	20	6	12:37	32	LD	850	22	7,241		
36	7/12/2022	21	5	12:40	32	LD	850	22	7,263		
37	7/12/2022	22	4	12:43	32	LD	850	22	7,285		
38	7/12/2022	23	3	14:24	31	BM	850	22	7,307		
39	7/12/2022	24	2	14:27	31	BM	850	22	7,329		
40	7/12/2022	25	1	14:30	31	BM	850	22	7,351		
41	7/13/2022	26	1	08:33	32	LD	850	232	7,583	DS-15	
42	7/13/2022	26	10	08:58	32	LD	850	22	7,605		
43	7/13/2022	26	11	09:04	32	LD	850	22	7,627		
44	7/13/2022	26	27	09:31	32	LD	850	22	7,649		
45	7/13/2022	26	28	10:44	31	BM	850	225	7,874		
46	7/13/2022	25	26	10:38	31	BM	850	54	7,928	DS-17	
47	7/13/2022	28	29	09:07	31	LD	850	22	7,950		
48	7/13/2022	29	30	09:15	31	LD	850	22	7,972		
49	7/13/2022	25	27	09:20	32	BM	850	710	8,682	DS-16	
50	7/13/2022	27	30	09:50	31	LD	850	710	9,392	DS-18	

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
51	7/15/2022	31	28	08:36	31	OP	850	225	9,617	DS-19	
52	7/15/2022	31	29	08:32	31	OP	850	54	9,671		
53	7/15/2022	31	33	09:06	31	OP	850	278	9,949		
54	7/15/2022	33	35	10:15	31	OP	850	278	10,227		
55	7/15/2022	33	36	10:00	31	OP	850	278	10,505		
56	7/15/2022	35	36	09:03	31	OP	850	22	10,527	DS-20	
57	7/15/2022	32	30	08:45	33	SS	850	703	11,230	DS-21	
58	7/15/2022	32	34	09:01	32	LD	850	703	11,933	DS-22, DS-23	
59	7/15/2022	31	32	09:50	31	OP	850	22	11,955		
60	7/15/2022	33	34	09:52	31	OP	850	22	11,977		
61	7/15/2022	36	37	09:55	31	OP	850	22	11,999		
62	7/15/2022	34	37	10:01	33	SS	850	703	12,702	DS-24	
63	7/18/2022	38	39	09:15	33	SS	850	347	13,049	DS-26	
64	7/18/2022	39	40	09:15	32	LD	850	347	13,396	DS-25	
65	7/18/2022	40	41	09:28	31	OP	850	347	13,743	DS-27	
66	7/18/2022	41	42	10:01	32	LD	850	347	14,090	DS-28	
67	7/18/2022	42	43	10:05	33	SS	850	347	14,437	DS-29	
68	7/18/2022	43	44	10:19	31	OP	850	347	14,784	DS-30	
69	7/18/2022	44	45	10:31	32	LD	850	347	15,131		
70	7/18/2022	45	46	10:40	33	SS	850	347	15,478		
71	7/18/2022	46	47	10:55	31	OP	850	347	15,825		
72	7/18/2022	47	48	11:20	33	SS	850	347	16,172	DS-31	
73	7/18/2022	48	49	11:37	32	LD	850	347	16,519		
74	7/18/2022	38	34	13:19	31	OP	850	22	16,541		
75	7/18/2022	39	32	13:23	31	OP	850	22	16,563		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
76	7/18/2022	40	30	13:27	31	OP	850	22	16,585		
77	7/18/2022	41	27	13:31	31	OP	850	22	16,607		
78	7/18/2022	42	25	13:34	31	OP	850	22	16,629		
79	7/18/2022	43	24	13:37	31	OP	850	22	16,651		
80	7/18/2022	44	23	13:40	31	OP	850	22	16,673		
81	7/18/2022	45	22	13:43	31	OP	850	22	16,695	DS-32	
82	7/18/2022	46	23	13:46	31	OP	850	22	16,717		
83	7/18/2022	47	20	13:49	31	OP	850	22	16,739		
84	7/18/2022	48	19	13:52	31	OP	850	22	16,761		
85	7/18/2022	49	18	13:55	31	OP	850	22	16,783		
86	7/20/2020	50	38	10:07	9	KC	260	22	16,805		
87	7/18/2022	50	39	13:22	32	LD	850	22	16,827		
88	7/18/2022	50	40	13:26	32	LD	850	22	16,849		
89	7/18/2022	50	41	13:28	32	LD	850	22	16,871		
90	7/18/2022	50	42	13:30	32	LD	850	22	16,893	DS-33	
91	7/18/2022	50	43	13:32	32	LD	850	22	16,915		
92	7/18/2022	50	44	13:35	32	LD	850	22	16,937		
93	7/18/2022	50	45	13:38	32	LD	850	22	16,959		
94	7/18/2022	50	46	13:41	32	LD	850	22	16,981		
95	7/18/2022	50	47	13:44	32	LD	850	22	17,003		
96	7/18/2022	50	48	13:47	32	LD	850	22	17,025		
97	7/18/2022	50	49	13:51	32	LD	850	22	17,047		
98	7/19/2022	50	51	09:01	32	LD	850	61	17,108		
99	7/19/2022	50	52	08:45	32	LD	850	180	17,288	DS-34	
100	7/19/2022	51	52	08:31	31	OP	850	22	17,310		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
101	7/19/2022	51	53	09:11	31	OP	850	55	17,365		
102	7/19/2022	52	53	08:56	31	OP	850	135	17,500		
103	7/19/2022	52	54	08:50	31	OP	850	50	17,550		
104	7/19/2022	53	54	08:44	31	OP	850	22	17,572		
105	7/19/2022	53	55	09:18	32	LD	850	175	17,747		
106	7/19/2022	54	55	09:15	32	LD	850	50	17,797		
107	7/19/2022	55	56	10:03	31	OP	850	41	17,838		
108	7/19/2022	55	57	09:48	31	OP	850	164	18,002	DS-35	
109	7/19/2022	56	57	09:40	32	LD	850	22	18,024		
110	7/19/2022	56	58	10:03	32	LD	850	12	18,036		
111	7/19/2022	57	58	10:01	32	LD	850	16	18,052		
112	7/19/2022	57	59	09:50	32	LD	850	147	18,199		
113	7/19/2022	58	59	09:45	32	LD	850	22	18,221		
114	7/19/2022	59	60	10:22	32	LD	850	28	18,249		
115	7/19/2022	59	61	10:11	31	OP	850	118	18,367		
116	7/19/2022	60	61	10:14	31	OP	850	22	18,389		
117	7/19/2022	61	62	10:23	31	OP	850	115	18,504		
118	7/19/2022	62	63	10:30	32	LD	850	84	18,588	DS-36	
119	7/19/2022	63	64	10:40	32	LD	850	54	18,642		
120	7/19/2022	64	65	10:38	31	OP	850	25	18,667		
121	9/15/2022	66	65	14:11	31	LD	850	22	18,689		
122	9/15/2022	66	64	14:07	31	LD	850	22	18,711		
123	9/15/2022	66	63	14:04	31	LD	850	22	18,733		
124	9/15/2022	66	62	14:00	31	LD	850	22	18,755		
125	9/15/2022	66	61	13:58	31	LD	850	22	18,777		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
126	9/15/2022	66	59	13:55	31	LD	850	22	18,799		
127	9/15/2022	66	57	13:52	31	LD	850	22	18,821		
128	9/15/2022	66	55	13:50	31	LD	850	22	18,843		
129	9/15/2022	66	54	13:48	31	LD	850	22	18,865		
130	9/15/2022	66	52	13:43	31	LD	850	22	18,887		
131	9/15/2022	66	50	13:40	31	LD	850	22	18,909	DS-37	
132	9/15/2022	66	38	12:50	31	LD	850	346	19,255		
133	9/19/2022	66	67	08:34	32	LD	850	35	19,290		
134	9/19/2022	67	68	08:35	31	OP	850	31	19,321		
135	9/19/2022	67	73	09:10	31	OP	850	22	19,343		
136	9/19/2022	68	71	10:10	32	LD	850	22	19,365		
137	9/19/2022	68	72	10:07	32	LD	850	22	19,387		
138	9/19/2022	68	73	09:15	32	LD	850	22	19,409		
139	9/19/2022	69	R-132	10:07	32	LD	850	33	19,442		
140	9/19/2022	69	70	09:59	31	OP	850	22	19,464		
141	9/19/2022	69	71	09:49	31	OP	850	33	19,497		
142	9/19/2022	71	R132	10:10	32	LD	850	17	19,514		
143	9/19/2022	70	71	10:12	31	OP	850	104	19,618		
144	9/19/2022	71	72	09:32	31	OP	850	195	19,813	DS-38	
145	9/19/2022	72	73	09:20	32	LD	850	195	20,008	DS-39	
146	9/19/2022	67	74	11:20	31	OP	850	22	20,030		
147	9/19/2022	66	74	11:01	32	LD	850	220	20,250	DS-40, DS-41	
148	9/19/2022	66	74	11:13	31	OP	850	337	20,587		
149	9/19/2022	37	74	11:10	32	LD	850	146	20,733		
150	9/21/2022	37	66	14:47	7	SA	260	22	20,755		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
151	9/20/2022	74	75	08:01	32	LD	850	105	20,860	DS-42	
152	9/20/2022	75	76	07:59	33	OP	850	105	20,965	DS-43, DS-44	
153	9/20/2022	76	77	09:17	33	OP	850	105	21,070	DS-45	
154	9/20/2022	77	78	09:30	32	LD	850	105	21,175	DS-46, DS-47	
155	9/20/2022	78	79	10:30	33	OP	850	105	21,280	DS-48	
156	9/20/2022	79	80	10:31	33	LD	850	105	21,385	DS-49, DS-50	
157	9/20/2022	81	82	10:30	33	EL	850	101	21,486		
158	9/20/2022	81	83	13:25	33	SS	260	5	21,491		
159	9/20/2022	82	83	10:53	33	EL	850	103	21,594	DS-51	
160	9/20/2022	81	71	11:13	33	EL	850	14	21,608		
161	9/20/2022	82	72	11:10	33	EL	850	22	21,630		
162	9/20/2022	83	73	11:07	33	EL	850	22	21,652		
163	9/20/2022	73	75	11:20	33	EL	850	22	21,674		
164	9/20/2022	73	76	13:10	33	EL	850	22	21,696		
165	9/20/2022	73	77	13:02	33	EL	850	22	21,718		
166	9/20/2022	73	78	12:58	33	EL	850	22	21,740		
167	9/20/2022	73	79	12:57	33	EL	850	22	21,762		
168	9/20/2022	73	80	12:50	33	EL	850	22	21,784		
169	9/21/2022	80	84	07:50	33	LD	850	697	22,481	DS-52	
170	9/21/2022	84	85	09:21	33	LD	850	697	23,178	DS-53, DS-54	
171	9/21/2022	85	86	09:10	33	LD	850	697	23,875	DS-55	
172	9/21/2022	86	87	09:07	33	LD	850	697	24,572	DS-56, DS-57	
173	9/21/2022	87	88	10:18	33	LD	850	697	25,269	DS-58, DS-59	
174	9/21/2022	88	89	10:20	33	LD	850	697	25,966	DS-60	
175	9/21/2022	73	84	10:30	33	LD	850	22	25,988		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
176	9/21/2022	73	85	10:35	33	LD	850	22	26,010		
177	9/21/2022	73	86	10:40	33	LD	850	22	26,032		
178	9/21/2022	73	87	10:45	33	LD	850	22	26,054		
179	9/21/2022	83	87	10:47	33	LD	850	6	26,060		
180	9/21/2022	83	88	10:50	33	LD	850	16	26,076		
181	9/21/2022	83	89	10:55	33	LD	850	22	26,098		
182	9/22/2022	89	90	07:50	33	LD	850	697	26,795	DS-61	
183	9/22/2022	90	91	09:19	33	LD	850	697	27,492	DS-62, DS-63	
184	9/22/2022	83	90	10:30	33	LD	850	22	27,514		
185	9/22/2022	83	91	10:33	33	LD	850	22	27,536		
186	9/28/2022	36	92	10:20	33	LD	850	137	27,673		
187	9/28/2022	37	92	10:34	33	LD	850	556	28,229	DS-68, DS-69	
188	9/28/2022	92	93	08:20	33	LD	850	93	28,322	DS-64	
189	9/28/2022	93	94	08:29	33	OP	850	93	28,415	DS-65	
190	9/28/2022	94	95	09:33	33	OP	850	93	28,508	DS-66, DS-67	
191	9/28/2022	74	92	10:56	33	OP	850	22	28,530		
192	9/28/2022	75	93	10:53	33	OP	850	22	28,552		
193	9/28/2022	76	94	10:50	33	OP	850	22	28,574		
194	9/28/2022	77	95	10:47	33	OP	850	22	28,596		
195	9/29/2022	95	96	08:05	32	LD	850	640	29,236	DS-70	
196	9/29/2022	96	97	08:52	31	OP	850	528	29,764	DS-71	
197	9/29/2022	96	98	09:40	31	OP	850	68	29,832		
198	9/29/2022	97	98	09:06	32	LD	850	22	29,854	DS-72	
199	9/29/2022	97	99	10:12	31	OP	850	381	30,235		
200	9/29/2022	97	100	09:53	31	OP	850	146	30,381		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
201	9/29/2022	98	100	09:50	31	OP	850	27	30,408		
202	9/29/2022	99	100	09:14	32	LD	850	22	30,430		
203	9/29/2022	99	101	09:59	32	LD	850	167	30,597		
204	9/29/2022	99	102	09:34	32	LD	850	213	30,810	DS-74	
205	9/29/2022	100	102	09:28	32	LD	850	81	30,891		
206	9/29/2022	100	103	09:25	32	LD	850	43	30,934		
207	9/29/2022	101	102	09:55	32	LD	850	22	30,956		
208	9/29/2022	101	104	10:45	32	LD	850	163	31,119		
209	9/29/2022	102	103	09:10	32	LD	850	22	31,141		
210	9/29/2022	102	104	10:16	32	LD	850	288	31,429	DS-73	
211	9/29/2022	78	96	10:55	31	OP	850	22	31,451		
212	9/29/2022	79	97	10:58	31	OP	850	22	31,473		
213	9/29/2022	80	99	11:01	31	OP	850	22	31,495		
214	9/29/2022	84	101	11:04	31	OP	850	22	31,517	DS-75	
215	9/29/2022	85	104	11:07	31	OP	850	22	31,539		
216	9/30/2022	104	105	07:48	31	OP	850	322	31,861	DS-76	
217	9/30/2022	104	106	08:23	31	OP	850	38	31,899		
218	9/30/2022	105	106	08:37	31	OP	850	22	31,921		
219	9/30/2022	105	107	09:24	31	OP	850	45	31,966		
220	9/30/2022	105	108	08:54	31	OP	850	322	32,288	DS-79	
221	9/30/2022	107	108	09:07	32	SS	850	22	32,310		
222	9/30/2022	107	109	08:11	32	SS	850	41	32,351		
223	9/30/2022	108	109	08:17	32	SS	850	297	32,648	DS-77	
224	9/30/2022	109	110	09:29	31	OP	850	300	32,948		
225	9/30/2022	110	111	08:45	32	SS	850	270	33,218	DS-78	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
226	9/30/2022	111	112	09:10	32	SS	850	225	33,443		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
227	9/30/2022	105	86	09:52	32	SS	850	22	33,465		
228	9/30/2022	107	87	09:50	32	SS	850	22	33,487		
229	9/30/2022	109	88	09:47	32	SS	850	22	33,509		
230	9/30/2022	110	89	09:45	32	SS	850	22	33,531		
231	9/30/2022	111	90	09:42	32	SS	850	22	33,553		
232	9/30/2022	112	91	09:38	32	SS	850	22	33,575	DS-80	
233	12/1/2022	113	114	08:54	33	SS	850	98	33,673		
234	12/1/2022	114	115	09:20	33	SS	850	227	33,900		
235	12/1/2022	115	116	09:45	33	SS	850	140	34,040		
236	12/1/2022	115	117	10:07	33	SS	850	92	34,132		
237	12/1/2022	116	117	10:02	33	SS	850	22	34,154	DS-81	
238	12/1/2022	91	115	10:50	9	MS	270	22	34,176		
239	12/1/2022	83	114	11:05	9	MS	270	22	34,198		
240	12/1/2022	81	113	11:15	9	MS	270	13	34,211		
241	12/1/2022	116	118	13:00	33	SS	850	137	34,348		
242	12/1/2022	117	118	13:20	33	SS	850	100	34,448		
243	12/1/2022	118	119	13:13	32	MS	850	235	34,683	DS-82	
244	12/1/2022	119	120	13:25	33	SS	850	230	34,913		
245	12/1/2022	120	121	13:44	32	MS	850	228	35,141		
246	12/1/2022	121	122	13:55	33	SS	850	218	35,359	DS-83	
247	12/1/2022	91	116	14:30	33	SS	850	22	35,381		
248	12/1/2022	91	118	14:32	33	SS	850	22	35,403		
249	12/1/2022	91	119	14:35	33	SS	850	22	35,425		
250	12/1/2022	91	120	14:38	33	SS	850	22	35,447		
251	12/1/2022	91	121	14:41	33	SS	850	22	35,469		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
252	12/5/2022	91	122	13:17	33	SS	850	22	35,491		
253	12/4/2022	123	124	08:15	33	SS	850	121	35,612		
254	12/4/2022	123	125	08:33	33	SS	850	22	35,634		
255	12/4/2022	124	125	08:30	33	SS	850	22	35,656		
256	12/4/2022	124	126	08:40	33	SS	850	107	35,763	DS-84	
257	12/4/2022	124	127	09:00	33	SS	850	26	35,789		
258	12/4/2022	125	127	09:05	33	SS	850	22	35,811		
259	12/4/2022	126	127	08:35	33	SS	850	22	35,833		
260	12/4/2022	126	128	09:12	33	SS	850	107	35,940		
261	12/4/2022	127	128	09:23	33	SS	850	50	35,990		
262	12/4/2022	128	129	09:40	33	SS	850	175	36,165	DS-85	
263	12/4/2022	129	130	10:08	33	SS	850	190	36,355		
264	12/4/2022	130	131	10:40	33	SS	850	203	36,558		
265	12/4/2022	131	132	11:00	33	SS	850	216	36,774	DS-86	
266	12/4/2022	114	123	13:00	33	SS	850	22	36,796		
267	12/4/2022	115	124	13:03	33	SS	850	22	36,818		
268	12/4/2022	117	126	13:06	33	SS	850	22	36,840		
269	12/4/2022	118	128	13:08	33	SS	850	22	36,862		
270	12/4/2022	119	129	13:10	33	SS	850	22	36,884		
271	12/4/2022	120	130	13:12	33	SS	850	22	36,906		
272	12/4/2022	121	131	13:15	33	SS	850	22	36,928		
273	12/4/2022	122	132	13:17	33	SS	850	54	36,982		
274	12/5/2022	122	133	11:35	33	SS	850	54	37,036		
275	12/5/2022	133	134	10:50	33	SS	850	54	37,090		
276	12/5/2022	134	135	10:37	33	SS	850	86	37,176	DS-88	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
277	12/5/2022	134	136	10:45	33	SS	850	25	37,201		
278	12/5/2022	135	136	10:11	33	SS	850	22	37,223		
279	12/5/2022	135	137	10:18	33	SS	850	86	37,309		
280	12/5/2022	136	137	10:21	33	SS	850	75	37,384		
281	12/5/2022	137	138	09:50	33	SS	850	200	37,584		
282	12/5/2022	132	138	09:25	33	SS	850	210	37,794	DS-87	
283	12/5/2022	122	134	11:30	33	SS	850	55	37,849		
284	12/5/2022	122	136	11:28	33	SS	850	55	37,904		
285	12/5/2022	122	137	11:22	33	SS	850	55	37,959		
286	12/5/2022	91	133	13:20	33	SS	850	22	37,981		
287	12/5/2022	91	134	13:22	33	SS	850	22	38,003		
288	12/5/2022	91	136	13:30	33	SS	850	22	38,025		
289	12/5/2022	91	137	13:35	33	SS	850	22	38,047		
290	12/5/2022	91	138	13:40	33	SS	850	22	38,069		
291	12/7/2022	139	140	14:00	9	SS	270	68	38,137		
292	12/7/2022	139	125	10:55	33	SS	850	45	38,182		
293	12/7/2022	139	127	11:00	33	SS	850	22	38,204		
294	12/7/2022	139	128	13:35	33	SS	850	22	38,226		
295	12/7/2022	140	128	11:19	33	SS	850	22	38,248		
296	12/7/2022	140	129	11:21	33	SS	850	22	38,270		
297	12/7/2022	140	130	11:23	33	SS	850	22	38,292		
298	12/7/2022	140	131	11:25	33	SS	850	22	38,314		
299	12/7/2022	140	132	11:27	33	SS	850	22	38,336		
300	12/7/2022	140	138	13:15	33	SS	850	22	38,358		
301	12/7/2022	140	142	14:35	9	SS	270	10	38,368		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
302	12/7/2022	140	143	13:20	33	SS	850	22	38,390		
303	12/7/2022	140	144	13:22	33	SS	850	22	38,412		
304	12/7/2022	140	145	13:25	33	SS	850	22	38,434		
305	12/7/2022	140	146	12:55	33	SS	850	22	38,456		
306	12/7/2022	140	147	12:57	33	SS	850	9	38,465		
307	12/7/2022	140	148	13:00	33	SS	850	22	38,487		
308	12/7/2022	140	149	13:02	33	SS	850	22	38,509		
309	12/7/2022	140	150	13:05	33	SS	850	22	38,531		
310	12/7/2022	140	151	13:08	33	SS	850	22	38,553		
311	12/7/2022	141	142	08:55	33	SS	850	83	38,636		
312	12/7/2022	142	143	09:07	33	SS	850	83	38,719	DS-89	
313	12/7/2022	143	144	09:17	33	SS	850	74	38,793		
314	12/7/2022	144	145	09:26	33	SS	850	59	38,852		
315	12/7/2022	145	146	09:36	33	SS	850	52	38,904		
316	12/7/2022	146	147	10:45	33	SS	850	29	38,933		
317	12/7/2022	146	153	10:40	33	SS	850	23	38,956		
318	12/7/2022	147	148	10:25	33	SS	850	72	39,028		
319	12/7/2022	147	153	10:35	33	SS	850	23	39,051		
320	12/7/2022	148	149	10:18	33	SS	850	72	39,123		
321	12/7/2022	149	150	10:08	33	SS	850	82	39,205	DS-90	
322	12/7/2022	150	151	10:00	33	SS	850	84	39,289		
323	12/7/2022	151	138	13:12	33	SS	850	7	39,296		
324	12/7/2022	151	152	09:48	33	SS	850	75	39,371		
325	12/7/2022	152	138	12:40	33	SS	850	22	39,393		
326	12/8/2022	154	155	10:45	33	SS	850	98	39,491		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
327	12/8/2022	155	156	11:00	33	SS	850	104	39,595		
328	12/8/2022	156	157	11:10	33	SS	850	110	39,705	DS-91	
329	12/8/2022	157	158	11:22	33	SS	850	76	39,781		
330	12/8/2022	157	159	11:32	33	SS	850	47	39,828		
331	12/8/2022	158	159	11:25	33	SS	850	22	39,850		
332	12/8/2022	158	160	11:45	33	SS	850	20	39,870		
333	12/8/2022	158	161	11:50	33	SS	850	33	39,903		
334	12/8/2022	159	161	11:55	33	SS	850	48	39,951		
335	12/8/2022	160	161	11:47	33	SS	850	6	39,957		
336	12/8/2022	16	154	14:30	8	ST	270	5	39,962		
337	12/8/2022	16	155	14:45	8	ST	270	15	39,977		
338	12/8/2022	15	155	14:55	8	ST	270	7	39,984		
339	12/8/2022	15	156	15:05	8	ST	270	15	39,999		
340	12/8/2022	13	156	15:15	8	ST	270	8	40,007		
341	12/8/2022	13	157	15:18	8	ST	270	14	40,021		
342	12/8/2022	12	157	15:22	8	ST	270	9	40,030		
343	12/8/2022	12	158	15:30	8	ST	270	12	40,042		
344	12/8/2022	26	158	15:36	8	ST	270	20	40,062		
345	12/8/2022	158	28	15:40	9	SS	270	6	40,068		
346	12/8/2022	160	28	15:34	9	SS	270	14	40,082		
347	12/8/2022	160	31	15:32	9	SS	270	4	40,086		
348	12/8/2022	161	31	15:22	9	SS	270	18	40,104		
349	12/8/2022	161	33	15:17	9	SS	270	21	40,125		
350	12/8/2022	162	35	15:73	49	KI	265	20	40,145		
351	12/8/2022	162	161	14:07	33	SS	850	19	40,164		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
352	12/8/2022	162	163	14:05	33	SS	850	16	40,180		
353	12/8/2022	163	164	13:25	33	SS	850	154	40,334	DS-92	
354	12/8/2022	164	165	13:45	33	SS	850	164	40,498		
355	12/8/2022	161	163	14:00	33	SS	850	23	40,521		
356	12/8/2022	163	35	14:20	49	KI	265	74	40,595		
357	12/8/2022	163	36	14:10	49	KI	265	52	40,647		
358	12/8/2022	164	161	14:15	33	SS	850	8	40,655		
359	12/8/2022	163	92	14:50	49	KI	265	22	40,677		
360	12/8/2022	164	93	15:00	49	KI	265	22	40,699		
361	12/8/2022	165	94	15:10	49	KI	265	22	40,721		
362	12/16/2022	166	167	08:45	33	SS	850	22	40,743	DS-95	
363	12/16/2022	166	91	10:20	35	RI	850	144	40,887		
364	12/16/2022	166	168	08:50	33	SS	850	144	41,031		
365	12/16/2022	167	91	10:34	35	RI	850	288	41,319	DS-96	
366	12/16/2022	167	112	11:10	35	RI	850	40	41,359		
367	12/16/2022	167	168	09:07	33	SS	850	219	41,578		
368	12/16/2022	167	169	09:30	33	SS	850	111	41,689		
369	12/16/2022	168	169	09:10	35	RI	850	22	41,711		
370	12/16/2022	168	170	09:21	35	RI	850	367	42,078	DS-94	
371	12/16/2022	169	170	09:54	35	RI	850	111	42,189		
372	12/16/2022	170	171	09:50	33	SS	850	488	42,677	DS-93	
373	12/16/2022	166	138	10:50	33	SS	850	22	42,699		
374	12/16/2022	168	138	10:52	33	SS	850	22	42,721		
375	12/16/2022	170	138	10:55	33	SS	850	22	42,743		
376	12/16/2022	171	138	11:00	33	SS	850	22	42,765		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
377	12/17/2022	171	172	08:50	33	SS	850	207	42,972		
378	12/17/2022	172	173	08:45	33	SS	850	22	42,994	DS-97	
379	12/17/2022	172	174	09:21	35	RI	850	209	43,203	DS-98	
380	12/17/2022	171	173	09:47	33	SS	850	275	43,478		
381	12/17/2022	173	174	09:41	35	RI	850	207	43,685		
382	12/17/2022	173	175	10:00	35	RI	850	68	43,753		
383	12/17/2022	174	175	09:10	35	RI	850	22	43,775		
384	12/17/2022	174	176	09:56	33	SS	850	420	44,195	DS-99	
385	12/17/2022	175	176	09:48	33	SS	850	68	44,263		
386	12/17/2022	176	177	10:45	35	RI	850	122	44,385		
387	12/17/2022	176	178	10:43	35	RI	850	372	44,757	DS-100	
388	12/17/2022	177	178	40:40	33	SS	850	22	44,779		
389	12/17/2022	138	172	40:50	33	SS	850	22	44,801		
390	12/17/2022	138	174	10:55	33	SS	850	22	44,823		
391	12/17/2022	138	176	10:57	33	SS	850	22	44,845		
392	12/17/2022	138	177	11:00	33	SS	850	22	44,867		
393	1/6/2023	177	179	08:40	33	OP	850	130	44,997	DS-102	
394	1/6/2023	178	179	08:57	33	OP	850	195	45,192		
395	1/6/2023	179	181	10:05	33	OP	850	326	45,518		
396	1/6/2023	179	180	09:20	33	OP	850	22	45,540		
397	1/6/2023	178	180	09:25	33	OP	850	153	45,693		
398	1/6/2023	180	181	09:53	33	OP	850	148	45,841	DS-103	
399	1/6/2023	181	182	09:47	31	LD	850	464	46,305		
400	1/6/2023	182	183	11:03	31	LD	850	226	46,531		
401	1/6/2023	182	184	10:34	31	LD	850	228	46,759		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
402	1/6/2023	183	184	11:00	31	LD	850	22	46,781	DS-104	
403	1/6/2023	183	185	10:39	33	OP	850	226	47,007		
404	1/6/2023	184	185	11:01	31	LD	850	228	47,235		
405	1/6/2023	185	186	11:30	31	LD	850	416	47,651	DS-101	
406	1/6/2023	186	187	12:30	31	LD	850	130	47,781		
407	1/6/2023	186	188	11:50	33	OP	850	297	48,078	DS-105	
408	1/6/2023	187	188	12:45	31	LD	850	22	48,100	DS-106	
409	1/6/2023	138	179	15:01	33	LD	850	22	48,122		
410	1/6/2023	138	181	14:51	33	LD	850	22	48,144		
411	1/6/2023	138	182	14:47	33	LD	850	22	48,166		
412	1/6/2023	138	183	14:44	33	LD	850	22	48,188		
413	1/6/2023	138	185	14:41	33	LD	850	22	48,210		
414	1/6/2023	138	186	14:38	33	LD	850	22	48,232		
415	1/6/2023	138	187	14:30	33	LD	850	22	48,254		
416	1/11/2023	138	189	08:01	32	LD	850	156	48,410		
417	1/11/2023	189	190	08:04	33	OP	850	160	48,570	DS-107	
418	1/11/2023	190	191	08:25	33	OP	850	164	48,734		
419	1/11/2023	191	192	08:45	32	LD	850	47	48,781		
420	1/11/2023	191	193	09:01	32	LD	850	125	48,906		
421	1/11/2023	192	193	08:35	32	LD	850	22	48,928	DS-108	
422	1/11/2023	192	194	08:55	33	OP	850	47	48,975		
423	1/11/2023	193	194	09:02	33	OP	850	133	49,108	DS-109	
424	1/11/2023	194	195	09:10	32	LD	850	192	49,300		
425	1/11/2023	195	196	09:38	33	OP	850	159	49,459		
426	1/11/2023	195	197	10:01	33	OP	850	49	49,508		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
427	1/11/2023	196	197	09:57	32	LD	850	22	49,530		
428	1/11/2023	196	198	10:15	32	LD	850	159	49,689		
429	1/11/2023	197	198	10:11	32	LD	850	55	49,744		
430	1/11/2023	198	199	10:10	33	OP	850	222	49,966		
431	1/11/2023	199	200	10:49	33	OP	850	65	50,031		
432	1/11/2023	199	201	10:35	32	LD	850	165	50,196	DS-110	
433	1/11/2023	200	201	10:44	33	OP	850	22	50,218		
434	1/11/2023	187	189	11:15	33	OP	850	22	50,240		
435	1/11/2023	187	190	11:18	33	OP	850	22	50,262		
436	1/11/2023	187	191	11:21	33	OP	850	22	50,284		
437	1/11/2023	189	192	11:24	33	OP	850	22	50,306		
438	1/11/2023	189	194	11:27	33	OP	850	22	50,328		
439	1/11/2023	189	195	11:30	33	OP	850	22	50,350		
440	1/11/2023	188	196	11:33	33	OP	850	22	50,372		
441	1/11/2023	188	198	11:36	33	OP	850	22	50,394		
442	1/11/2023	188	199	11:39	33	OP	850	22	50,416		
443	1/11/2023	188	200	11:42	33	OP	850	22	50,438		
444	1/13/2023	200	202	09:06	32	LD	850	65	50,503	DS-111	
445	1/13/2023	201	202	08:48	32	LD	850	172	50,675		
446	1/13/2023	202	203	09:49	33	OP	850	251	50,926	DS-112	
447	1/13/2023	203	204	09:35	32	LD	850	148	51,074		
448	1/13/2023	203	205	09:50	32	LD	850	141	51,215		
449	1/13/2023	204	205	09:08	32	LD	850	22	51,237	DS-114	
450	1/13/2023	204	206	09:25	33	OP	850	148	51,385	DS-113	
451	1/13/2023	205	206	09:33	33	OP	850	141	51,526		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
452	1/13/2023	206	207	09:56	33	OP	850	118	51,644		
453	1/13/2023	207	208	10:14	32	LD	850	94	51,738	DS-115	
454	1/13/2023	208	209	10:20	33	OP	850	75	51,813		
455	1/13/2023	209	210	10:32	33	OP	850	38	51,851		
456	1/13/2023	188	202	10:42	32	LD	850	22	51,873		
457	1/13/2023	188	203	10:45	32	LD	850	22	51,895		
458	1/13/2023	188	204	10:48	32	LD	850	22	51,917		
459	1/13/2023	188	206	10:51	32	LD	850	22	51,939		
460	1/13/2023	188	207	10:54	32	LD	850	22	51,961		
461	1/13/2023	188	208	10:57	32	LD	850	22	51,983		
462	1/13/2023	188	209	11:00	32	LD	850	22	52,005		
463	1/13/2023	188	210	11:03	32	LD	850	22	52,027		
464	1/13/2023	211	212	12:38	33	OP	850	140	52,167		
465	1/13/2023	212	213	12:39	32	LD	850	138	52,305		
466	1/13/2023	213	214	12:57	33	OP	850	137	52,442	DS-117	
467	1/13/2023	214	215	13:06	32	LD	850	72	52,514		
468	1/13/2023	214	216	13:25	32	LD	850	68	52,582		
469	1/13/2023	215	216	13:20	32	LD	850	22	52,604	DS-116	
470	1/13/2023	215	217	13:28	33	OP	850	74	52,678		
471	1/13/2023	216	217	13:35	33	OP	850	68	52,746		
472	1/13/2023	217	218	13:36	32	LD	850	146	52,892		
473	1/13/2023	218	219	13:45	33	OP	850	150	53,042		
474	1/13/2023	219	220	13:55	32	LD	850	139	53,181		
475	1/13/2023	220	221	14:20	33	OP	850	128	53,309		
476	1/13/2023	221	222	14:30	32	LD	850	112	53,421		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
477	1/13/2023	222	223	14:42	32	LD	850	96	53,517		
478	1/13/2023	223	224	15:01	32	LD	850	36	53,553		
479	1/13/2023	223	225	15:05	32	LD	850	42	53,595		
480	1/13/2023	224	225	14:52	32	LD	850	22	53,617		
481	1/13/2023	210	211	15:07	33	OP	850	22	53,639		
482	1/13/2023	210	212	15:10	33	OP	850	22	53,661		
483	1/13/2023	210	213	15:13	33	OP	850	9	53,670		
484	1/13/2023	209	213	15:14	33	OP	850	13	53,683		
485	1/13/2023	209	214	15:16	33	OP	850	22	53,705		
486	1/13/2023	209	215	15:19	33	OP	850	7	53,712		
487	1/13/2023	208	215	15:20	33	OP	850	15	53,727		
488	1/13/2023	208	217	15:22	33	OP	850	22	53,749		
489	1/13/2023	207	218	15:28	33	OP	850	22	53,771		
490	1/13/2023	207	219	15:30	33	OP	850	10	53,781		
491	1/13/2023	206	219	15:10	32	LD	850	14	53,795		
492	1/13/2023	206	220	15:13	32	LD	850	26	53,821		
493	1/13/2023	206	221	15:17	32	LD	850	26	53,847		
494	1/13/2023	206	222	15:21	32	LD	850	26	53,873		
495	1/13/2023	206	223	15:25	32	LD	850	26	53,899		
496	1/13/2023	206	204	15:29	32	LD	850	26	53,925		
497	1/14/2023	221	226	08:10	32	LD	850	145	54,070		
498	1/14/2023	226	211	08:12	33	OP	850	110	54,180	DS-118	
499	1/14/2023	226	228	08:25	33	OP	850	50	54,230		
500	1/14/2023	227	228	08:28	32	LD	850	22	54,252	DS-119	
501	1/14/2023	227	229	08:35	32	LD	850	110	54,362		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
502	1/14/2023	228	229	08:48	33	OP	850	50	54,412		
503	1/14/2023	229	230	08:46	32	LD	850	163	54,575		
504	1/14/2023	230	231	08:55	33	OP	850	163	54,738		
505	1/14/2023	231	232	09:26	33	OP	850	153	54,891		
506	1/14/2023	231	233	09:30	33	OP	850	13	54,904		
507	1/14/2023	232	233	09:24	33	OP	850	22	54,926		
508	1/14/2023	232	234	09:22	32	LD	850	153	55,079		
509	1/14/2023	233	234	09:35	32	LD	850	13	55,092		
510	1/14/2023	234	235	09:38	32	LD	850	170	55,262	DS-120	
511	1/14/2023	235	236	09:44	33	OP	850	170	55,432		
512	1/14/2023	226	188	10:44	32	LD	850	13	55,445		
513	1/14/2023	226	186	10:15	32	LD	850	5	55,450		
514	1/14/2023	227	186	10:16	32	LD	850	22	55,472		
515	1/14/2023	229	185	10:17	32	LD	850	22	55,494		
516	1/14/2023	230	184	10:23	32	LD	850	19	55,513	DS-121	
517	1/14/2023	231	184	10:25	32	LD	850	13	55,526		
518	1/14/2023	231	183	10:26	32	LD	850	9	55,535		
519	1/14/2023	232	183	10:29	32	LD	850	17	55,552		
520	1/14/2023	232	181	10:30	32	LD	850	5	55,557		
521	1/14/2023	234	181	10:32	32	LD	850	22	55,579		
522	1/14/2023	235	180	10:35	32	LD	850	22	55,601		
523	1/14/2023	236	178	10:48	32	LD	850	17	55,618		
524	1/17/2023	236	237	13:13	32	LD	850	173	55,791		
525	1/17/2023	237	238	08:26	33	OP	850	206	55,997	DS-122	
526	1/17/2023	238	239	08:28	32	LD	850	211	56,208	DS-123	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
527	1/17/2023	239	240	09:06	32	LD	850	20	56,228		
528	1/17/2023	239	241	09:08	32	LD	850	213	56,441		
529	1/17/2023	240	241	08:55	33	OP	850	22	56,463		
530	1/17/2023	240	242	09:04	33	OP	850	20	56,483		
531	1/17/2023	240	243	09:08	33	OP	850	20	56,503		
532	1/17/2023	241	243	09:09	33	OP	850	215	56,718	DS-124	
533	1/17/2023	242	243	08:56	33	OP	850	22	56,740		
534	1/17/2023	242	244	09:37	33	OP	850	40	56,780		
535	1/17/2023	243	244	09:43	33	OP	850	240	57,020		
536	1/17/2023	243	245	10:04	33	OP	850	36	57,056		
537	1/17/2023	244	245	09:33	32	LD	850	22	57,078	DS-125	
538	1/17/2023	244	246	09:45	32	LD	850	240	57,318		
539	1/17/2023	245	246	10:22	32	LD	850	36	57,354		
540	1/17/2023	246	247	10:21	33	OP	850	254	57,608	DS-126	
541	1/17/2023	248	248	10:45	32	LD	850	95	57,703		
542	1/17/2023	247	249	10:55	32	LD	850	137	57,840		
543	1/17/2023	248	249	10:36	32	LD	850	133	57,973		
544	1/17/2023	248	250	11:27	32	LD	850	48	58,021		
545	1/17/2023	248	251	11:25	32	LD	850	22	58,043		
546	1/17/2023	249	251	11:00	32	LD	850	135	58,178	DS-127	
547	1/17/2023	250	251	10:38	32	LD	850	22	58,200		
548	1/17/2023	250	252	10:07	33	OP	850	28	58,228		
549	1/17/2023	241	252	10:52	33	OP	850	157	58,385		
550	1/17/2023	252	253	13:17	33	OP	850	174	58,559		
551	1/17/2023	253	254	13:40	33	OP	850	177	58,736	DS-128	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
552	1/17/2023	254	255	14:03	33	OP	850	175	58,911		
553	1/17/2023	255	256	14:24	33	OP	850	172	59,083		
554	1/17/2023	256	257	14:44	33	OP	850	156	59,239		
555	1/17/2023	256	258	15:00	33	OP	850	14	59,253		
556	1/17/2023	257	258	15:02	33	OP	850	22	59,275		
557	1/17/2023	257	259	14:24	33	OP	850	155	59,430		
558	1/17/2023	258	259	15:09	33	OP	850	16	59,446		
559	1/17/2023	259	260	15:27	33	OP	850	178	59,624		
560	1/17/2023	237	178	13:30	32	LD	850	7	59,631		
561	1/17/2023	237	176	13:32	32	LD	850	20	59,651		
562	1/17/2023	238	175	13:34	32	LD	850	23	59,674		
563	1/17/2023	238	173	13:35	32	LD	850	4	59,678		
564	1/17/2023	239	173	13:37	32	LD	850	18	59,696		
565	1/17/2023	239	171	13:40	32	LD	850	12	59,708		
566	1/17/2023	240	171	13:41	32	LD	850	10	59,718		
567	1/17/2023	240	170	13:42	32	LD	850	20	59,738		
568	1/17/2023	242	169	13:44	32	LD	850	21	59,759		
569	1/17/2023	242	167	13:46	32	LD	850	6	59,765		
570	1/17/2023	244	167	13:47	32	LD	850	15	59,780		
571	1/17/2023	244	112	14:30	32	LD	850	33	59,813		
572	1/17/2023	246	122	14:32	32	LD	850	33	59,846		
573	1/17/2023	247	122	14:36	32	LD	850	33	59,879	DS-130	
574	1/17/2023	248	122	14:40	32	LD	850	33	59,912		
575	1/17/2023	250	122	15:11	32	LD	850	33	59,945		
576	1/17/2023	252	122	15:15	32	LD	850	24	59,969		

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
577	1/17/2023	253	122	15:18	32	LD	850	24	59,993		
578	1/17/2023	254	111	15:21	32	LD	850	24	60,017	DS-129	
579	1/17/2023	255	111	15:24	32	LD	850	24	60,041		
580	1/17/2023	256	110	15:27	32	LD	850	23	60,064		
581	1/17/2023	257	110	15:50	32	LD	850	14	60,078		
582	1/17/2023	257	109	15:52	32	LD	850	8	60,086		
583	1/17/2023	259	109	15:53	32	LD	850	23	60,109		
584	1/20/2023	260	109	10:35	9	BM	270	7	60,116		
585	1/17/2023	260	108	15:59	32	LD	850	16	60,132		
586	1/23/2023	260	261	08:40	32	LD	850	183	60,315		
587	1/23/2023	261	262	09:10	32	LD	850	93	60,408	DS-131	
588	1/23/2023	261	263	09:22	32	LD	850	100	60,508		
589	1/23/2023	262	263	09:05	33	OP	850	22	60,530		
590	1/23/2023	262	264	09:27	33	OP	850	88	60,618		
591	1/23/2023	263	264	09:14	33	OP	850	114	60,732		
592	1/23/2023	264	265	09:41	33	OP	850	209	60,941	DS-132	
593	1/23/2023	265	266	09:52	32	LD	850	141	61,082		
594	1/23/2023	265	267	09:42	32	LD	850	73	61,155		
595	1/23/2023	266	267	09:40	32	LD	850	22	61,177		
596	1/23/2023	266	268	10:12	33	OP	850	134	61,311		
597	1/23/2023	267	268	10:03	33	OP	850	82	61,393	DS-133	
598	1/23/2023	268	269	10:10	32	LD	850	219	61,612		
599	1/23/2023	269	270	10:33	32	LD	850	168	61,780		
600	1/23/2023	269	271	10:30	32	LD	850	44	61,824		
601	1/23/2023	270	271	10:39	33	OP	850	22	61,846		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
602	1/23/2023	270	272	10:44	33	OP	850	160	62,006		
603	1/23/2023	271	272	10:39	33	OP	850	60	62,066		
604	1/23/2023	261	108	12:37	32	LD	850	23	62,089		
605	1/23/2023	262	106	12:40	32	LD	850	23	62,112		
606	1/23/2023	264	106	12:43	32	LD	850	23	62,135		
607	1/23/2023	265	104	12:46	32	LD	850	23	62,158		
608	1/23/2023	266	104	12:49	32	LD	850	22	62,180		
609	1/23/2023	266	102	14:05	9	SA	850	4	62,184		
610	1/23/2023	268	102	12:52	32	LD	850	5	62,189		
611	1/23/2023	268	103	12:53	32	LD	850	18	62,207		
612	1/23/2023	269	103	12:55	32	LD	850	23	62,230		
613	1/23/2023	270	103	13:00	32	LD	850	23	62,253		
614	2/7/2023	272	273	07:49	32	LD	850	65	62,318		
615	2/7/2023	273	274	11:00	32	LD	850	61	62,379		
616	2/7/2023	274	275	09:05	33	OP	850	118	62,497	DS-134	
617	2/7/2023	275	276	10:00	33	OP	850	167	62,664		
618	2/11/2023	276	284	08:30	33	SS	850	194	62,858	DS-136	
619	2/11/2023	284	285	08:40	33	SS	850	98	62,956		
620	2/11/2023	285	R564	08:40	33	SS	850	51	63,007		
621	2/11/2023	285	R565	14:00	33	SS	850	28	63,035		
622	2/11/2023	R564	R564	14:05	6	SS	850	5	63,040		
623	2/11/2023	277	R564	10:00	6	SS	850	28	63,068		
624	2/11/2023	277	R565	14:10	6	SS	850	51	63,119		
625	2/11/2023	284	277	09:05	33	SS	850	18	63,137		
626	2/11/2023	284	278	09:10	33	SS	850	73	63,210		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
627	2/11/2023	285	277	12:42	6	SS	850	20	63,230		
628	2/7/2023	277	278	08:52	32	LD	850	22	63,252		
629	2/7/2023	277	279	09:05	32	LD	850	117	63,369		
630	2/7/2023	278	279	08:15	32	LD	850	70	63,439		
631	2/7/2023	279	280	08:33	33	OP	850	184	63,623		
632	2/7/2023	280	281	08:26	33	OP	850	181	63,804		
633	2/7/2023	281	282	07:58	32	LD	850	173	63,977	DS-135	
634	2/10/2023	272	274	11:00	33	SS	850	22	63,999		
635	2/10/2023	272	275	12:40	33	SS	850	22	64,021		
636	2/10/2023	272	276	13:01	6	SS	850	22	64,043		
637	2/10/2023	272	100	09:25	6	SS	270	22	64,065		
638	2/10/2023	273	98	09:30	6	SS	270	22	64,087		
639	2/10/2023	274	98	09:35	6	SS	270	22	64,109		
640	2/10/2023	275	98	08:45	6	SS	270	5	64,114		
641	2/10/2023	275	96	08:42	6	SS	270	15	64,129		
642	2/10/2023	276	96	08:30	6	SS	270	22	64,151		
643	2/10/2023	284	96	08:25	6	SS	270	7	64,158		
644	2/10/2023	284	95	08:23	6	SS	270	5	64,163		
645	2/10/2023	285	95	08:20	33	SS	282	22	64,185		
646	2/11/2023	R565	95	08:15	6	SS	270	8	64,193		
647	2/10/2023	277	95	14:20	6	SS	270	22	64,215		
648	2/10/2023	279	165	14:25	6	SS	270	22	64,237		
649	2/10/2023	280	165	14:10	6	SS	270	22	64,259		
650	2/10/2023	281	165	14:02	6	SS	270	22	64,281		
651	2/10/2023	282	165	13:25	6	SS	270	22	64,303		

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
652	2/7/2023	282	283	07:58	32	LD	850	169	64,472		
653	2/13/2023	283	286	08:00	33	NS	850	170	64,642		
654	2/13/2023	286	287	08:15	33	NS	850	130	64,772	DS-137	
655	2/13/2023	288	289	08:54	33	NS	850	140	64,912		
656	2/13/2023	289	290	10:15	33	NS	850	149	65,061		
657	2/15/2023	290	291	10:49	33	NS	850	159	65,220		
658	2/15/2023	291	R581	10:46	33	NS	850	7	65,227		
659	2/13/2023	291	292	11:13	33	NS	850	184	65,411	S-138, DS-139	
660	2/15/2023	283	165	14:28	6	SS	270	22	65,433		
661	2/15/2023	286	165	14:15	6	SS	270	22	65,455		
662	2/15/2023	286	R581	14:02	6	SS	270	8	65,463		
663	2/15/2023	286	291	13:35	6	SS	270	22	65,485		
664	2/15/2023	287	292	13:38	6	SS	270	22	65,507		
665	2/15/2023	R581	164	13:10	6	SS	270	22	65,529		
666	2/13/2023	290	R581	13:05	6	SS	270	5	65,534		
667	2/13/2023	290	164	14:45	6	SS	270	22	65,556		
668	2/13/2023	289	164	14:35	6	SS	270	7	65,563		
669	2/13/2023	289	163	14:25	6	SS	270	15	65,578		
670	2/13/2023	288	163	14:20	6	SS	270	7	65,585		
671	2/13/2023	288	35	14:10	6	SS	270	15	65,600		
672	2/13/2023	288	33	14:00	6	SS	270	15	65,615		
673	2/13/2023	288	161	13:50	6	SS	270	22	65,637		
674	2/13/2023	288	158	14:42	6	SS	270	22	65,659		
675	2/13/2023	288	157	13:30	6	SS	270	22	65,681		
676	2/13/2023	288	156	13:21	6	SS	270	22	65,703		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
677	2/13/2023	288	155	13:10	6	SS	270	22	65,725		
678	2/13/2023	288	154	13:00	6	SS	270	22	65,747		
679	2/18/2023	292	293	08:39	32	LD	850	172	65,919	DS-140	
680	2/18/2023	293	294	08:34	31	OP	850	178	66,097	DS-141	
681	2/18/2023	294	295	08:40	33	SS	850	185	66,282		
682	2/18/2023	295	296	09:31	31	OP	850	89	66,371		
683	2/18/2023	295	297	09:43	31	OP	850	105	66,476		
684	2/18/2023	296	297	09:09	31	OP	850	22	66,498		
685	2/18/2023	296	298	09:35	33	SS	850	94	66,592		
686	2/18/2023	297	298	09:40	33	SS	850	110	66,702		
687	2/18/2023	298	299	09:22	32	LD	850	211	66,913		
688	2/18/2023	299	300	10:07	33	SS	850	148	67,061		
689	2/18/2023	299	301	10:00	33	SS	850	71	67,132		
690	2/18/2023	300	301	09:53	32	LD	850	22	67,154		
691	2/18/2023	300	302	10:14	32	LD	850	149	67,303		
692	2/18/2023	301	302	10:01	32	LD	850	76	67,379		
693	2/18/2023	302	303	10:07	31	OP	850	231	67,610	DS-143	
694	2/18/2023	303	304	10:42	33	SS	850	151	67,761	DS-144	
695	2/18/2023	303	305	10:30	33	SS	850	100	67,861		
696	2/18/2023	304	305	10:25	33	SS	850	22	67,883		
697	2/18/2023	304	306	10:43	32	LD	850	147	68,030		
698	2/18/2023	305	306	10:32	32	LD	850	104	68,134	DS-145	
699	2/18/2023	287	292	14:15	32	LD	850	22	68,156		
700	2/18/2023	287	294	14:20	32	LD	850	22	68,178		
701	2/18/2023	287	295	14:23	32	LD	850	22	68,200		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
702	2/18/2023	287	298	14:26	32	LD	850	22	68,222	DS-147	
703	2/18/2023	287	298	14:29	32	LD	850	22	68,244		
704	2/18/2023	323	299	14:01	33	SS	850	22	68,266		
705	2/18/2023	323	301	14:05	33	SS	850	22	68,288		
706	2/18/2023	323	302	14:07	33	SS	850	22	68,310		
707	2/18/2023	323	303	14:10	33	SS	850	22	68,332		
708	2/18/2023	323	305	14:12	33	SS	850	22	68,354		
709	2/18/2023	303	306	14:14	33	SS	850	22	68,376		
710	2/18/2023	322	323	14:17	33	SS	850	130	68,506	DS-146	
711	2/18/2023	322	306	14:29	31	OP	850	22	68,528	DS-147	
712	2/18/2023	306	321	14:32	31	OP	850	22	68,550		
713	2/18/2023	306	320	14:35	31	OP	850	22	68,572		
714	2/18/2023	306	319	14:38	31	OP	850	22	68,594		
715	2/18/2023	306	318	14:41	31	OP	850	22	68,616		
716	2/18/2023	306	317	14:45	31	OP	850	22	68,638		
717	2/18/2023	306	315	14:47	31	OP	850	22	68,660		
718	2/18/2023	306	314	14:50	31	OP	850	22	68,682		
719	2/18/2023	306	313	14:53	31	OP	850	22	68,704		
720	2/18/2023	306	312	14:56	31	OP	850	22	68,726		
721	2/18/2023	306	311	14:59	31	OP	850	22	68,748		
722	2/18/2023	306	307	10:40	31	OP	850	22	68,770		
723	2/18/2023	307	308	12:24	32	LD	850	115	68,885		
724	2/18/2023	308	309	12:45	32	LD	850	25	68,910		
725	2/18/2023	308	310	12:50	32	LD	850	45	68,955		
726	2/18/2023	308	311	12:50	31	OP	850	46	69,001		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
727	2/18/2023	309	310	12:40	32	LD	850	32	69,033		
728	2/18/2023	310	311	12:41	31	OP	850	73	69,106		
729	2/18/2023	311	312	12:45	33	SS	850	121	69,227		
730	2/18/2023	312	313	13:03	33	SS	850	122	69,349		
731	2/18/2023	313	314	14:56	32	LD	850	123	69,472		
732	2/18/2023	314	315	12:59	31	OP	850	124	69,596		
733	2/18/2023	315	316	13:14	32	LD	850	70	69,666		
734	2/18/2023	315	317	13:22	32	LD	850	53	69,719		
735	2/18/2023	316	317	13:22	31	OP	850	22	69,741		
736	2/18/2023	316	318	13:21	33	SS	850	70	69,811		
737	2/18/2023	318	319	13:30	31	OP	850	125	69,936		
738	2/18/2023	319	320	13:31	32	LD	850	126	70,062		
739	2/18/2023	320	321	12:35	33	SS	850	128	70,190		
740	2/18/2023	317	318	13:30	33	SS	850	54	70,244		
741	2/18/2023	321	322	13:48	32	LD	850	129	70,373		
742	2/19/2023	323	324	07:58	31	OP	850	260	70,633	DS-149	
743	2/19/2023	324	325	08:20	32	LD	850	171	70,804	DS-150	
744	2/19/2023	324	326	08:38	32	LD	850	109	70,913		
745	2/19/2023	325	326	08:10	32	LD	850	22	70,935		
746	2/19/2023	325	327	08:35	31	OP	850	171	71,106		
747	2/19/2023	326	327	08:55	31	OP	850	106	71,212		
748	2/19/2023	327	328	08:25	33	SS	850	270	71,482	DS-151	
749	2/19/2023	328	329	08:45	33	SS	850	266	71,748		
750	2/19/2023	329	330	08:56	32	LD	850	262	72,010		
751	2/19/2023	330	331	09:25	33	SS	850	147	72,157		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
752	2/19/2023	330	332	09:39	33	SS	850	111	72,268	DS-154	
753	2/19/2023	331	332	09:18	31	OP	850	22	72,290		
754	2/19/2023	331	333	09:25	31	OP	850	142	72,432	DS-152	
755	2/19/2023	332	333	09:44	31	OP	850	99	72,531		
756	2/19/2023	333	334	09:36	32	LD	850	223	72,754	DS-153	
757	2/19/2023	334	335	09:40	32	LD	850	114	72,868		
758	2/19/2023	334	336	10:15	32	LD	850	98	72,966		
759	2/19/2023	335	336	09:15	32	LD	850	22	72,988		
760	2/19/2023	335	337	12:17	33	SS	850	113	73,101		
761	2/19/2023	336	337	12:50	33	SS	850	72	73,173		
762	2/19/2023	337	338	12:26	32	LD	850	192	73,365		
763	2/19/2023	338	339	12:34	31	OP	850	183	73,548		
764	2/19/2023	339	340	13:15	33	SS	850	175	73,723	DS-155	
765	2/19/2023	340	341	13:19	31	OP	850	174	73,897	DS-156	
766	2/19/2023	341	342	13:30	32	LD	850	172	74,069	DS-157	
767	2/19/2023	342	343	13:35	33	SS	850	174	74,243		
768	2/19/2023	343	344	13:45	31	OP	850	176	74,419		
769	2/19/2023	344	345	13:52	32	LD	850	183	74,602		
770	2/19/2023	345	346	14:00	33	SS	850	189	74,791		
771	2/19/2023	346	347	14:05	31	OP	850	123	74,914		
772	2/19/2023	346	348	14:18	31	OP	850	71	74,985		
773	2/19/2023	347	348	14:17	32	LD	850	22	75,007		
774	2/19/2023	323	287	10:45	33	SS	850	22	75,029		
775	2/19/2023	324	286	10:40	33	SS	850	22	75,051		
776	2/19/2023	325	283	10:37	33	SS	850	22	75,073		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
777	2/19/2023	327	282	10:35	33	SS	850	22	75,095		
778	2/19/2023	328	281	10:33	33	SS	850	22	75,117		
779	2/19/2023	329	280	10:27	33	SS	850	22	75,139		
780	2/19/2023	330	279	10:25	33	SS	850	22	75,161		
781	2/19/2023	331	278	10:52	31	OP	850	22	75,183		
782	2/19/2023	333	276	10:50	31	OP	850	7	75,190		
783	2/19/2023	333	272	10:48	31	OP	850	15	75,205		
784	2/19/2023	334	272	10:46	31	OP	850	5	75,210		
785	2/19/2023	334	271	10:44	31	OP	850	17	75,227		
786	2/19/2023	335	271	10:41	31	OP	850	19	75,246		
787	2/19/2023	335	269	10:40	31	OP	850	22	75,268		
788	2/19/2023	337	269	15:25	33	TV	850	10	75,278		
789	2/19/2023	337	268	15:24	33	TV	850	12	75,290		
790	2/19/2023	338	268	15:23	33	TV	850	14	75,304		
791	2/19/2023	338	267	15:22	33	TV	850	8	75,312		
792	2/19/2023	339	267	13:21	33	TV	850	17	75,329		
793	2/19/2023	339	265	13:20	33	TV	850	5	75,334		
794	2/19/2023	340	265	15:19	33	TV	850	22	75,356		
795	2/19/2023	341	264	15:17	33	TV	850	22	75,378		
796	2/19/2023	342	263	15:13	33	TV	850	22	75,400		
797	2/19/2023	343	261	15:10	33	TV	850	20	75,420		
798	2/19/2023	344	261	15:05	33	TV	850	7	75,427		
799	2/19/2023	344	260	15:03	33	TV	850	13	75,440		
800	2/19/2023	345	260	15:02	33	TV	850	9	75,449		
801	2/19/2023	345	259	15:01	33	TV	850	13	75,462		

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Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
802	2/19/2023	346	259	15:00	33	TV	850	10	75,472		
803	2/19/2023	346	258	14:58	33	TV	850	12	75,484		
804	2/19/2023	347	258	14:56	33	TV	850	11	75,495		
805	2/19/2023	347	256	14:40	33	TV	850	11	75,506		
806	2/20/2023	347	249	09:37	33	SS	850	123	75,629		
807	2/20/2023	348	349	09:55	33	SS	850	73	75,702		
808	2/20/2023	349	350	09:46	33	SS	850	204	75,906	DS-158	
809	2/20/2023	350	351	10:15	33	SS	850	202	76,108	DS-159	
810	2/20/2023	349	255	12:42	33	SS	850	9	76,117		
811	2/20/2023	350	255	12:44	33	SS	850	12	76,129		
812	2/20/2023	350	254	12:46	33	SS	850	10	76,139		
813	2/20/2023	351	254	12:48	33	SS	850	12	76,151		
814	2/20/2023	351	253	12:50	33	SS	850	10	76,161		
815	2/20/2023	351	353	13:19	33	TV	850	134	76,295		
816	2/20/2023	351	352	12:57	33	TV	850	22	76,317		
817	2/20/2023	352	353	13:07	33	TV	850	73	76,390	DS-160	
818	2/20/2023	352	354	13:45	33	TV	850	134	76,524		
819	2/20/2023	353	354	13:33	33	TV	850	134	76,658		
820	2/20/2023	354	355	13:56	33	TV	850	209	76,867		
821	2/20/2023	355	356	14:46	33	TV	850	139	77,006	DS-161	
822	2/20/2023	355	357	14:40	33	TV	850	59	77,065		
823	2/20/2023	356	357	14:36	33	TV	850	15	77,080		
824	2/20/2023	356	R713	15:35	33	SS	850	39	77,119		
825	2/20/2023	357	358	15:35	33	SS	850	59	77,178		
826	2/20/2023	R713	358	15:40	33	TV	850	39	77,217		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
827	2/20/2023	356	358	15:50	33	SS	850	90	77,307		
828	2/20/2023	351	254	12:48	33	SS	850	12	77,319		
829	2/20/2023	351	253	12:50	33	SS	850	10	77,329		
830	2/23/2023	352	253	08:10	33	SS	850	12	77,341		
831	2/23/2023	354	252	08:07	33	SS	850	10	77,351		
832	2/23/2023	354	251	08:06	33	SS	850	11	77,362		
833	2/23/2023	355	251	08:05	33	SS	850	11	77,373		
834	2/23/2023	355	249	08:02	33	SS	850	15	77,388		
835	2/23/2023	356	249	08:00	33	SS	850	7	77,395		
836	2/23/2023	R713	247	13:50	33	SS	850	22	77,417		
837	2/23/2023	358	240	08:08	6	SS	270	22	77,439		
838	2/24/2023	358	359	08:17	4	TV	850	191	77,630	DS-162	
839	2/24/2023	359	360	08:25	33	SS	850	191	77,821	DS-163	
840	2/24/2023	360	361	08:52	33	SS	850	42	77,863		
841	2/24/2023	360	362	09:10	33	SS	850	58	77,921		
842	2/24/2023	360	363	09:02	33	SS	850	58	77,979		
843	2/24/2023	360	364	09:57	33	SS	850	20	77,999		
844	2/24/2023	361	362	09:10	4	TV	850	42	78,041		
845	2/24/2023	362	363	09:20	4	TV	850	92	78,133		
846	2/24/2023	363	364	09:34	33	SS	850	148	78,281		
847	2/24/2023	363	365	09:35	4	TV	850	168	78,449		
848	2/24/2023	359	245	10:20	33	SS	850	17	78,466		
849	2/24/2023	359	243	12:15	33	SS	850	5	78,471		
850	2/24/2023	360	243	10:15	33	SS	850	15	78,486		
851	2/24/2023	360	241	12:10	33	SS	850	22	78,508		

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
852	2/24/2023	361	241	10:12	33	SS	850	22	78,530		
853	2/24/2023	362	239	10:10	33	SS	850	22	78,552		
854	2/24/2023	363	238	10:07	33	SS	850	22	78,574		
855	2/24/2023	364	237	10:05	33	SS	850	22	78,596		
856	2/24/2023	365	236	10:00	33	SS	850	22	78,618		
857	2/24/2023	366	367	12:40	33	SS	850	78	78,696		
858	2/24/2023	367	368	12:59	4	TV	850	132	78,828	DS-164	
859	2/24/2023	368	369	13:00	B	SS	850	137	78,965	DS-165	
860	2/24/2023	369	370	13:12	4	TV	850	137	79,102		
861	2/24/2023	370	371	13:40	33	TV	850	84	79,186		
862	2/24/2023	370	372	13:22	4	SS	850	80	79,266		
863	2/24/2023	371	372	13:42	4	TV	850	22	79,288		
864	2/24/2023	371	373	14:05	33	SS	850	84	79,372		
865	2/24/2023	372	374	14:15	33	SS	850	80	79,452		
866	2/24/2023	373	374	14:26	33	SS	850	196	79,648		
867	2/24/2023	374	375	14:56	33	SS	850	48	79,696	DS-166	
868	2/24/2023	374	376	15:01	33	SS	850	171	79,867		
869	2/24/2023	375	376	14:52	33	SS	850	22	79,889		
870	2/24/2023	375	377	15:12	33	SS	850	48	79,937		
871	2/24/2023	376	377	15:18	33	SS	850	171	80,108		
872	2/24/2023	366	307	14:47	4	TV	850	22	80,130		
873	2/24/2023	367	308	14:44	4	TV	850	22	80,152		
874	2/24/2023	368	309	14:38	4	TV	850	15	80,167		
875	2/24/2023	368	310	14:35	4	TV	850	10	80,177		
876	2/24/2023	369	310	14:33	4	TV	850	12	80,189		

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
877	2/24/2023	369	311	14:50	4	TV	850	10	80,199		
878	2/24/2023	370	311	14:51	4	TV	850	12	80,211		
879	2/24/2023	370	312	14:53	4	TV	850	10	80,221		
880	2/24/2023	371	312	14:54	4	TV	850	12	80,233		
881	2/24/2023	371	313	14:55	4	TV	850	10	80,243		
882	2/24/2023	373	313	14:56	4	TV	850	11	80,254		
883	2/24/2023	373	314	14:57	4	TV	850	11	80,265		
884	2/24/2023	374	314	14:58	4	TV	850	19	80,284		
885	2/24/2023	374	315	14:59	4	TV	850	3	80,287		
886	2/24/2023	375	317	15:02	4	TV	850	18	80,305		
887	2/24/2023	377	318	15:04	4	TV	850	4	80,309		
888	2/25/2023	377	378	08:42	4	TV	850	22	80,331		
889	2/25/2023	378	319	08:48	4	TV	850	22	80,353		
890	2/28/2023	380	365	08:20	33	SS	850	39	80,392	DS-167	
891	2/28/2023	379	365	08:00	33	SS	850	138	80,530		
892	2/28/2023	379	380	08:15	33	SS	850	22	80,552		
893	2/28/2023	379	381	08:30	33	SS	850	137	80,689		
894	2/28/2023	380	381	08:40	33	SS	850	37	80,726		
895	2/28/2023	381	382	08:52	33	SS	850	180	80,906		
896	2/28/2023	382	383	08:12	33	SS	850	142	81,048	DS-168	
897	2/28/2023	383	384	09:40	33	SS	850	104	81,152		
898	2/28/2023	383	385	09:50	33	SS	850	78	81,230		
899	2/28/2023	384	385	09:35	33	SS	850	22	81,252		
900	2/28/2023	384	386	10:00	33	SS	850	104	81,356		
901	2/28/2023	385	386	10:12	33	SS	850	78	81,434		

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By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
902	2/28/2023	386	387	10:25	33	SS	850	180	81,614	DS-169	
903	2/28/2023	387	388	10:42	33	SS	850	180	81,794		
904	2/28/2023	388	389	12:23	33	SS	850	53	81,847		
905	2/28/2023	388	390	12:30	33	SS	850	128	81,975		
906	2/28/2023	389	390	12:20	33	SS	850	22	81,997	DS-170	
907	2/28/2023	389	391	12:44	33	SS	850	53	82,050		
908	2/28/2023	390	391	12:50	33	SS	850	128	82,178		
909	2/28/2023	391	392	13:03	33	SS	850	185	82,363		
910	2/28/2023	392	393	13:22	33	SS	850	186	82,549		
911	2/28/2023	379	335	14:20	6	SS	850	22	82,571		
912	2/28/2023	381	334	14:35	6	SS	850	22	82,593		
913	2/28/2023	382	333	14:42	6	SS	850	22	82,615		
914	2/28/2023	383	331	14:50	6	SS	850	22	82,637		
915	2/28/2023	384	330	14:58	6	SS	850	22	82,659		
916	2/28/2023	386	329	15:10	6	SS	850	22	82,681		
917	3/1/2023	387	228	07:12	6	SS	850	22	82,703		
918	3/1/2023	389	211	08:24	6	SS	850	22	82,725		
919	3/1/2023	391	212	08:37	6	SS	850	22	82,747		
920	3/1/2023	392	213	08:47	6	SS	850	22	82,769		
921	3/1/2023	393	214	08:52	6	SS	850	22	82,791		
922	3/2/2023	393	394	07:50	33	SS	850	187	82,978	DS-171	
923	3/2/2023	394	395	08:17	33	SS	850	188	83,166		
924	3/2/2023	395	396	08:45	33	SS	850	190	83,356	DS-172	
925	3/2/2023	396	397	09:30	33	SS	850	117	83,473		
926	3/2/2023	396	398	09:16	33	SS	850	80	83,553		

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
927	3/2/2023	397	398	09:07	33	SS	850	22	83,575		
928	3/2/2023	397	399	10:00	33	SS	850	117	83,692		
929	3/2/2023	398	399	09:42	33	SS	850	80	83,772		
930	3/2/2023	399	400	10:17	33	SS	850	196	83,968	DS-173	
931	3/2/2023	400	401	10:25	33	SS	850	197	84,165		
932	3/2/2023	401	402	11:05	33	SS	850	198	84,363	DS-174	
933	3/7/2023	394	216	09:45	6	BM	850	22	84,385		
934	3/2/2023	395	217	14:05	6	SS	850	22	84,407		
935	3/2/2023	396	218	13:51	6	SS	850	22	84,429		
936	3/2/2023	397	219	13:41	6	SS	850	22	84,451		
937	3/2/2023	399	220	13:30	6	SS	850	22	84,473		
938	3/2/2023	400	221	13:25	6	SS	850	22	84,495		
939	3/2/2023	401	222	13:15	6	SS	850	22	84,517		
940	3/2/2023	402	223	13:00	6	SS	850	22	84,539		
941	3/9/2023	403	404	09:19	99	LD	850	183	84,722		
942	3/9/2023	404	405	09:33	99	LD	850	382	85,104	DS-175	
943	3/9/2023	405	406	09:51	32	OP	850	210	85,314	DS-176	
944	3/9/2023	405	407	10:14	32	OP	850	270	85,584	DS-177	
945	3/9/2023	406	407	10:02	33	SS	850	22	85,606		
946	3/9/2023	406	408	10:23	33	SS	850	136	85,742		
947	3/9/2023	406	409	10:35	33	SS	850	93	85,835		
948	3/9/2023	408	409	10:25	32	LD	850	93	85,928		
949	3/9/2023	408	410	10:40	32	LD	850	93	86,021		
950	3/9/2023	409	410	10:50	32	LD	850	93	86,114		
951	3/9/2023	407	409	10:45	33	SS	850	93	86,207		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
952	3/9/2023	410	411	12:48	32	OP	850	93	86,300	DS-178	
953	3/9/2023	410	412	10:51	32	OP	850	93	86,393		
954	3/9/2023	411	412	12:42	32	OP	850	93	86,486		
955	3/9/2023	411	413	13:15	33	SS	850	93	86,579	DS-179	
956	3/9/2023	411	414	13:05	33	SS	850	93	86,672		
957	3/9/2023	412	414	13:00	33	SS	850	93	86,765		
958	3/9/2023	413	414	13:10	99	LD	850	93	86,858	DS-180	
959	3/10/2023	413	415	12:50	31	SS	850	302	87,160		
960	3/10/2023	413	416	13:25	31	SS	850	91	87,251	DS-181	
961	3/10/2023	414	416	13:30	31	SS	850	193	87,444		
962	3/10/2023	415	416	12:55	99	LD	850	22	87,466		
963	3/10/2023	416	417	13:02	31	OP	850	300	87,766		
964	3/10/2023	416	417	13:35	99	LD	850	98	87,864		
965	3/10/2023	416	418	13:40	99	LD	850	202	88,066	DS-182	
966	3/10/2023	417	418	13:18	32	OP	850	22	88,088		
967	3/10/2023	418	420	14:15	32	OP	850	214	88,302		
968	3/10/2023	419	420	13:04	32	OP	850	22	88,324	DS-183	
969	3/10/2023	419	421	14:25	31	SS	850	76	88,400		
970	3/10/2023	419	422	14:30	31	SS	850	61	88,461		
971	3/10/2023	420	422	14:37	31	SS	850	480	88,941	DS-184	
972	3/10/2023	421	422	14:30	31	SS	850	22	88,963		
973	3/10/2023	421	423	14:45	99	LD	850	37	89,000	DS-185	
974	3/10/2023	421	424	14:49	99	LD	850	35	89,035		
975	3/10/2023	423	424	14:41	99	LD	850	22	89,057		
976	3/10/2023	423	425	15:00	32	OP	850	38	89,095		

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
977	3/10/2023	424	425	13:03	32	OP	850	606	89,701	S-187, DS-188	
978	3/10/2023	417	419	13:45	32	OP	850	141	89,842		
979	3/10/2023	417	420	15:59	32	OP	850	252	90,094		
980	3/10/2023	422	424	14:52	99	LD	850	557	90,651	DS-186	
981	3/13/2023	425	426	07:15	33	SS	850	641	91,292	DS-189	
982	3/13/2023	426	427	08:38	32	OP	850	42	91,334	DS-190	
983	3/13/2023	426	428	08:43	32	OP	850	611	91,945		
984	3/13/2023	427	428	08:35	32	OP	850	22	91,967		
985	3/13/2023	427	429	09:00	99	LD	850	20	91,987		
986	3/13/2023	428	429	09:03	99	LD	850	55	92,042	DS-191	
987	3/13/2023	428	430	09:09	99	LD	850	570	92,612		
988	3/13/2023	429	430	08:54	99	LD	850	22	92,634		
989	3/13/2023	429	431	09:24	31	AS	850	56	92,690		
990	3/13/2023	430	431	09:29	31	AS	850	56	92,746	DS-192	
991	3/13/2023	430	432	09:35	31	AS	850	529	93,275		
992	3/13/2023	431	432	09:18	31	AS	850	22	93,297		
993	3/13/2023	431	433	08:52	33	SS	850	104	93,401		
994	3/13/2023	432	433	09:07	33	SS	850	58	93,459	DS-193	
995	3/13/2023	432	434	10:15	33	SS	850	483	93,942		
996	3/13/2023	433	434	08:47	33	SS	850	22	93,964		
997	3/13/2023	433	435	10:01	32	OP	850	101	94,065	DS-194	
998	3/13/2023	434	435	10:19	32	OP	850	493	94,558		
999	3/13/2023	435	436	10:25	99	LD	850	645	95,203	DS-195	
1000	3/13/2023	436	437	10:50	31	AS	850	450	95,653	S-196, DS-197	
1001	3/13/2023	437	438	12:50	33	SS	850	641	96,294	S-198, DS-199	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1002	3/13/2023	438	439	13:00	32	OP	850	629	96,923	S-200, DS-201	
1003	3/13/2023	439	440	13:30	99	LD	850	620	97,543	DS-202, DS203	
1004	3/13/2023	440	441	13:18	31	AS	850	602	98,145	S-204, DS-205	
1005	3/13/2023	441	442	14:05	33	SS	850	594	98,739	S-206, DS-207	
1006	3/13/2023	442	443	14:57	32	OP	850	591	99,330	DS-208	
1007	3/15/2023	443	444	08:08	32	OP	850	590	99,920	DS-209	
1008	3/15/2023	444	445	08:21	31	AS	850	582	100,502	DS-210	
1009	3/15/2023	445	446	08:36	99	SS	850	574	101,076	DS-211	
1010	3/15/2023	446	447	09:25	33	MA	850	568	101,644	DS-212	
1011	3/15/2023	447	448	09:28	31	AS	850	560	102,204	DS-213	
1012	3/15/2023	448	449	09:55	99	SS	850	550	102,754	DS-214	
1013	3/15/2023	449	450	09:09	32	OP	850	543	103,297	DS-215	
1014	3/15/2023	450	451	10:50	33	MA	850	376	103,673	DS-216	
1015	3/15/2023	450	452	10:32	33	MA	850	158	103,831	DS-218	
1016	3/15/2023	451	452	10:35	31	AS	850	22	103,853	DS-217	
1017	3/15/2023	451	453	11:16	99	SS	850	182	104,035		
1018	3/15/2023	451	454	11:10	99	SS	850	171	104,206		
1019	3/15/2023	452	454	10:53	99	SS	850	156	104,362		
1020	3/15/2023	453	454	11:13	99	SS	850	22	104,384		
1021	3/15/2023	453	455	13:28	32	OP	850	173	104,557		
1022	3/15/2023	454	455	13:51	32	OP	850	330	104,887	DS-219	
1023	3/15/2023	455	456	13:17	99	SN	850	165	105,052		
1024	3/15/2023	456	457	13:17	33	SS	850	166	105,218		
1025	3/15/2023	457	458	13:24	31	AS	850	143	105,361	DS-220	
1026	3/15/2023	458	458	13:39	99	SN	850	135	105,496		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1027	3/15/2023	459	460	14:05	33	SS	850	42	105,538		
1028	3/15/2023	459	461	13:55	33	SS	850	76	105,614		
1029	3/15/2023	460	461	13:51	33	SS	850	22	105,636		
1030	3/15/2023	460	462	14:10	31	AS	850	25	105,661		
1031	3/15/2023	461	462	13:58	31	AS	850	72	105,733		
1032	3/23/2023	141	463	13:55	6	SS	270	65	105,798		
1033	3/21/2023	463	464	08:37	99	SS	850	64	105,862		
1034	3/21/2023	463	467	09:12	31	AS	850	17	105,879		
1035	3/21/2023	463	468	09:06	31	AS	850	6	105,885		
1036	3/21/2023	464	465	08:42	31	AS	850	41	105,926		
1037	3/21/2023	464	468	09:03	31	AS	850	28	105,954		
1038	3/21/2023	465	466	08:50	31	AS	850	18	105,972		
1039	3/21/2023	465	468	09:01	31	AS	850	18	105,990		
1040	3/12/2023	466	468	08:59	31	AS	850	97	106,087		
1041	3/21/2023	467	468	08:55	31	AS	850	16	106,103	DS-221	
1042	3/21/2023	468	469	08:52	32	OP	850	172	106,275	DS-222	
1043	3/21/2023	469	470	09:00	33	MA	850	174	106,449	DS-223	
1044	3/21/2023	470	471	09:18	99	SS	850	178	106,627		
1045	3/21/2023	471	472	09:24	32	OP	850	181	106,808		
1046	3/21/2023	472	473	09:30	33	MA	850	134	106,942		
1047	3/21/2023	472	474	09:44	31	AS	850	55	106,997		
1048	3/21/2023	473	474	09:40	31	AS	850	22	107,019	DS-224	
1049	3/21/2023	474	475	09:45	99	SS	850	56	107,075		
1050	3/21/2023	473	475	09:51	99	SS	850	136	107,211		
1051	3/21/2023	475	476	09:52	31	AS	850	196	107,407		

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By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1052	3/21/2023	476	479	10:15	33	MA	850	196	107,603	DS-226	
1053	3/21/2023	479	480	10:25	99	SS	850	198	107,801	DS-225	
1054	3/21/2023	480	481	10:33	31	AS	850	199	108,000		
1055	3/21/2023	481	482	10:53	32	OP	850	195	108,195	DS-227	
1056	3/21/2023	482	483	11:03	33	MA	850	193	108,388		
1057	3/21/2023	483	484	11:10	99	SS	850	188	108,576		
1058	3/21/2023	484	485	11:22	31	AS	850	178	108,754	DS-228	
1059	3/21/2023	485	486	11:39	311	OP	850	165	108,919		
1060	3/21/2023	486	487	11:45	33	MA	850	147	109,066		
1061	3/21/2023	487	488	11:49	99	SS	850	134	109,200		
1062	3/21/2023	488	489	12:01	31	AS	850	118	109,318		
1063	3/21/2023	489	490	12:07	33	MA	850	80	109,398	DS-229	
1064	3/23/2023	141	467	14:10	6	SS	270	16	109,414		
1065	3/21/2023	467	477	09:56	32	OP	850	77	109,491		
1066	3/21/2023	477	478	10:07	32	OP	850	9	109,500		
1067	3/23/2023	141	477	14:00	6	SS	270	23	109,523		
1068	3/23/2023	143	477	14:12	6	SS	270	22	109,545		
1069	3/21/2023	463	467	09:12	31	AS	850	23	109,568		
1070	3/23/2023	142	477	14:14	6	SS	270	23	109,591		
1071	3/23/2023	143	478	14:16	6	SS	270	23	109,614		
1072	3/23/2023	144	478	14:20	6	SS	270	17	109,631		
1073	3/23/2023	145	478	14:30	6	SS	270	23	109,654		
1074	3/23/2023	153	478	14:24	6	SS	270	10	109,664		
1075	3/23/2023	147	478	14:45	6	SS	270	16	109,680		
1076	3/23/2023	491	492	09:08	35	SS	850	205	109,885		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1077	3/23/2023	491	493	09:32	35	SS	850	288	110,173		
1078	3/23/2023	492	493	08:20	35	SS	850	22	110,195	DS-231	
1079	3/23/2023	492	491	09:00	31	OP	850	196	110,391		
1080	3/23/2023	493	494	08:48	31	OP	850	118	110,509	DS-232	
1081	3/23/2023	494	495	09:08	33	AS	850	315	110,824	DS-233	
1082	3/23/2023	495	496	09:25	31	OP	850	316	111,140		
1083	3/23/2023	496	497	09:50	35	SS	850	318	111,458	DS-234	
1084	3/23/2023	497	498	11:38	71	MA	850	326	111,784	DS-235	
1085	3/23/2023	497	499	11:34	71	MA	850	43	111,827		
1086	3/23/2023	498	499	10:25	71	MA	850	43	111,870		
1087	3/23/2023	498	500	10:55	33	AS	850	43	111,913		
1088	3/23/2023	499	500	10:50	33	AS	850	43	111,956	DS-236	
1089	3/23/2023	478	491	08:30	71	MA	850	10	111,966		
1090	3/23/2023	477	491	08:32	71	MA	850	22	111,988		
1091	3/23/2023	467	491	08:35	71	MA	850	22	112,010		
1092	3/23/2023	468	491	08:38	71	MA	850	22	112,032		
1093	3/23/2023	469	491	08:41	71	MA	850	22	112,054		
1094	3/23/2023	470	491	08:44	71	MA	850	22	112,076		
1095	3/23/2023	471	491	08:47	71	MA	850	22	112,098		
1096	3/23/2023	472	491	08:50	71	MA	850	22	112,120		
1097	3/23/2023	474	491	08:52	71	MA	850	22	112,142		
1098	3/23/2023	475	491	08:54	71	MA	850	22	112,164	DS-230	
1099	3/23/2023	476	491	08:56	71	MA	850	22	112,186		
1100	3/23/2023	479	491	08:58	71	MA	850	22	112,208		
1101	3/23/2023	480	491	09:00	71	MA	850	22	112,230		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1102	3/23/2023	481	491	09:02	71	MA	850	22	112,252		
1103	3/23/2023	482	491	09:04	71	MA	850	22	112,274		
1104	3/23/2023	483	491	09:06	71	MA	850	22	112,296		
1105	3/23/2023	484	491	09:08	71	MA	850	22	112,318		
1106	3/23/2023	485	491	09:10	71	MA	850	22	112,340		
1107	3/23/2023	486	491	09:12	71	MA	850	22	112,362		
1108	3/23/2023	487	491	09:14	71	MA	850	22	112,384		
1109	3/23/2023	488	491	09:16	71	MA	850	22	112,406		
1110	3/23/2023	489	491	09:18	71	MA	850	22	112,428		
1111	3/23/2023	147	491	15:01	6	SS	270	18	112,446		
1112	3/23/2023	148	492	15:10	6	SS	270	22	112,468		
1113	3/23/2023	149	494	15:23	6	SS	270	22	112,490		
1114	3/23/2023	150	495	14:56	1	SP	270	22	112,512		
1115	3/23/2023	151	496	14:49	1	SP	270	22	112,534		
1116	3/23/2023	152	497	14:36	1	SP	270	31	112,565		
1117	3/23/2023	189	497	14:30	1	SP	270	14	112,579		
1118	3/23/2023	189	498	14:15	1	SP	270	11	112,590		
1119	3/23/2023	190	498	14:40	1	SP	270	14	112,604		
1120	3/23/2023	190	500	13:33	1	SP	270	11	112,615		
1121	3/23/2023	191	500	13:30	1	SP	270	11	112,626		
1122	3/27/2023	501	502	10:13	33	AS	850	170	112,796		
1123	3/27/2023	501	503	10:00	33	AS	850	135	112,931		
1124	3/27/2023	502	503	09:48	33	AS	850	22	112,953	DS-237	
1125	3/27/2023	502	504	10:39	36	LD	850	238	113,191		
1126	3/27/2023	502	505	10:19	32	OP	850	83	113,274		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1127	3/27/2023	503	505	10:02	32	OP	850	188	113,462	DS-238	
1128	3/27/2023	504	505	10:00	31	MA	850	22	113,484	DS-239	
1129	3/27/2023	504	506	10:35	31	MA	850	235	113,719		
1130	3/27/2023	505	506	10:15	31	MA	850	178	113,897		
1131	3/27/2023	505	507	10:44	33	AS	850	88	113,985		
1132	3/27/2023	506	507	10:37	33	AS	850	22	114,007		
1133	3/27/2023	506	508	10:34	32	OP	850	410	114,417		
1134	3/27/2023	507	508	10:40	32	OP	850	84	114,501		
1135	3/27/2023	508	509	12:45	36	LD	850	477	114,978	DS-240	
1136	3/27/2023	509	510	13:01	33	AS	850	470	115,448	DS-241	
1137	3/27/2023	510	511	13:20	31	OP	850	101	115,549	DS-242	
1138	3/27/2023	510	512	14:09	31	OP	850	130	115,679		
1139	3/27/2023	510	513	13:45	31	OP	850	230	115,909		
1140	3/27/2023	511	512	13:15	31	OP	850	22	115,931		
1141	3/27/2023	511	514	14:27	33	AS	850	96	116,027		
1142	3/27/2023	512	513	13:37	31	OP	850	22	116,049		
1143	3/27/2023	512	514	14:14	33	AS	850	130	116,179		
1144	3/27/2023	513	514	13:51	33	AS	850	230	116,409	DS-243	
1145	3/27/2023	514	515	14:10	36	LD	850	446	116,855	DS-244	
1146	3/27/2023	515	516	15:11	33	AS	850	250	117,105		
1147	3/27/2023	515	517	14:55	33	AS	850	188	117,293		
1148	3/27/2023	516	517	14:44	33	AS	850	22	117,315		
1149	3/27/2023	500	502	14:57	31	OP	850	20	117,335		
1150	3/27/2023	500	504	15:00	31	OP	850	23	117,358		
1151	3/27/2023	500	506	15:03	31	OP	850	23	117,381		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1152	3/27/2023	500	508	15:06	31	OP	850	23	117,404		
1153	3/27/2023	500	509	15:09	31	OP	850	23	117,427		
1154	3/27/2023	500	510	15:12	31	OP	850	23	117,450		
1155	3/27/2023	500	511	15:15	31	OP	850	23	117,473		
1156	3/27/2023	500	514	15:18	31	OP	850	23	117,496		
1157	3/27/2023	500	515	15:21	31	OP	850	23	117,519		
1158	3/27/2023	500	516	15:24	31	OP	850	23	117,542		
1159	3/27/2023	191	502	13:00	6	SS	270	23	117,565		
1160	3/27/2023	193	502	13:05	6	SS	270	23	117,588		
1161	3/27/2023	194	502	13:10	6	SS	270	23	117,611		
1162	3/27/2023	195	502	13:16	6	SS	270	23	117,634		
1163	3/27/2023	197	502	13:30	6	SS	270	23	117,657		
1164	3/27/2023	198	502	13:35	6	SS	270	23	117,680		
1165	3/27/2023	199	502	13:55	6	SS	270	23	117,703		
1166	3/27/2023	201	502	14:00	6	SS	270	23	117,726		
1167	3/27/2023	201	501	15:05	6	SS	270	23	117,749		
1168	3/27/2023	202	501	15:10	6	SS	270	23	117,772		
1169	3/27/2023	203	501	15:16	6	SS	270	23	117,795		
1170	3/27/2023	205	501	15:20	6	SS	270	23	117,818		
1171	3/27/2023	206	501	15:30	6	SS	270	23	117,841		
1172	3/27/2023	224	501	14:01	36	LD	850	22	117,863		
1173	3/27/2023	225	501	15:57	1	SP	270	41	117,904		
1174	3/27/2023	R-954	501	13:09	36	LD	850	40	117,944		
1175	3/27/2023	402	501	14:12	1	SP	270	102	118,046		
1176	3/27/2023	402	502	13:49	1	SP	270	53	118,099		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1177	3/28/2023	518	519	08:45	36	LD	850	81	118,180	DS-245	
1178	3/28/2023	518	520	08:53	36	LD	850	222	118,402		
1179	3/28/2023	519	520	08:35	36	LD	850	22	118,424		
1180	3/28/2023	519	521	08:41	32	OP	850	81	118,505	DS-246	
1181	3/28/2023	520	521	08:51	36	LD	850	216	118,721		
1182	3/28/2023	521	522	08:42	35	KK	850	262	118,983	DS-247	
1183	3/28/2023	521	523	09:21	35	KK	850	52	119,035		
1184	3/28/2023	522	523	09:16	35	KK	850	22	119,057		
1185	3/28/2023	522	524	09:01	33	AS	850	262	119,319	DS-248	
1186	3/28/2023	523	524	10:00	35	KK	850	47	119,366		
1187	3/28/2023	524	525	09:11	31	MA	850	312	119,678	DS-249	
1188	3/28/2023	525	526	09:57	36	LD	850	315	119,993		
1189	3/28/2023	526	500	09:42	32	OP	850	153	120,146		
1190	3/28/2023	526	527	09:53	33	AS	850	130	120,276	DS-250	
1191	3/28/2023	526	528	10:20	35	KK	850	233	120,509		
1192	3/28/2023	527	528	10:07	35	KK	850	22	120,531		
1193	3/28/2023	527	529	10:18	35	KK	850	228	120,759	DS-251	
1194	3/28/2023	528	529	10:23	31	MA	850	230	120,989		
1195	3/28/2023	529	530	10:45	33	AS	850	448	121,437	DS-252	
1196	3/28/2023	518	493	08:33	33	AS	850	175	121,612		
1197	3/28/2023	518	494	09:40	36	LD	850	22	121,634		
1198	3/28/2023	519	498	09:38	36	LD	850	22	121,656		
1199	3/28/2023	521	496	09:36	36	LD	850	22	121,678		
1200	3/28/2023	522	497	09:33	36	LD	850	22	121,700		
1201	3/28/2023	524	499	09:30	36	LD	850	22	121,722		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1202	3/28/2023	525	500	09:26	36	LD	850	22	121,744		
1203	3/28/2023	526	516	10:40	33	AS	850	22	121,766		
1204	3/28/2023	527	516	10:37	33	AS	850	22	121,788		
1205	3/28/2023	529	516	10:34	33	AS	850	22	121,810		
1206	3/29/2023	530	516	12:37	35	KK	850	22	121,832		
1207	3/28/2023	531	518	12:35	31	MA	850	107	121,939	DS-253	
1208	3/28/2023	531	532	12:48	31	MA	850	103	122,042		
1209	3/28/2023	532	533	13:17	31	MA	850	99	122,141		
1210	3/28/2023	534	535	13:46	31	MA	850	48	122,189		
1211	3/28/2023	535	536	13:53	31	MA	850	37	122,226		
1212	3/28/2023	536	537	13:58	31	MA	850	24	122,250		
1213	3/28/2023	537	538	14:02	31	MA	850	16	122,266		
1214	3/28/2023	531	493	14:29	31	MA	850	22	122,288		
1215	3/28/2023	532	491	14:31	31	MA	850	22	122,310		
1216	3/28/2023	533	491	13:07	31	MA	850	22	122,332		
1217	3/28/2023	533	489	14:23	31	MA	850	22	122,354		
1218	3/28/2023	533	490	14:17	31	MA	850	22	122,376		
1219	3/28/2023	534	533	14:15	31	MA	850	22	122,398		
1220	3/28/2023	535	533	14:13	31	MA	850	22	122,420		
1221	3/28/2023	536	533	14:10	31	MA	850	22	122,442		
1222	3/28/2023	537	533	14:07	31	MA	850	22	122,464		
1223	3/28/2023	538	533	14:05	31	MA	850	7	122,471		
1224	3/28/2023	534	490	13:34	31	MA	850	59	122,530		
1225	3/29/2023	530	539	08:31	33	AS	850	341	122,871		
1226	3/29/2023	539	540	08:12	33	AS	850	22	122,893	DS-254	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1227	3/29/2023	530	540	08:22	33	AS	850	95	122,988		
1228	3/29/2023	540	541	08:42	35	KK	850	89	123,077		
1229	3/29/2023	541	543	08:33	31	MA	850	163	123,240	DS-255	
1230	3/29/2023	541	543	08:55	32	OP	850	257	123,497		
1231	3/29/2023	542	543	08:55	31	MA	850	22	123,519		
1232	3/29/2023	542	544	09:40	31	MA	850	157	123,676	DS-256	
1233	3/29/2023	543	544	09:11	31	MA	850	252	123,928		
1234	3/29/2023	544	545	09:22	33	AS	850	399	124,327		
1235	3/29/2023	545	546	10:02	32	OP	850	295	124,622		
1236	3/29/2023	545	547	09:50	32	OP	850	95	124,717		
1237	3/29/2023	546	547	09:46	32	OP	850	22	124,739		
1238	3/29/2023	546	548	10:07	35	KK	850	291	125,030		
1239	3/29/2023	547	548	09:56	35	KK	850	87	125,117	DS-257	
1240	3/29/2023	548	549	10:40	31	MA	850	208	125,325		
1241	3/29/2023	548	550	10:23	31	MA	850	154	125,479		
1242	3/29/2023	549	550	10:25	33	AS	850	22	125,501		
1243	3/29/2023	549	551	10:50	33	AS	850	203	125,704		
1244	3/29/2023	550	551	10:35	33	AS	850	140	125,844	DS-258	
1245	3/29/2023	551	552	12:25	32	OP	850	129	125,973		
1246	3/29/2023	551	553	10:43	32	OP	850	179	126,152		
1247	3/29/2023	552	553	12:22	31	MA	850	22	126,174		
1248	3/29/2023	552	554	12:45	31	MA	850	124	126,298		
1249	3/29/2023	553	554	12:30	31	MA	850	140	126,438		
1250	3/29/2023	554	555	12:35	33	AS	850	210	126,648		
1251	3/29/2023	555	556	13:02	32	OP	850	81	126,729		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1252	3/29/2023	555	557	12:54	32	OP	850	84	126,813	DS-259	
1253	3/29/2023	556	557	12:50	32	OP	850	22	126,835		
1254	3/29/2023	556	558	13:08	31	MA	850	65	126,900		
1255	3/29/2023	556	559	13:05	31	MA	850	12	126,912		
1256	3/29/2023	557	559	13:00	31	MA	850	33	126,945		
1257	3/29/2023	558	559	13:02	33	AS	850	19	126,964		
1258	3/29/2023	558	560	13:05	33	AS	850	47	127,011		
1259	3/29/2023	537	516	12:35	35	KK	850	22	127,033		
1260	3/29/2023	541	516	12:28	35	KK	850	22	127,055		
1261	3/29/2023	542	516	11:12	35	KK	850	22	127,077		
1262	3/29/2023	544	516	11:07	35	KK	850	22	127,099		
1263	3/29/2023	545	516	10:58	35	KK	850	22	127,121		
1264	3/39/2023	545	517	13:12	35	KK	850	22	127,143		
1265	3/29/2023	548	516	13:07	35	KK	850	22	127,165		
1266	3/29/2023	549	517	13:10	35	KK	850	22	127,187		
1267	3/29/2023	551	517	12:55	35	KK	850	22	127,209		
1268	3/29/2023	552	517	13:34	35	KK	850	22	127,231		
1269	3/29/2023	554	517	13:32	35	KK	850	22	127,253		
1270	3/29/2023	555	517	13:30	35	KK	850	22	127,275		
1271	3/29/2023	556	517	13:26	35	KK	850	22	127,297		
1272	3/29/2023	558	517	13:24	35	KK	850	22	127,319		
1273	3/29/2023	560	517	13:17	35	KK	850	22	127,341		
1274	11/28/2023	561	455		50	RP	860	14	127,355		
1275	11/28/2023	561	453		50	RP	860	5	127,360		
1276	11/28/2023	561	451		50	RP	860	23	127,383		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1277	11/28/2023	561	450	10:45	50	RP	860	25	127,408		
1278	11/28/2023	561	449	11:05	50	RP	860	25	127,433		
1279	11/28/2023	561	448	11:20	50	RP	860	25	127,458		
1280	11/28/2023	561	447	11:27	50	RP	860	24	127,482		
1281	11/28/2023	561	446	11:31	50	RP	860	20	127,502		Tie-In
1282	11/28/2023	561	445	12:55	50	RP	860	22	127,524		all ext. weld
1283	11/28/2023	561	444	13:01	50	RP	860	24	127,548		from R 1078
1284	11/28/2023	561	443	13:05	50	RP	860	21	127,569		
1285	11/28/2023	561	442	13:12	50	RP	860	10	127,579		
1286	11/28/2023	562	561	13:39	34	SS	860	22	127,601	DS-260	
1287	11/28/2023	563	562	13:47	34	SS	860	36	127,637		
1288	11/28/2023	442	563	14:19	50	RP	860	16	127,653		
1289	11/28/2023	441	563	14:23	50	RP	860	24	127,677		
1290	11/28/2023	440	563	14:27	50	RP	860	11	127,688		
1291	11/28/2023	440	562	14:37	50	RP	860	14	127,702		
1292	11/28/2023	440	564	14:40	50	RP	860	12	127,714		
1293	11/28/2023	439	564	14:43	50	RP	860	25	127,739		R1082
1294	11/28/2023	438	564	14:47	50	RP	860	6	127,745		
1295	11/28/2023	562	564	13:54	34	SS	860	37	127,782		
1296	11/28/2023	438	562	14:49	50	RP	860	23	127,805		VBOX 12/4 on all ext seams
1297	11/28/2023	437	562	14:52	50	RP	860	20	127,825		
1298	11/28/2023	565	562	15:10	34	SS	860	137	127,962		
1299	11/28/2023	565	566	15:06	34	SS	860	6	127,968		
1300	11/28/2023	566	562	15:22	34	SS	860	37	128,005		
1301	11/28/2023	436	565	16:08	50	RP	860	20	128,025		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1302	11/28/2023	435	565	16:10	50	RP	860	23	128,048		
1303	11/28/2023	433	565	16:16	50	RP	860	23	128,071		
1304	11/28/2023	431	565	16:20	50	RP	860	24	128,095		
1305	11/28/2023	429	565	16:26	50	RP	860	29	128,124		
1306	11/28/2023	427	565	16:30	50	RP	860	28	128,152		
1307	11/28/2023	427	566	16:35	50	RP	860	3	128,155		
1308	11/28/2023	426	566	16:36	50	RP	860	12	128,167		
1309	11/29/2023	567	566	08:00	34	SS	860	22	128,189		
1310	11/29/2023	568	566	08:29	34	SS	860	81	128,270		
1311	11/29/2023	468	567	08:37	34	SS	860	146	128,416	DS-261	VBOX 12/4 on all ext seams
1312	11/29/2023	569	568	08:55	34	SS	860	57	128,473		
1313	11/29/2023	426	566	09:24	50	RP	860	12	128,485		
1314	11/29/2023	425	566	09:26	50	RP	860	19	128,504		
1315	11/29/2023	425	562	09:30	50	RP	860	11	128,515		Partial-stopped 1636
1316	11/29/2023	425	568	09:33	50	RP	860	7	128,522		x-seam
1317	11/29/2023	423	568	09:35	50	RP	860	23	128,545		
1318	11/29/2023	421	568	09:50	50	RP	860	22	128,567		R1086
1319	11/29/2023	419	568	09:55	50	RP	860	21	128,588		
1320	11/29/2023	419	569	09:58	50	RP	860	1	128,589		VBOX 12/4 on all ext seams
1321	11/29/2023	417	569	09:59	50	RP	860	22	128,611		
1322	11/29/2023	415	569	10:07	50	RP	860	22	128,633		
1323	11/29/2023	413	569	10:12	50	RP	860	12	128,645		
1324	11/29/2023	413	571	15:11	50	RP	860	9	128,654		
1325	11/29/2023	411	571	15:13	50	RP	860	21	128,675		
1326	11/29/2023	411	R1090	12:11	50	RP	860	21	128,696		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1327	11/29/2023	410	R1090	12:12	50	RP	860	13	128,709		
1328	11/29/2023	408	R1090	12:16	50	RP	860	12	128,721		
1329	11/29/2023	408	572	15:28	50	RP	860	5	128,726		
1330	11/29/2023	408	573	15:29	50	RP	860	16	128,742		
1331	11/29/2023	406	573	14:33	50	RP	860	20	128,762		
1332	11/29/2023	406	574	15:42	50	RP	860	13	128,775		
1333	11/29/2023	405	574	15:47	50	RP	860	18	128,793		
1334	11/29/2023	404	575	15:55	50	RP	860	22	128,815		
1335	11/29/2023	403	575	15:59	50	RP	860	6	128,821		
1336	11/29/2023	R1091	403	16:02	50	RP	860	13	128,834		
1337	11/29/2023	570	568	12:49	34	SS	860	22	128,856		
1338	11/29/2023	570	567	12:52	34	SS	860	115	128,971		
1339	11/29/2023	571	569	13:04	34	SS	860	22	128,993		
1340	11/29/2023	571	568	13:12	34	SS	860	102	129,095		
1341	11/29/2023	571	570	13:20	34	SS	860	103	129,198		
1342	11/29/2023	R1090	572	13:51	34	SS	860	24	129,222		VBOX 12/4
1343	11/29/2023	572	571	13:35	34	SS	860	156	129,378	DS-263	VBOX 12/4
1344	11/29/2023	573	572	13:57	34	SS	860	125	129,503		x-seam
1345	11/29/2023	574	573	14:16	34	SS	860	83	129,586		
1346	11/29/2023	575	574	14:38	34	SS	860	60	129,646	DS-262	x-seam
1347	11/29/2023	R1091	575	14:43	34	SS	860	13	129,659		
1348	12/5/2023	576	570	08:24	33	SS	860	269	129,928		
1349	12/5/2023	576	562	08:43	33	SS	860	357	130,285	DS-264	
1350	12/5/2023	576	577	08:45	31	SP	860	22	130,307		R1093
1351	12/5/2023	577	562	08:53	31	SP	860	49	130,356		

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1352	12/5/2023	577	561	09:00	31	SP	860	290	130,646		
1353	12/5/2023	577	579	10:08	31	SP	860	336	130,982	DS-265	R1092
1354	12/5/2023	579	576	10:35	33	SS	860	288	131,270		Into AT
1355	12/5/2023	578	579	09:55	33	SS	860	22	131,292		
1356	12/5/2023	578	576	10:04	33	SS	860	349	131,641	DS-266	R1098
1357	12/5/2023	581	580	12:46	31	SP	860	22	131,663	DS-267	
1358	12/5/2023	581	579	12:53	31	SP	860	274	131,937		
1359	12/5/2023	579	580	12:52	33	SS	860	374	132,311		
1360	12/5/2023	578	580	13:25	33	SS	860	330	132,641	DS-268	R1099
1361	12/5/2023	583	582	14:00	31	SP	860	22	132,663		
1362	12/5/2023	582	580	14:09	31	SP	860	152	132,815		
1363	12/5/2023	582	581	14:25	31	SP	860	261	133,076	DS-270	R1100
1364	12/5/2023	583	580	14:15	33	SS	860	552	133,628	DS-269	R1103
1365	12/5/2023	582	584	15:34	31	SP	860	150	133,778		
1366	12/5/2023	584	585	15:24	31	SP	860	22	133,800		
1367	12/5/2023	582	585	15:49	31	SP	860	250	134,050	DS-271	R1106
1368	12/5/2023	583	585	15:29	33	SS	860	450	134,500		
1369	12/5/2023	585	586	16:06	33	SS	860	22	134,522	DS-272	
1370	12/5/2023	583	586	16:09	33	SS	860	105	134,627		R1110
1371	12/6/2023	585	587	08:58	31	SP	860	431	135,058	DS-273	R1109
1372	12/6/2023	586	588	08:45	33	SS	860	107	135,165		
1373	12/6/2023	585	588	08:55	33	SS	860	269	135,434	DS-274	
1374	12/6/2023	584	587	09:36	31	SP	860	149	135,583		R1114
1375	12/6/2023	587	589	09:22	33	SS	860	22	135,605	DS-276	
1376	12/6/2023	589	590	10:08	33	SS	860	22	135,627		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1377	12/6/2023	588	590	10:06	33	SS	860	376	136,003	DS-275	
1378	12/6/2023	584	591	10:59	31	SP	860	22	136,025		
1379	12/6/2023	589	592	11:20	31	SP	860	287	136,312		
1380	12/6/2023	590	592	11:37	33	SS	860	403	136,715	DS-277	
1381	12/6/2023	592	593	12:15	33	SS	860	22	136,737		
1382	12/6/2023	590	593	12:17	33	SS	860	225	136,962	DS-278	
1383	12/6/2023	593	594	14:08	33	SS	860	225	137,187		
1384	12/6/2023	592	595	14:28	33	SS	860	209	137,396		
1385	12/6/2023	592	594	14:11	31	SP	860	473	137,869	DS-279	
1386	12/6/2023	594	595	14:08	31	SP	860	22	137,891		
1387	12/6/2023	587	591	11:05	31	SP	860	18	137,909		
1388	12/6/2023	594	596	15:45	31	SP	860	262	138,171		
1389	12/6/2023	596	597	15:20	31	SP	860	22	138,193		
1390	12/6/2023	594	597	15:27	31	SP	860	191	138,384	DS-281	
1391	12/6/2023	595	597	15:28	33	SS	860	433	138,817	DS-282	
1392	12/6/2023	594	595	14:05	31	SP	860	22	138,839		
1393	12/6/2023	596	598	16:13	31	SP	860	71	138,910		
1394	12/6/2023	592	593	11:25	31	SP	860	22	138,932		
1395	12/6/2023	595	593	14:12	33	SS	860	222	139,154	DS-280	
1396	12/7/2023	598	599	08:25	31	SP	860	22	139,176	DS-288	
1397	12/7/2023	596	599	08:38	31	SP	860	170	139,346	DS-284	
1398	12/7/2023	599	600	08:28	33	SS	860	22	139,368		
1399	12/7/2023	597	600	08:34	33	SS	860	109	139,477		
1400	12/7/2023	597	599	08:43	33	SS	860	521	139,998	DS-283	
1401	12/7/2023	596	598	16:13	31	SP	860	71	140,069		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1402	12/7/2023	598	601	09:40	31	SP	860	50	140,119		
1403	12/7/2023	599	601	09:50	31	SP	860	538	140,657	DS-285	
1404	12/7/2023	601	602	09:56	33	SS	860	22	140,679	DS-286	
1405	12/7/2023	599	602	09:59	33	SS	860	157	140,836		
1406	12/7/2023	600	602	10:13	33	SS	860	109	140,945		
1407	12/7/2023	601	603	11:24	31	SP	860	426	141,371	DS-287	75' from EEOS
1408	12/7/2023	603	604	11:23	33	SS	860	22	141,393		12-6-23
1409	12/7/2023	601	604	11:28	33	SS	860	139	141,532		
1410	12/7/2023	602	604	11:39	33	SS	860	268	141,800		
1411	12/7/2023	603	605	13:50	31	SP	860	295	142,095		
1412	12/7/2023	605	606	14:20	31	SP	860	22	142,117		
1413	12/7/2023	603	606	14:24	31	SP	860	115	142,232		
1414	12/7/2023	604	606	13:53	33	SS	860	407	142,639	DS-289	
1415	12/7/2023	606	608	15:04	33	SS	860	518	143,157	DS-290	
1416	12/7/2023	605	608	15:31	31	SP	860	103	143,260		
1417	12/7/2023	607	608	15:05	31	SP	860	22	143,282		
1418	12/7/2023	605	607	15:12	31	SP	860	176	143,458		
1419	12/8/2023	609	610	08:10	31	SP	860	22	143,480		
1420	12/8/2023	607	610	08:18	31	SP	860	82	143,562		
1421	12/8/2023	608	610	08:27	31	SP	860	620	144,182	DS-291	
1422	12/8/2023	607	611	08:48	33	SS	860	75	144,257		
1423	12/8/2023	610	611	08:51	33	SS	860	695	144,952	DS-292	
1424	12/8/2023	611	612	10:48	31	SP	860	697	145,649	DS-293	
1425	12/8/2023	611	612	10:48	31	SP	860	697	146,346	DS-294	
1426	12/8/2023	612	613	11:21	33	SS	860	672	147,018	DS-295	

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1427	12/8/2023	612	613	11:21	33	SS	860	672	147,690	DS-296	
1428	12/8/2023	591	614	14:01	31	SP	860	31	147,721		
1429	12/8/2023	582	614	14:08	31	SP	860	22	147,743		
1430	12/8/2023	581	614	14:12	31	SP	860	22	147,765		
1431	12/8/2023	614	615	14:14	31	SP	860	12	147,777		
1432	12/8/2023	581	615	14:37	31	SP	860	21	147,798		
1433	12/8/2023	614	615	14:31	31	SP	860	44	147,842		35' from NEDS
1434	12/8/2023	579	615	14:41	31	SP	860	51	147,893		132' from SEDS
1435	12/8/2023	579B	615	15:04	31	SP	860	11	147,904		
1436	12/8/2023	579	579B	15:05	31	SP	860	22	147,926		
1437	12/8/2023	400	609		?	?	480	22	147,948	DS-297	
1438	12/9/2023	615	557	09:33	50	RP	480	38	147,986		
1439	12/9/2023	614	557	09:20	50	RP	480	18	148,004		
1440	12/9/2023	614	559	09:21	50	RP	480	13	148,017		
1441	12/9/2023	591	559	10:04	50	RP	480	7	148,024		
1442	12/9/2023	591	560	10:10	50	RP	480	12	148,036		
1443	12/9/2023	587	560	10:11	50	RP	480	31	148,067		
1444	12/9/2023	589	560	10:36	50	RP	480	33	148,100		R1129
1445	12/9/2023	589	517	10:43	50	RP	480	13	148,113		VTOK 12-12-23 P.L.
1446	12/9/2023	562	517	10:49	50	RP	480	10	148,123		VTOK 12-12-23 P.L.
1447	12/9/2023	592	515	11:00	50	RP	480	11	148,134		VTOK 12-12-23 P.L.
1448	12/9/2023	594	514	11:01	50	RP	480	22	148,156		VTOK 12-12-23 P.L.
1449	12/9/2023	596	513	11:07	50	RP	480	19	148,175		VTOK 12-12-23 P.L.
1450	12/9/2023	596	510	12:37	50	RP	480	13	148,188		VTOK 12-12-23 P.L.
1451	12/9/2023	598	510	12:41	50	RP	480	10	148,198		VTOK 12-12-23 P.L.

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1452	12/9/2023	598	509	12:45	50	RP	480	18	148,216		VTOK 12-12-23 P.L.
1453	12/9/2023	601	508	12:53	50	RP	480	26	148,242		VTOK 12-12-23 P.L.
1454	12/9/2023	601	507	12:58	50	RP	480	7	148,249		VTOK 12-12-23 P.L.
1455	12/9/2023	603	507	13:27	50	RP	480	15	148,264		VTOK 12-12-23 P.L.
1456	12/9/2023	603	505	13:32	50	RP	480	10	148,274		VTOK 12-12-23 P.L.
1457	12/9/2023	605	505	13:36	50	RP	480	8	148,282		VTOK 12-12-23 P.L.
1458	12/9/2023	605	503	13:42	50	RP	480	12	148,294		VTOK 12-12-23 P.L.
1459	12/9/2023	605	402	13:50	50	RP	480	7	148,301		VTOK 12-12-23 P.L.
1460	12/9/2023	607	402	13:52	50	RP	480	11	148,312		VTOK 12-12-23 P.L.
1461	12/9/2023	607	401	13:56	50	RP	480	19	148,331		VTOK 12-12-23 P.L.
1462	12/9/2023	609	401	13:57	50	RP	480	1	148,332		VTOK 12-12-23 P.L.
1463	12/9/2023	609	399	14:02	50	RP	480	22	148,354		VTOK 12-12-23 P.L.
1464	12/9/2023	609	398	14:10	50	RP	480	12	148,366		VTOK 12-12-23 P.L.
1465	12/9/2023	611	398	14:32	50	RP	480	11	148,377		VTOK 12-12-23 P.L.
1466	12/9/2023	611	396	14:38	50	RP	480	17	148,394		VTOK 12-12-23 P.L.
1467	12/9/2023	612	395	14:45	50	RP	480	21	148,415		VTOK 12-12-23 P.L.
1468	12/11/2023	613	616	09:14	31	SP	860	680	149,095	DS-298	VTOK 12-12-23 P.L.
1469	12/11/2023	616	617	09:15	33	SS	860	687	149,782	DS-299	VTOK 12-12-23 P.L.
1470	12/11/2023	617	618	10:35	33	SS	860	688	150,470	DS-300	VTOK 12-12-23 P.L.
1471	12/11/2023								150,470		VTOK 12-12-23 P.L.
1472	12/21/2023	518	619	08:39	31	SP	860	34	150,504		VTOK 12-12-23 P.L.
1473	12/21/2023	619	620	08:44	31	SP	860	51	150,555		VTOK 12-12-23 P.L.
1474	12/21/2023	620	621	09:00	34	KK	850	68	150,623	DS-302	VTOK 12-12-23 P.L.
1475	12/21/2023	621	622	09:10	34	KK	850	78	150,701		C.over 140'+360'=500'
1476	12/21/2023	622	623	08:51	31	SP	860	89	150,790	DS-303	C.over 134'+366'=500'

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1477	12/21/2023	623	624	09:10	31	SP	860	98	150,888		C.over 337'+163'=500'
1478	12/21/2023	624	625	09:28	34	KK	850	106	150,994		Cover over 25 #33
1479	12/21/2023	625	626	09:50	34	KK	850	114	151,108		
1480	12/21/2023	626	627	09:29	31	SP	860	127	151,235		
1481	12/21/2023	627	628	09:52	31	SP	860	139	151,374		
1482	12/21/2023	628	629	10:15	34	KK	850	149	151,523		
1483	12/21/2023	629	630	10:40	34	KK	850	164	151,687		
1484	12/21/2023	630	631	10:14	31	SP	860	179	151,866		
1485	12/21/2023	632	633	10:45	31	SP	860	22	151,888		
1486	12/21/2023	631	632	10:56	31	SP	860	96	151,984		
1487	12/21/2023	631	633	11:08	31	SP	860	94	152,078		
1488	12/21/2023	634	635	11:15	34	KK	850	22	152,100	DS-306	
1489	12/21/2023	611	635	13:22	34	KK	850	22	152,122		
1490	12/21/2023	610	635	13:30	34	KK	850	50	152,172		
1491	12/21/2023	635	636	13:37	31	SP	860	50	152,222		
1492	12/21/2023	634	636	13:42	31	SP	860	25	152,247		
1493	12/21/2023	634	637	13:45	31	SP	860	184	152,431		
1494	12/21/2023	612	636	14:10	34	KK	850	22	152,453		
1495	12/21/2023	613	638	14:12	31	SP	860	22	152,475		
1496	12/21/2023	613	636	14:24	34	KK	850	36	152,511		
1497	12/21/2023	636	638	14:27	34	KK	850	38	152,549		
1498	12/21/2023	636	637	14:31	34	KK	850	22	152,571		
1499	12/21/2023	637	638	14:31	34	KK	850	41	152,612		
1500	12/21/2023	638	639	14:35	31	KK	850	22	152,634		
1501	12/21/2023	637	639	14:41	31	SP	850	155	152,789		

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Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1502	12/21/2023	616	638	14:30	31	SP	860	21	152,810		
1503	12/21/2023	638	640	14:32	31	SP	860	226	153,036		
1504	12/21/2023	639	640	14:38	31	SP	860	167	153,203		
1505	12/21/2023	617	641	15:05	34	KK	850	22	153,225		
1506	12/21/2023	640	641	15:15	34	KK	850	214	153,439	DS-307	
1507	12/21/2023	617	640	13:15	34	KK	850	24	153,463		
1508	12/21/2023	618	642	15:44	34	KK	850	22	153,485		
1509	12/21/2023	618	641	15:50	34	KK	850	15	153,500		
1510	12/21/2023	641	642	15:52	34	KK	850	208	153,708		
1511	12/21/2023	610	632	15:03	34	SP	860	22	153,730		
1512	12/21/2023	608	631	15:06	34	SP	860	22	153,752		
1513	12/21/2023	606	630	15:09	34	SP	860	22	153,774		
1514	12/21/2023	604	629	15:15	34	SP	860	22	153,796		
1515	12/21/2023	602	628	15:18	34	SP	860	22	153,818	DS-308	
1516	12/21/2023	600	627	15:21	34	SP	860	22	153,840		
1517	12/21/2023	600	627	01:52	31	SP	860	22	153,862		
1518	12/21/2023	597	626	15:27	31	SP	860	22	153,884		
1519	12/21/2023	595	625	15:30	31	SP	860	22	153,906		
1520	12/21/2023	593	624	15:33	31	SP	860	22	153,928		
1521	12/21/2023	590	623	15:36	31	SP	860	22	153,950		
1522	12/21/2023	588	622	15:39	31	SP	860	22	153,972		
1523	12/21/2023	586	621	15:42	31	SP	860	22	153,994		
1524	12/21/2023	583	620	15:45	31	SP	860	22	154,016		
1525	12/21/2023	580	619	15:48	31	SP	860	22	154,038		
1526	12/22/2023	642	643	09:45	34	KK	860	224	154,262		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1527	12/22/2023	618	643		34	KK	860	234	154,496		
1528	12/22/2023	644	618	09:44	31	SP	860	451	154,947		
1529	12/22/2023	644	643	09:49	31	SP	860	22	154,969		
1530	12/29/2023	645	646	09:01	31	SP	860	28	154,997		
1531	12/29/2023	646	647	09:07	31	SP	860	53	155,050		
1532	12/29/2023	647	648	08:55	34	KK	860	89	155,139		
1533	12/29/2023	648	649	09:15	34	KK	860	112	155,251		
1534	12/29/2023	649	650	09:42	34	KK	860	136	155,387		
1535	12/29/2023	650	651	09:49	31	SP	860	157	155,544		
1536	12/29/2023	653	652	10:14	34	KK	860	22	155,566		
1537	12/29/2023	651	652	10:13	31	SP	860	95	155,661		
1538	12/29/2023	652	654	10:17	34	KK	860	111	155,772		
1539	12/29/2023	651	653	10:26	31	SP	860	76	155,848		
1540	12/29/2023	653	654	10:30	34	KK	860	77	155,925		
1541	12/29/2023	654	655	10:45	34	KK	860	209	156,134		
1542	12/29/2023	655	656	10:49	31	SP	860	147	156,281		*Retest V-seam
1543	12/29/2023	656	657	10:42	31	SP	860	22	156,303		
1544	12/29/2023	655	657	11:09	31	SP	860	87	156,390		
1545	12/29/2023	656	658	11:25	31	SP	860	162	156,552		
1546	12/29/2023	657	658	11:47	31	SP	860	85	156,637		
1547	12/29/2023	658	659	13:59	33*	KK	860	255	156,892		
1548	12/29/2023	644	618	13:59	33	KK	860	310	157,202		
1549	12/30/2023	659	660	09:07	33	KK	850	275	157,477	DS-313	
1550	12/30/2023	660	661	09:08	31	SP	860	293	157,770	DS-314	
1551	12/30/2023	661	662	10:05	33	KK	860	224	157,994		

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Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1552	12/30/2023	661	663	10:25	33	KK	860	90	158,084		
1553	12/30/2023	662	663	10:00	33	KK	860	22	158,106		
1554	12/30/2023	662	664	10:01	31	SP	860	239	158,345		*Switch machines
1555	12/30/2023	663	664	10:34	31	SP	860	84	158,429		reseam portion
1556	12/30/2023	664	665	11:10	33	KK	860	202	158,631	DS-315	R1243
1557	12/30/2023	665	667	11:03	31	SP	860	212	158,843	DS-316	R1244
1558	12/30/2023	664	666	11:21	33	KK	860	129	158,972		
1559	12/30/2023	666	667	11:32	31	SP	860	130	159,102		
1560	12/30/2023	665	666	10:50	33	KK	860	22	159,124		
1561	12/30/2023	667	668	11:45	33	KK	860	204	159,328		
1562	12/30/2023	667	669	12:11	33	KK	860	141	159,469	DS-317	
1563	12/30/2023	668	669	10:48	31	SP	860	22	159,491		R1249
1564	12/30/2023	668	670	11:55	31	SP	860	204	159,695		R1250
1565	12/30/2023	669	670	12:20	34	CH	860	137	159,832		
1566	12/30/2023	670	671	11:35	34	CH	850	191	160,023		
1567	12/30/2023	671	672	10:57	31	SP	860	22	160,045		
1568	12/30/2023	670	672	12:00	34	CH	860	150	160,195	DS-318	
1569	12/30/2023	673	618	14:19	33	KK	860	208	160,403		R1255
1570	12/30/2023	673	644	14:18	34	VP	860	22	160,425		
1571	12/30/2023	673	659	14:38	34	VP	860	7	160,432		
1572	12/30/2023	673	660	14:39	34	VP	860	22	160,454		
1573	12/30/2023	673	661	14:43	34	VP	860	22	160,476		
1574	12/30/2023	673	663	14:48	34	VP	860	22	160,498		
1575	12/30/2023	673	664	14:53	34	VP	860	22	160,520		R1257
1576	12/30/2023	673	666	14:55	34	VP	860	22	160,542		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1577	12/30/2023	673	666	14:45	33	V	860	6	160,548		
1578	12/30/2023	673	667	14:48	33	V	860	22	160,570		
1579	12/30/2023	673	669	14:58	33	VP	860	22	160,592		
1580	12/30/2023	673	670	15:01	33	VP	860	22	160,614		
1581	12/30/2023	673	672	15:05	33	VP	860	22	160,636		
1582	12/30/2023	644	647	14:22	31	SP	860	22	160,658		
1583	12/30/2023	644	648	14:26	31	SP	860	22	160,680		17'
1584	12/30/2023	644	649	14:29	31	SP	860	22	160,702		
1585	12/30/2023	644	650	14:32	31	SP	860	22	160,724		
1586	12/30/2023	644	651	14:35	31	SP	860	22	160,746		
1587	12/30/2023	644	653	14:40	31	SP	860	22	160,768		
1588	12/30/2023	644	654	14:43	31	SP	860	22	160,790		
1589	12/30/2023	644	655	14:45	31	SP	860	22	160,812		
1590	12/30/2023	644	657	14:48	31	SP	860	22	160,834		
1591	12/30/2023	644	658	14:57	31	SP	860	22	160,856		
1592	12/30/2023	644	659	14:54	31	SP	860	14	160,870		
1593	1/2/2024	394	613	08:20	50	RP	860	8	160,878		
1594	1/2/2024	394	616	08:22	50	RP	860	8	160,886		
1595	1/2/2024	393	616	08:25	50	RP	860	22	160,908		
1596	1/2/2024	392	616	08:29	50	RP	860	2	160,910		
1597	1/2/2024	392	617	08:30	50	RP	860	20	160,930		
1598	1/2/2024	391	618	08:39	50	RP	860	16	160,946		
1599	1/2/2024	390	618	08:46	50	RP	860	17	160,963		
1600	1/2/2024	390	644	08:50	50	RP	860	7	160,970		
1601	1/2/2024	388	644	08:54	50	RP	860	20	160,990		ext weld

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1602	1/2/2024	387	645	09:51	50	RP	860	15	161,005		ext weld
1603	1/2/2024	386	645	09:54	50	RP	860	23	161,028		ext weld
1604	1/2/2024	385	646	10:00	50	RP	860	22	161,050		ext weld
1605	1/2/2024	383	646	10:04	50	RP	860	11	161,061		ext weld
1606	1/2/2024	383	647	10:06	50	RP	860	11	161,072		ext weld
1607	1/2/2024	382	647	10:08	50	RP	860	22	161,094		ext weld
1608	1/2/2024	381	648	10:13	50	RP	860	6	161,100		ext weld
1609	1/2/2024	381	648	10:18	50	RP	860	16	161,116	DS-320	ext weld
1610	1/2/2024	380	648	10:21	50	RP	860	19	161,135		ext weld
1611	1/2/2024	380	649	10:34	50	RP	860	3	161,138		ext weld
1612	1/2/2024	365	649	10:36	50	RP	860	22	161,160		ext weld
1613	1/2/2024	364	649	10:38	50	RP	860	10	161,170		ext weld
1614	1/2/2024	364	650	10:41	50	RP	860	7	161,177		ext weld
1615	1/2/2024	360	650	10:42	50	RP	860	22	161,199		Ext Weld
1616	1/2/2024	359	650	10:49	50	RP	860	7	161,206		R1302
1617	1/2/2024	359	651	10:50	50	RP	860	15	161,221		
1618	1/2/2024	358	651	10:11	50	RP	860	12	161,233		
1619	1/2/2024	358	652	11:07	50	RP	860	10	161,243		
1620	1/2/2024	357	652	11:09	50	RP	860	3	161,246		
1621	1/2/2024	355	652	11:12	50	RP	860	14	161,260		
1622	1/2/2024	355	654	07:32	90	CH	860	12	161,272		
1623	1/2/2024	354	654	07:45	90	CH	860	24	161,296		
1624	1/2/2024	353	655	08:00	90	CH	860	24	161,320		
1625	1/2/2024	351	655	08:13	90	CH	860	9	161,329		
1626	1/2/2024	656	351	08:17	90	CH	860	14	161,343		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1627	1/2/2024	350	656	08:26	90	CH	860	12	161,355		
1628	1/2/2024	350	658	08:31	90	CH	860	11	161,366		
1629	1/2/2024	349	658	08:35	90	CH	860	17	161,383		
1630	1/2/2024	349	659	08:45	90	CH	860	11	161,394		Old TI ext welding
1631	1/2/2024	348	659	08:50	90	CH	860	23	161,417		Old TI ext welding
1632	1/2/2024	346	660	09:04	90	CH	860	23	161,440		Old TI ext welding
1633	1/2/2024	345	660	09:19	90	CH	860	7	161,447		Old TI ext welding
1634	1/2/2024	345	661	09:21	90	CH	860	18	161,465		Old TI ext welding
1635	1/2/2024	344	661	09:28	90	CH	860	14	161,479		Old TI ext welding
1636	1/2/2024	344	662	09:32	90	CH	860	9	161,488		Old TI ext welding
1637	1/2/2024	343	662	09:36	90	CH	860	17	161,505		Old TI ext welding
1638	1/2/2024	343	664	09:43	90	CH	860	5	161,510		Old TI ext welding
1639	1/2/2024	342	664	09:45	90	CH	860	18	161,528		Old TI ext welding
1640	1/2/2024	342	665	09:54	90	CH	860	4	161,532		Old TI ext welding
1641	1/2/2024	341	665	09:58	90	CH	860	21	161,553		Old TI ext welding
1642	1/2/2024	341	667	10:10	90	CH	860	2	161,555		Old TI ext welding
1643	1/2/2024	340	667	10:12	90	CH	860	20	161,575		Old TI ext welding
1644	1/2/2024	340	668	10:27	90	CH	860	1.5	161,577		Old TI ext welding
1645	1/2/2024	339	668	10:30	90	CH	860	20	161,597	DS-319	ext weld tie-in
1646	1/2/2024	339	670	10:45	90	CH	860	3	161,600		
1647	1/2/2024	338	670	10:47	90	CH	860	19	161,619		
1648	1/2/2024	338	671	11:01	90	CH	860	4	161,623		
1649	1/2/2024	337	671	11:04	90	CH	860	11	161,634		
1650	1/13/2024	677	678	08:42	31	SP	860	22	161,656		
1651	1/13/2024	674	675	08:35	34	SS	860	22	161,678		

GCERG - Site F Landfill
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1652	1/13/2024	676	675	08:40	34	SS	860	51	161,729		R1301
1653	1/13/2024	676	674	08:48	34	SS	860	281	162,010	DS-321	
1654	1/13/2024	678	676	08:50	31	SP	860	290	162,300		
1655	1/13/2024	677	676	09:35	31	SP	860	49	162,349	DS-322	
1656	1/13/2024	679	678	09:38	34	SS	860	289	162,638		
1657	1/13/2024	677	678	08:42	31	SP	860	22	162,660		
1658	1/13/2024	679	677	10:15	34	SS	860	48	162,708	DS-323	
1659	1/13/2024	680	681	09:58	31	SP	860	22	162,730		
1660	1/13/2024	681	679	10:08	31	SP	860	27	162,757		R1308
1661	1/13/2024	680	679	10:13	31	SP	860	309	163,066		
1662	1/13/2024	675	672	10:50	34	SS	860	53	163,119		R1309
1663	1/13/2024	674	672	11:03	34	SS	860	93	163,212		
1664	1/13/2024	674	671	11:15	34	SS	860	60	163,272		
1665	1/13/2024	674	671	11:03	31	SP	860	132	163,404		R1311
1666	1/13/2024	337	671	13:45	50	RP	860	7	163,411		
1667	1/13/2024	337	674	13:47	50	RP	860	5	163,416		
1668	1/13/2024	336	674	13:48	50	RP	860	17	163,433		
1669	1/13/2024	336	676	13:52	50	RP	860	7	163,440		R1303
1670	1/13/2024	334	676	13:58	50	RP	860	15	163,455		R1304
1671	1/13/2024	334	677	14:00	50	RP	860	8	163,463		R1305
1672	1/13/2024	333	677	14:02	50	RP	860	11	163,474		R1305
1673	1/13/2024	333	679	14:12	50	RP	860	5.5	163,479		
1674	1/13/2024	332	679	14:15	50	RP	860	13	163,492		
1675	1/13/2024	332	680	14:18	50	RP	860	11	163,503		
1676	1/13/2024	330	680	14:20	50	RP	860	3	163,506		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1677	1/13/2024	673	618	14:06	5	SP	860	2.5	163,509		
1678	1/13/2024	673	643	14:07	5	SP	860	21	163,530		
1679	1/13/2024	675	643	14:13	5	SP	860	20	163,550		
1680	1/13/2024	676	643	14:18	5	SP	860	22	163,572		
1681	1/13/2024	678	643	12:29	5	SP	860	22	163,594		
1682	1/13/2024	679	643	14:25	50	RP	860	22	163,616		
1683	1/13/2024	681	643	14:29	50	RP	860	12	163,628		
1684	1/17/2024	683	684	08:55	31	SP	860	22	163,650		
1685	1/17/2024	682	683	09:00	31	SP	860	13	163,663		
1686	1/17/2024	682	684	09:03	31	SP	860	320	163,983	DS-326	
1687	1/17/2024	682	681	08:59	34	SS	860	22	164,005	DS-325	
1688	1/17/2024	682	680	09:01	34	SS	860	307	164,312		
1689	1/17/2024	685	684	09:56	5	SS	860	320	164,632		
1690	1/17/2024	686	687	10:13	31	SP	860	22	164,654		
1691	1/17/2024	687	685	10:21	31	SP	860	10	164,664		
1692	1/17/2024	686	685	10:18	31	SP	860	334	164,998		
1693	1/17/2024	688	687	10:57	5	SS	860	6	165,004		R1324
1694	1/17/2024	688	686	11:00	5	SS	860	335	165,339	DS-327	R1322
1695	1/17/2024	690	688	11:13	31	SP	860	28	165,367	DS-328	
1696	1/17/2024	689	688	11:17	31	SP	860	326	165,693		
1697	1/17/2024	689	690	10:37	5	SS	860	22	165,715		
1698	1/17/2024	685	683	10:14	5	SS	860	18	165,733		
1699	1/17/2024	691	690	13:24	31	SP	860	26	165,759		
1700	1/17/2024	691	689	13:29	31	SP	860	339	166,098	DS-329	
1701	1/17/2024	693	691	13:57	5	SS	860	92	166,190		R1325

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1702	1/17/2024	692	691	14:09	5	SS	860	278	166,468		R1331
1703	1/17/2024	692	693	13:52	5	SS	860	22	166,490	DS-330	
1704	1/17/2024	694	693	14:36	31	SP	860	90	166,580		
1705	1/17/2024	694	692	14:49	31	SP	860	292	166,872	DS-331	
1706	1/17/2024	681	643	15:25	50	RP	860	10	166,882		
1707	1/17/2024	682	643	15:27	50	RP	860	22	166,904		R1333
1708	1/17/2024	684	643	15:40	50	RP	860	22	166,926		
1709	1/17/2024	685	643	15:45	50	RP	860	22	166,948		
1710	1/17/2024	687	643	15:51	50	RP	860	22	166,970		R1335
1711	1/17/2024	688	643	15:57	50	RP	860	22	166,992		
1712	1/17/2024	690	643	16:11	50	RP	860	22	167,014		R1336
1713	1/17/2024	691	643	16:15	50	RP	860	22	167,036		
1714	1/17/2024	693	643	16:20	50	RP	860	22	167,058		
1715	1/17/2024	694	643	16:25	50	RP	860	20	167,078		
1716	1/18/2024	695	696	08:00	5	SS	860	22	167,100		
1717	1/18/2024	696	694	08:14	31	SP	860	175	167,275		
1718	1/18/2024	695	694	08:39	31	SP	860	213	167,488	DS-332	
1719	1/18/2024	697	696	08:17	5	SS	860	171	167,659		
1720	1/18/2024	697	695	08:42	5	SS	860	190	167,849	DS-333	
1721	1/18/2024	698	699	09:16	5	SS	860	22	167,871		
1722	1/18/2024	699	697	09:14	31	SP	860	126	167,997		
1723	1/18/2024	698	697	09:35	31	SP	860	225	168,222		X
1724	1/18/2024	700	699	09:23	5	SS	860	127	168,349		
1725	1/18/2024	700	698	09:41	5	SS	860	208	168,557		R1342
1726	1/18/2024	701	700	10:10	31	SP	860	311	168,868	DS-334	

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1727	1/18/2024	702	701	10:15	5	SS	860	262	169,130	DS-335	R1343
1728	1/18/2024	694	643	13:18	5	MV	860	3	169,133		X
1729	1/18/2024	696	643	12:50	5	MV	860	22	169,155		
1730	1/18/2024	697	643	12:57	5	MV	860	22	169,177		
1731	1/18/2024	699	643	13:10	5	MV	860	22	169,199		
1732	1/18/2024	700	643	13:33	5	MV	860	22	169,221		
1733	1/18/2024	618	643	12:45	50	RP	860	160	169,381		R1344
1734	1/18/2024	643	642	09:45	50	RP	860	140	169,521		R1345
1735	1/18/2024	643	642	13:18	5	MV	860	80	169,601		
1736	1/19/2024	702	703	07:56	31	SP	860	202	169,803		
1737	1/19/2024	703	704	08:25	31	SP	860	147	169,950		
1738	1/19/2024	704	705	08:55	31	SP	860	89	170,039		ext
1739	1/19/2024	330	680	10:12	50	RP	860	9	170,048	DS-336	ext
1740	1/19/2024	330	682	10:17	50	RP	860	11	170,059		ext
1741	1/19/2024	329	682	10:20	50	RP	860	12	170,071		ext
1742	1/19/2024	329	683	10:23	50	RP	860	11	170,082		ext
1743	1/19/2024	705	706	12:54	31	SP	860	37	170,119		
1744	1/19/2024	328	683	10:28	50	RP	860	10	170,129		
1745	1/19/2024	328	685	10:32	50	RP	860	11	170,140		
1746	1/19/2024	327	685	10:57	50	RP	860	11	170,151		R1352
1747	1/19/2024	327	686	10:59	50	RP	860	11	170,162		
1748	1/19/2024	326	686	11:11	50	RP	860	12	170,174		
1749	1/19/2024	326	688	11:17	50	RP	860	10	170,184		
1750	1/19/2024	324	688	13:10	50	RP	860	14	170,198		
1751	1/19/2024	324	689	13:14	50	RP	860	8	170,206		

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Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1752	1/19/2024	323	689	13:17	50	RP	860	17	170,223		
1753	1/19/2024	323	691	13:24	50	RP	860	5	170,228		
1754	1/19/2024	322	691	13:25	50	RP	860	19	170,247		
1755	1/19/2024	322	692	13:38	50	RP	860	3	170,250		
1756	1/19/2024	321	692	13:39	50	RP	860	23	170,273	DS-337	
1757	1/19/2024	320	694	13:47	50	RP	860	22	170,295		
1758	1/19/2024	318 OR 319	694	14:15	50	RP	860	2	170,297		
1759	1/19/2024	318 OR 319	695	14:16	50	RP	860	6	170,303		
1760	1/19/2024	378	695	14:18	50	RP	860	28	170,331		
1761	1/19/2024	378	697	14:43	50	RP	860	28	170,359		
1762	1/19/2024	378	698	14:42	50	RP	860	25	170,384		
1763	1/19/2024	378	700	15:02	50	RP	860	9	170,393		R1353
1764	1/19/2024	378	700	14:04	90	MC	860	19	170,412		
1765	1/19/2024	378	701	14:07	90	MC	860	29	170,441	DS-338	
1766	1/19/2024	378	702	14:34	90	MC	860	29	170,470		
1767	1/19/2024	378	703	14:52	90	MC	860	25	170,495		
1768	1/19/2024	378	704	15:08	90	MC	860	26	170,521		
1769	1/19/2024	378	705	15:26	90	MC	860	24	170,545		
1770	1/19/2024	378	706	15:40	90	MC	860	25	170,570		
1771	2/7/2024	616	707	08:53	90	RP	860	19	170,589		
1772	2/7/2024	709	708	12:37	31	SP	860	142	170,731	DS-339	
1773	2/7/2024	710	709	13:30	31	SP	860	161	170,892		
1774	2/7/2024	708	707	14:38	90	RP	860	35	170,927		
1775	2/7/2024	708	616	13:55			860	20	170,947		
1776	2/7/2024	708		15:10			860	77	171,024		

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Solmax - 40-mil LLDPE Textured Black
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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1777	2/7/2024	708	577	15:12			860	22	171,046	DS-340	
1778	2/7/2024	709		15:24			860	22	171,068		
1779	2/7/2024	710	455	15:45			860	22	171,090		R1355
1780	2/7/2024	707					860		171,090		
1781	2/8/2024	712	710	09:39	31	SP	860	97	171,187		
1782	2/8/2024	711	710	09:52	31	SP	860	80	171,267		
1783	2/8/2024	711	712	09:32	31	SP	860	22	171,289		
1784	2/8/2024	713	711	10:57	31	SP	860	72	171,361	DS-341	R1356
1785	2/8/2024	713	712	11:15	31	SP	860	136	171,497		
1786	2/8/2024	714	713	13:04	31	SP	860	202	171,699	DS-342	
1787	2/9/2024	715	714	10:03	31	SP	860	306	172,005	DS-343	
1788	2/9/2024	716	715	10:25	5	MA	860	310	172,315	DS-344	
1789	2/9/2024	716	717	10:46	31	SP	860	320	172,635		
1790	2/9/2024	718	717	12:55	31	SP	860	315	172,950	DS-345	
1791	2/9/2024	719	718	13:35	5	MA	860	22	172,972		R1359
1792	2/9/2024	720	718	13:48	5	MA	860	178	173,150		
1793	2/9/2024	720	718	13:38	31	SP	860	142	173,292		R1360
1794	2/9/2024	720	719	13:45	5	MA	860	25	173,317		R1365
1795	2/9/2024	721	720	14:25	5	MA	860	191	173,508	DS-346	R1366
1796	2/9/2024	721	720	14:25	31	SP	860	144	173,652		
1797	2/9/2024	722	721	14:48	31	SP	860	340	173,992		R1367
1798	2/9/2024	723	722	14:55	5	MA	860	344	174,336	DS-347	
1799	2/9/2024	724	723	15:40	31	SP	860	335	174,671	DS-348	
1800	2/9/2024	725	724	15:54	5	MA	860	335	175,006		
1801	2/9/2024	727	726	16:55	5	MA	860	112	175,118		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1802	2/9/2024	728	727	17:00	31	SP	860	81	175,199		R1370
1803	2/9/2024	729	728	17:13	5	MA	860	55	175,254		
1804	2/9/2024	730	729	17:14	31	SP	860	39	175,293		
1805	2/9/2024	725	726	14:31	31	SP	860	31	175,324		R1372
1806	2/9/2024	725	727	17:35	31	SP	860	31	175,355		R1375
1807	2/9/2024	725	728	17:39	31	SP	860	31	175,386		
1808	2/9/2024	725	729	17:44	31	SP	860	31	175,417		
1809	2/9/2024	725	730	17:48	31	SP	860	31	175,448		
1810	2/9/2024	725	731	17:52	30	SP	860	31	175,479		
1811	2/9/2024	725	732	17:59	22	SP	860	31	175,510		
1812	2/9/2024	725	733	18:01	8	SP	860	31	175,541		
1813	2/9/2024	725	734	18:02	23	SP	860	26	175,567		
1814	2/9/2024	732	731	17:27	5	MA	860		175,567		
1815	2/13/2024	455	711	08:47	50	RP	860	23	175,590		
1816	2/13/2024	455	713	08:50	50	RP	860	24	175,614		
1817	2/13/2024	455	714	10:36	50	RP	860	25	175,639		
1818	2/13/2024	455	715	10:43	50	RP	860	24	175,663		
1819	2/13/2024	455	716	11:05	50	RP	860	24.5	175,687		
1820	2/13/2024	455	717	11:11	50	RP	860	24	175,711	DS-349	
1821	2/13/2024	462	726	11:05	90	MV	860	19	175,730		
1822	2/13/2024	462	727	10:15	90	MV	860	23	175,753		ext welding
1823	2/13/2024	462	728	10:20	90	MV	860	24	175,777		
1824	2/13/2024	462	729	13:30	90	MV	860	24	175,801		
1825	2/13/2024	462	730	13:35	90	MV	860		175,801	DS-350	
1826	2/14/2024	714	?	08:36	50	RP	860	15	175,816		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1827	2/14/2024	714	?	08:40	50	RP	860	23	175,839		R1386
1828	2/14/2024	714	?	08:46	50	RP	860	24	175,863		
1829	2/14/2024	714	?		-	-	860	26	175,889		
1830	2/14/2024	714	?	08:52	-	-	860	3	175,892		
1831	2/14/2024	735	726	13:28	31	SP	860	128	176,020		
1832	2/14/2024	736	726	13:47	31	SP	860	92	176,112		
1833	2/14/2024	736	735	13:58	31	SP	860	22	176,134		
1834	2/14/2024	737	736	14:10	31	SP	860	87	176,221	DS-351	
1835	2/14/2024	737	735	14:20	31	SP	860	112	176,333		
1836	2/14/2024	736	735	15:07	90	MC	860	24	176,357		
1837	2/15/2024	738	714	16:10	90	MC	860	25	176,382	DS-358	
1838	2/15/2024	738	715	16:21	90	MC	860	25	176,407		
1839	2/15/2024	738	716	16:40	90	MC	860	25	176,432		
1840	2/15/2024	738	717	16:38	90	MC	860	25	176,457		
1841	2/15/2024	738	719	16:49	90	MC	860	25	176,482		R1388
1842	2/15/2024	717	719	16:40	90	MC	860	3	176,485		
1843	2/15/2024	738	720	16:49	50	RP	860	25	176,510		
1844	2/15/2024	738	721	16:42	50	RP	860		176,510		R1414
1845	2/15/2024	738	722	16:36	50	RP	860		176,510		
1846	2/15/2024	738	723	16:25	50	RP	860	25	176,535		
1847	2/15/2024	738	724	16:15	50	RP	860	6	176,541		
1848	2/15/2024	738	736	16:10	50	RP	860	22	176,563	DS-357	
1849	2/14/2024	738	737		50	MC	860	10	176,573		
1850	2/16/2024	738	714	09:30	90	MC	860	3	176,576		
1851	2/16/2024	738	545	09:31	90	MC	860	8	176,584		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1852	2/15/2024	740	739	08:37	31	SP	860	22	176,606		
1853	2/15/2024	740	738	08:30	5	MA	860	133	176,739	DS-352	
1854	2/15/2024	741	740	08:44	31	SP	860		176,739		
1855	2/15/2024	739	738	08:55	5	MA	860		176,739		R1413
1856	2/15/2024	741	739	08:59	31	SP	860		176,739	DS-353	
1857	2/15/2024	742	741	09:18	31	SP	860		176,739		
1858	2/15/2024	744	742	09:25	5	MA	860	78	176,817		
1859	2/15/2024	743	742	09:40	5	MA	860	114	176,931	DS-354	
1860	2/15/2024	745	743	09:59	31	SP	860	109	177,040		R1393
1861	2/15/2024	745	744	09:50	31	SP	860	68	177,108		
1862	2/15/2024	746	745	10:00	5	MA	860	152	177,260		
1863	2/15/2024	747	746	10:13	31	SP	860	135	177,395		R1354
1864	2/15/2024	748	747	10:35	5	MA	860	117	177,512		
1865	2/15/2024	749	748	10:52	31	SP	860	107	177,619	DS-355	
1866	2/15/2024	750	749	11:00	5	MA	860	96	177,715		R1397
1867	2/15/2024	751	750	12:31	31	SP	860	88	177,803		
1868	2/15/2024	752	751	12:36	5	MA	860	86	177,889		
1869	2/15/2024	753	752	12:45	31	SP	860	88	177,977		
1870	2/15/2024	754	753	12:50	5	MA	860	86	178,063		
1871	2/15/2024	755	754	12:57	31	SP	860	85	178,148		
1872	2/15/2024	756	755	13:20	5	MA	860	84	178,232	DS-356	R1398
1873	2/15/2024	757	756	14:15	5	MA	860	81	178,313		
1874	2/16/2024	738	544	09:32	90	MC	860	14	178,327		
1875	2/16/2024	740	543	11:29	50	RP	860	17	178,344	DS-359	
1876	2/16/2024	741	541	15:25	50	RP	860	18	178,362		

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Geomembrane Panel Placement and Seam Location Log

Line	Date	Seam Number		Approx. Start Time	Welding Machine	Welding Tech	Machine Temp	Approx. Length Welded	Total Length	Destructive Number	Remarks
		1st Panel	2nd Panel								
1877	2/16/2024	742	541	13:05	50	RP	860	5	178,367		
1878	2/16/2024	742	540	13:07	50	RP	860	20	178,387		
1879	2/16/2024	744	530	13:18	50	RP	860	21	178,408		R1399
1880	2/16/2024	745	530	13:23	50	RP	860	2	178,410		Goes into AT
1881	2/16/2024	745	529	13:26	50	RP	860	19	178,429		
1882	2/16/2024	746	527	13:41	50	RP	860	22	178,451		R1418
1883	2/16/2024	740	544	11:15	90	RP	860	9	178,460		
1884	2/16/2024	747	528	14:00	90	RP	860	23	178,483		
1885	2/16/2024	748	525	14:15	90	RP	860	24	178,507		
1886	2/16/2024	749	524	14:33	90	RP	860	21	178,528		
1887	2/16/2024	750	523	14:48	50	RP	860	7	178,535		
1888	2/16/2024	750	523	13:25	90	MV	860	15	178,550	DS-360	
1889	2/16/2024	521	751	13:36	90	MV	860	21	178,571		
1890	2/16/2024	520	752	13:46	90	MV	860	20	178,591		
1891	2/16/2024	518	753	14:11	90	MV	860	22	178,613		
1892	2/16/2024	531	754	14:16	90	MV	860	21	178,634		
1893	2/16/2024	532	755	14:22	90	MV	860	21	178,655		
1894	2/16/2024	533	756	14:23	90	MV	860	22	178,677		
1895	2/16/2024	533	757	14:30	90	MV	860	6	178,683		R1431
1896	2/16/2024	538	757	14:45	90	MV	860	18	178,701		All Ext Welds (old tie in)

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1	7/11/2022	1	2	10:15	10:20	30	30	VX	AIR	PASS
2	7/11/2022	2	3	10:21	10:26	30	30	VX	AIR	PASS
3	7/11/2022	3	4	10:27	10:32	30	30	VX	AIR	PASS
4	7/11/2022	4	5	10:41	10:46	30	30	VX	AIR	PASS
5	7/11/2022	5	6	10:50	10:55	30	30	VX	AIR	PASS
6	7/11/2022	6	7	11:05	11:10	30	30	VX	AIR	PASS
7	7/11/2022	7	8	11:20	11:25	30	30	VX	AIR	PASS
8	7/11/2022	7	9	11:24	11:29	30	30	VX	AIR	PASS
9	7/11/2022	8	9	10:20	10:25	30	30	VX	AIR	PASS
10	7/11/2022	1	10	14:48	14:53	30	30	VX	AIR	PASS
11	7/11/2022	2	10	14:47	14:52	30	30	VX	AIR	PASS
12	7/11/2022	3	10	14:41	14:46	30	30	VX	AIR	PASS
13	7/11/2022	4	10	14:40	14:45	30	30	VX	AIR	PASS
14	7/11/2022	5	10	14:29	14:34	30	30	VX	AIR	PASS
15	7/11/2022	6	10	14:30	14:35	30	30	VX	AIR	PASS
16	7/11/2022	10	11	13:00	13:05	30	30	VX	AIR	PASS
17	7/11/2022	11	12	13:02	13:07	30	30	VX	AIR	PASS
18	7/11/2022	12	13	14:00	14:05	30	30	VX	AIR	PASS
19	7/11/2022	12	14	14:01	14:06	30	30	VX	AIR	PASS
20	7/11/2022	13	14	13:10	13:15	30	30	VX	AIR	PASS
21	7/11/2022	13	15	14:10	14:15	30	30	VX	AIR	PASS
22	7/11/2022	14	15	14:11	14:16	30	30	VX	AIR	PASS
23	7/11/2022	15	16	14:20	14:25	30	30	VX	AIR	PASS
24	7/11/2022	15	17	14:21	14:26	30	30	VX	AIR	PASS
25	7/11/2022	16	17	14:23	14:28	30	30	VX	AIR	PASS
26	7/12/2022	18	19	10:25	10:30	30	30	VX	AIR	PASS
27	7/12/2022	19	20	10:40	10:45	30	30	VX	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
28	7/12/2022	20	21	11:10	11:15	30	30	VX	AIR	PASS
29	7/12/2022	21	22	12:30	12:35	30	30	VX	AIR	PASS
30	7/12/2022	22	23	12:40	12:45	30	30	VX	AIR	PASS
31	7/12/2022	23	24	13:41	13:46	30	30	VX	AIR	PASS
32	7/12/2022	24	25	14:30	14:35	30	30	VX	AIR	PASS
33	7/12/2022	18	9	13:00	13:05	30	30	VX	AIR	PASS
34	7/12/2022	19	7	13:01	13:06	30	30	VX	AIR	PASS
35	7/12/2022	20	6	13:07	13:12	30	30	VX	AIR	PASS
36	7/12/2022	21	5	13:08	13:13	30	30	VX	AIR	PASS
37	7/12/2022	22	4	13:14	13:19	30	30	VX	AIR	PASS
38	7/12/2022	23	3	13:36	13:41	30	30	VX	AIR	PASS
39	7/12/2022	24	2	13:37	13:42	30	30	VX	AIR	PASS
40	7/12/2022	25	1	13:38	13:43	30	30	VX	AIR	PASS
41	7/13/2022	26	1	09:52	09:57	30	30	VX	AIR	PASS
42	7/13/2022	26	10	10:00	10:05	30	30	VX	AIR	PASS
43	7/13/2022	26	11	10:01	10:06	30	30	VX	AIR	PASS
44	7/13/2022	26	27	10:08	10:13	30	30	VX	AIR	PASS
45	7/13/2022	26	28	12:51	12:56	30	30	VX	AIR	PASS
46	7/13/2022	26	29	12:50	12:55	30	30	VX	AIR	PASS
47	7/13/2022	28	29	09:20	09:25	30	30	VX	AIR	PASS
48	7/13/2022	29	30	09:50	09:55	30	30	VX	AIR	PASS
49	7/13/2022	25	27	13:00	13:05	30	30	VX	AIR	PASS
50	7/13/2022	27	30	13:50	13:55	30	30	VX	AIR	PASS
51	7/15/2022	31	28	09:00	09:05	30	30	VX	AIR	PASS
52	7/15/2022	31	29	09:01	09:06	30	30	VX	AIR	PASS
53	7/15/2022	31	33	09:50	09:55	30	30	VX	AIR	PASS
54	7/15/2022	33	35	10:31	10:36	30	30	VX	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
55	7/15/2022	33	36	10:30	10:35	30	30	VX	AIR	PASS
56	7/15/2022	35	36	09:20	09:25	30	30	VX	AIR	PASS
57	7/15/2022	32	30	10:37	10:42	30	30	VX	AIR	PASS
58	7/15/2022	32	34	10:39	10:44	30	30	VX	AIR	PASS
59	7/15/2022	31	32	10:00	10:05	30	30	VX	AIR	PASS
60	7/15/2022	33	34	10:01	10:06	30	30	VX	AIR	PASS
61	7/15/2022	36	37	10:07	10:12	30	30	VX	AIR	PASS
62	7/15/2022	34	37	11:00	11:05	30	30	VX	AIR	PASS
63	7/18/2022	38	39	13:38	13:43	30	30	VX	AIR	PASS
64	7/18/2022	39	40	11:10	11:15	30	30	VX	AIR	PASS
65	7/18/2022	40	41	11:13	11:18	30	30	VX	AIR	PASS
66	7/18/2022	41	42	11:16	11:21	30	30	VX	AIR	PASS
67	7/18/2022	42	43	11:20	11:25	30	30	VX	AIR	PASS
68	7/18/2022	43	44	11:26	11:31	30	30	VX	AIR	PASS
69	7/18/2022	44	45	11:32	11:37	30	30	VX	AIR	PASS
70	7/18/2022	45	46	11:38	11:43	30	30	VX	AIR	PASS
71	7/18/2022	46	47	13:06	13:11	30	30	VX	AIR	PASS
72	7/18/2022	47	48	13:12	13:17	30	30	VX	AIR	PASS
73	7/18/2022	48	49	13:18	13:23	30	30	VX	AIR	PASS
74	7/18/2022	38	34	13:39	13:44	30	30	VX	AIR	PASS
75	7/18/2022	39	32	13:52	13:57	30	30	VX	AIR	PASS
76	7/18/2022	40	30	13:58	14:03	30	30	VX	AIR	PASS
77	7/18/2022	41	27	13:59	14:04	30	30	VX	AIR	PASS
78	7/18/2022	42	25	14:00	14:05	30	30	VX	AIR	PASS
79	7/18/2022	43	24	14:06	14:11	30	30	VX	AIR	PASS
80	7/18/2022	44	23	14:07	14:12	30	30	VX	AIR	PASS
81	7/18/2022	45	22	14:13	14:18	30	30	VX	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
82	7/18/2022	46	23	14:09	14:14	30	30	VX	AIR	PASS
83	7/18/2022	47	20	14:15	14:20	30	30	VX	AIR	PASS
84	7/18/2022	48	19	14:16	14:21	30	30	VX	AIR	PASS
85	7/18/2022	49	18	14:22	14:27	30	30	VX	AIR	PASS
86	7/18/2022	50	38	-- ext weld --				VX	Vac Test	PASS
87	7/19/2022	50	39	09:15	09:20	30	30	VX	AIR	PASS
88	7/19/2022	50	40	09:14	09:19	30	30	VX	AIR	PASS
89	7/19/2022	50	41	09:13	09:18	30	30	VX	AIR	PASS
90	7/19/2022	50	42	09:07	09:12	30	30	VX	AIR	PASS
91	7/19/2022	50	43	09:06	09:11	30	30	VX	AIR	PASS
92	7/19/2022	50	44	09:00	09:05	30	30	VX	AIR	PASS
93	7/19/2022	50	45	08:54	08:59	30	30	VX	AIR	PASS
94	7/19/2022	50	46	08:48	08:53	30	30	VX	AIR	PASS
95	7/19/2022	50	47	08:47	08:52	30	30	VX	AIR	PASS
96	7/19/2022	50	48	08:41	08:46	30	30	VX	AIR	PASS
97	7/19/2022	50	49	08:40	08:45	30	30	VX	AIR	PASS
98	7/19/2022	50	51	09:57	10:02	30	30	VX	AIR	PASS
99	7/19/2022	50	52	09:50	09:55	30	30	VX	AIR	PASS
100	7/19/2022	51	52	09:51	09:56	30	30	VX	AIR	PASS
101	7/19/2022	51	53	10:00	10:05	30	30	VX	AIR	PASS
102	7/19/2022	52	53	10:12	10:17	30	30	VX	AIR	PASS
103	7/19/2022	52	54	09:16	09:21	30	30	VX	AIR	PASS
104	7/19/2022	53	54	09:17	09:23	30	30	VX	AIR	PASS
105	7/19/2022	53	55	10:16	10:21	30	30	VX	AIR	PASS
106	7/19/2022	54	55	09:23	09:28	30	30	VX	AIR	PASS
107	7/19/2022	55	56	10:22	10:27	30	30	VX	AIR	PASS
108	7/19/2022	55	57	10:20	10:25	30	30	VX	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
109	7/19/2022	56	57	10:24	10:29	30	30	VX	AIR	PASS
110	7/19/2022	56	58	10:27	10:32	30	30	VX	AIR	PASS
111	7/19/2022	57	58	10:28	10:33	30	30	VX	AIR	PASS
112	7/19/2022	57	59	10:30	10:35	30	30	VX	AIR	PASS
113	7/19/2022	58	59	10:29	10:34	30	30	VX	AIR	PASS
114	7/19/2022	59	60	10:33	10:38	30	30	VX	AIR	PASS
115	7/19/2022	59	61	10:34	10:39	30	30	VX	AIR	PASS
116	7/19/2022	60	61	10:36	10:41	30	30	VX	AIR	PASS
117	7/19/2022	61	62	10:40	10:45	30	30	VX	AIR	PASS
118	7/19/2022	62	63	10:40	10:45	30	30	VX	AIR	PASS
119	7/19/2022	63	64	12:10	12:15	30	30	VX	AIR	PASS
120	7/19/2022	64	65	11:55	12:00	30	30	VX	AIR	PASS
121	9/15/2022	66	65	14:40	14:45	30	30	EL	AIR	PASS
122	9/15/2022	66	64	14:50	14:55	30	30	EL	AIR	PASS
123	9/15/2022	66	63	14:30	14:35	30	30	EL	AIR	PASS
124	9/15/2022	66	62	14:20	14:25	30	30	EL	AIR	PASS
125	9/15/2022	66	61	14:15	14:20	30	30	EL	AIR	PASS
126	9/15/2022	66	59	14:10	14:15	30	30	EL	AIR	PASS
127	9/15/2022	66	57	14:05	14:10	30	30	EL	AIR	PASS
128	9/15/2022	66	55	14:00	14:05	30	30	EL	AIR	PASS
129	9/15/2022	66	54	13:55	14:00	30	30	EL	AIR	PASS
130	9/15/2022	66	52	13:50	13:55	30	30	EL	AIR	PASS
131	9/15/2022	66	50	13:45	13:50	30	30	EL	AIR	PASS
132	9/15/2022	66	38	13:40	13:45	30	30	EL	AIR	PASS
133	9/19/2022	66	67	08:45	08:50	30	30	KV	AIR	PASS
134	9/19/2022	67	68	08:50	08:55	30	30	KV	AIR	PASS
135	9/19/2022	67	79	09:20	09:25	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
136	9/19/2022	68	71	10:23	10:28	30	30	KV	AIR	PASS
137	9/19/2022	68	72	10:20	10:25	30	30	KV	AIR	PASS
138	9/19/2022	68	73	09:30	09:35	30	30	KV	AIR	PASS
139	9/19/2022	69	R132	10:53	10:58	30	30	KV	AIR	PASS
140	9/19/2022	69	70	10:45	10:50	30	30	KV	AIR	PASS
141	9/19/2022	69	71	10:30	10:35	30	30	KV	AIR	PASS
142	9/19/2022	70	R132	10:50	10:55	30	30	KV	AIR	PASS
143	9/19/2022	70	71	10:40	10:45	30	30	KV	AIR	PASS
144	9/19/2022	71	72	10:00	10:05	30	30	KV	AIR	PASS
145	9/19/2022	72	73	10:05	10:10	30	30	KV	AIR	PASS
146	9/19/2022	67	74	11:30	11:35	30	30	KV	AIR	PASS
147	9/19/2022	66	74	13:00	13:05	30	30	KV	AIR	PASS
148	9/19/2022	66	74	12:45	12:50	30	30	KV	AIR	PASS
149	9/19/2022	37	74	13:50	13:55	30	30	KV	AIR	PASS
150	9/21/2022	37	66	-- ext weld --				EL	Vac Test	PASS
151	9/20/2022	74	75	13:40	13:45	30	30	EL	AIR	PASS
152	9/20/2022	75	76	13:42	13:47	30	30	EL	AIR	PASS
153	9/20/2022	76	77	13:45	13:50	30	30	EL	AIR	PASS
154	9/20/2022	77	78	14:35	14:40	30	30	EL	AIR	PASS
155	9/20/2022	78	79	14:40	14:45	30	30	EL	AIR	PASS
156	9/20/2022	79	80	14:50	14:55	30	30	EL	AIR	PASS
157	9/20/2022	81	82	13:15	13:20	30	30	EL	AIR	PASS
158	9/20/2022	81	83	-- ext weld --				EL	Vac Test	PASS
159	9/20/2022	82	83	12:55	13:00	30	30	EL	AIR	PASS
160	9/20/2022	81	71	13:10	13:15	30	30	EL	AIR	PASS
161	9/20/2022	82	72	13:07	13:12	30	30	EL	AIR	PASS
162	9/20/2022	83	73	13:00	13:05	30	30	EL	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
163	9/20/2022	73	75	11:30	11:35	30	30	EL	AIR	PASS
164	9/20/2022	73	76	13:22	13:27	30	30	EL	AIR	PASS
165	9/20/2022	73	77	13:25	13:30	30	30	EL	AIR	PASS
166	9/20/2022	73	78	13:27	13:32	30	30	EL	AIR	PASS
167	9/20/2022	73	79	13:30	13:35	30	30	EL	AIR	PASS
168	9/20/2022	73	80	13:33	13:38	30	30	EL	AIR	PASS
169	9/21/2022	80	84	10:00	10:05	30	30	KV	AIR	PASS
170	9/21/2022	84	85	10:42	10:47	30	30	KV	AIR	PASS
171	9/21/2022	85	86	11:12	11:17	30	30	KV	AIR	PASS
172	9/21/2022	86	87	11:15	11:20	30	30	KV	AIR	PASS
173	9/21/2022	87	88	12:30	12:35	30	30	KV	AIR	PASS
174	9/21/2022	88	89	12:35	12:40	30	30	KV	AIR	PASS
175	9/21/2022	73	84	10:40	10:45	30	30	KV	AIR	PASS
176	9/21/2022	73	85	10:46	10:51	30	30	KV	AIR	PASS
177	9/21/2022	736	86	11:00	11:05	30	30	KV	AIR	PASS
178	9/21/2022	73	87	11:01	11:06	30	30	KV	AIR	PASS
179	9/21/2022	83	87	11:03	11:08	30	30	KV	AIR	PASS
180	9/21/2022	83	88	11:05	11:10	30	30	KV	AIR	PASS
181	9/21/2022	83	89	11:10	11:15	30	30	KV	AIR	PASS
182	9/22/2022	89	90	10:55	11:00	30	30	KV	AIR	PASS
183	9/22/2022	90	91	11:15	11:20	30	30	KV	AIR	PASS
184	9/22/2022	83	90	10:40	10:45	30	30	KV	AIR	PASS
185	9/22/2022	83	91	10:41	10:46	30	30	KV	AIR	PASS
186	9/28/2022	36	92	10:17	10:22	30	30	KV	AIR	PASS
187	9/28/2022	37	92	10:35	10:40	30	30	KV	AIR	PASS
188	9/28/2022	92	93	10:15	10:20	30	30	KV	AIR	PASS
189	9/28/2022	93	94	10:05	10:10	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
190	9/28/2022	94	95	11:03	11:08	30	30	KV	AIR	PASS
191	9/28/2022	74	92	11:15	11:20	30	30	KV	AIR	PASS
192	9/28/2022	75	93	11:12	11:17	30	30	KV	AIR	PASS
193	9/28/2022	76	94	11:10	11:15	30	30	KV	AIR	PASS
194	9/28/2022	77	95	11:00	11:05	30	30	KV	AIR	PASS
195	9/29/2022	95	96	09:30	09:35	30	30	KV	AIR	PASS
196	9/29/2022	96	97	09:40	09:45	30	30	KV	AIR	PASS
197	9/29/2022	96	98	09:50	09:55	30	30	KV	AIR	PASS
198	9/29/2022	97	98	09:52	09:57	30	30	KV	AIR	PASS
199	9/29/2022	97	99	12:32	12:37	30	30	KV	AIR	PASS
200	9/29/2022	97	100	10:22	10:27	30	30	KV	AIR	PASS
201	9/29/2022	98	100	09:55	10:00	30	30	KV	AIR	PASS
202	9/29/2022	99	100	10:26	10:31	30	30	KV	AIR	PASS
203	9/29/2022	99	101	12:37	12:42	30	30	KV	AIR	PASS
204	9/29/2022	99	102	10:25	10:30	30	30	KV	AIR	PASS
205	9/29/2022	100	102	10:18	10:23	30	30	KV	AIR	PASS
206	9/29/2022	100	103	10:12	10:17	30	30	KV	AIR	PASS
207	9/29/2022	101	102	10:21	10:26	30	30	KV	AIR	PASS
208	9/29/2022	101	104	12:42	12:47	30	30	KV	AIR	PASS
209	9/29/2022	102	103	10:15	10:20	30	30	KV	AIR	PASS
210	9/29/2022	102	104	10:58	11:03	30	30	KV	AIR	PASS
211	9/29/2022	78	96	12:31	12:36	30	30	KV	AIR	PASS
212	9/29/2022	79	97	12:30	12:35	30	30	KV	AIR	PASS
213	9/29/2022	80	99	12:35	12:40	30	30	KV	AIR	PASS
214	9/29/2022	84	101	12:40	12:45	30	30	KV	AIR	PASS
215	9/29/2022	85	104	12:44	12:49	30	30	KV	AIR	PASS
216	9/30/2022	104	105	08:47	08:52	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
217	9/30/2022	104	106	08:40	08:45	30	30	KV	AIR	PASS
218	9/30/2022	105	106	08:45	08:50	30	30	KV	AIR	PASS
219	9/30/2022	105	107	09:35	09:40	30	30	KV	AIR	PASS
220	9/30/2022	105	108	09:27	09:32	30	30	KV	AIR	PASS
221	9/30/2022	107	108	09:05	09:10	30	30	KV	AIR	PASS
222	9/30/2022	107	109	09:13	09:18	30	30	KV	AIR	PASS
223	9/30/2022	108	109	09:45	09:50	30	30	KV	AIR	PASS
224	9/30/2022	109	110	09:58	10:03	30	30	KV	AIR	PASS
225	9/30/2022	110	111	09:10	09:15	30	30	KV	AIR	PASS
226	9/30/2022	111	112	09:50	09:55	30	30	KV	AIR	PASS
227	9/30/2022	105	86	10:09	10:14	30	30	KV	AIR	PASS
228	9/30/2022	107	87	10:08	10:13	30	30	KV	AIR	PASS
229	9/30/2022	109	88	10:09	10:14	30	30	KV	AIR	PASS
230	9/30/2022	110	89	10:10	10:15	30	30	KV	AIR	PASS
231	9/30/2022	111	90	09:53	09:58	30	30	KV	AIR	PASS
232	9/30/2022	112	91	09:52	09:57	30	30	KV	AIR	PASS
233	12/1/2022	113	114	09:10	09:15	30	30	KV	AIR	PASS
234	12/1/2022	114	115	09:45	09:50	30	30	KV	AIR	PASS
235	12/1/2022	115	116	10:05	10:10	30	30	KV	AIR	PASS
236	12/1/2022	115	117	10:25	10:30	30	30	KV	AIR	PASS
237	12/1/2022	116	117	10:10	10:15	30	30	KV	AIR	PASS
238	12/1/2022	91	115	-- ext weld --				KV	Vac Test	PASS
239	12/1/2022	83	114	-- ext weld --				KV	Vac Test	PASS
240	12/1/2022	81	113	-- ext weld --				KV	Vac Test	PASS
241	12/1/2022	116	118	13:25	13:30	30	30	KV	AIR	PASS
242	12/1/2022	117	118	13:35	13:40	30	30	KV	AIR	PASS
243	12/1/2022	118	119	13:41	13:46	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
244	12/1/2022	119	120	14:00	14:05	30	30	KV	AIR	PASS
245	12/1/2022	120	121	14:27	14:32	30	30	KV	AIR	PASS
246	12/1/2022	121	122	14:30	14:35	30	30	KV	AIR	PASS
247	12/1/2022	91	116	14:40	14:45	30	30	KV	AIR	PASS
248	12/1/2022	91	118	14:44	14:49	30	30	KV	AIR	PASS
249	12/1/2022	91	119	14:46	14:51	30	30	KV	AIR	PASS
250	12/1/2022	91	120	14:50	14:55	30	30	KV	AIR	PASS
251	12/1/2022	91	121	15:00	15:05	30	30	KV	AIR	PASS
252	12/1/2022	91	122	-- ext weld --				KV	Vac Test	PASS
253	12/4/2022	123	124	09:00	09:05	30	30	KV	AIR	PASS
254	12/4/2022	123	125	09:10	09:15	30	30	KV	AIR	PASS
255	12/4/2022	124	125	09:13	09:18	30	30	KV	AIR	PASS
256	12/4/2022	124	126	09:30	09:35	30	30	KV	AIR	PASS
257	12/4/2022	124	127	09:20	09:25	30	30	KV	AIR	PASS
258	12/4/2022	125	127	09:25	09:30	30	30	KV	AIR	PASS
259	12/4/2022	126	127	09:32	09:37	30	30	KV	AIR	PASS
260	12/4/2022	126	128	09:45	09:50	30	30	KV	AIR	PASS
261	12/4/2022	127	128	09:47	09:52	30	30	KV	AIR	PASS
262	12/4/2022	128	129	10:30	10:35	30	30	KV	AIR	PASS
263	12/4/2022	129	130	10:50	10:55	30	30	KV	AIR	PASS
264	12/4/2022	130	131	11:11	11:16	30	30	KV	AIR	PASS
265	12/4/2022	131	132	11:25	11:30	30	30	KV	AIR	PASS
266	12/4/2022	114	123	13:10	13:15	30	30	KV	AIR	PASS
267	12/4/2022	115	124	13:12	13:17	30	30	KV	AIR	PASS
268	12/4/2022	117	126	13:20	13:25	30	30	KV	AIR	PASS
269	12/4/2022	118	128	13:22	13:27	30	30	KV	AIR	PASS
270	12/4/2022	119	129	13:25	13:30	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
271	12/4/2022	120	130	13:28	13:33	30	30	KV	AIR	PASS
272	12/4/2022	121	131	13:30	13:35	30	30	KV	AIR	PASS
273	12/4/2022	122	132	13:32	13:37	30	30	KV	AIR	PASS
274	12/5/2022	122	133	13:03	13:08	30	30	KV	AIR	PASS
275	12/5/2022	133	134	11:06	11:11	30	30	KV	AIR	PASS
276	12/5/2022	134	135	11:05	11:10	30	30	KV	AIR	PASS
277	12/5/2022	134	136	11:02	11:07	30	30	KV	AIR	PASS
278	12/5/2022	135	136	11:00	11:05	30	30	KV	AIR	PASS
279	12/5/2022	135	137	10:52	10:57	30	30	KV	AIR	PASS
280	12/5/2022	136	137	10:50	10:55	30	30	KV	AIR	PASS
281	12/5/2022	137	138	10:42	10:47	30	30	KV	AIR	PASS
282	12/5/2022	132	138	10:30	10:35	30	30	KV	AIR	PASS
283	12/5/2022	122	134	13:00	13:05	30	30	KV	AIR	PASS
284	12/5/2022	122	136	11:38	11:43	30	30	KV	AIR	PASS
285	12/5/2022	122	137	11:26	11:31	30	30	KV	AIR	PASS
286	12/5/2022	91	133	13:32	13:37	30	30	KV	AIR	PASS
287	12/5/2022	91	134	13:40	13:45	30	30	KV	AIR	PASS
288	12/5/2022	91	136	13:42	13:47	30	30	KV	AIR	PASS
289	12/5/2022	91	137	13:50	13:55	30	30	KV	AIR	PASS
290	12/5/2022	91	138	13:55	14:00	30	30	KV	AIR	PASS
291	12/7/2022	139	140	-- ext weld --				SS	Vac Test	PASS
292	12/7/2022	139	125	13:00	13:05	30	30	KV	AIR	PASS
293	12/7/2022	139	127	13:02	13:07	30	30	KV	AIR	PASS
294	12/7/2022	139	128	14:10	14:15	30	30	KV	AIR	PASS
295	12/7/2022	140	128	13:05	13:10	30	30	KV	AIR	PASS
296	12/7/2022	140	129	13:07	13:12	30	30	KV	AIR	PASS
297	12/7/2022	140	130	13:10	13:15	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
298	12/7/2022	140	131	13:12	13:17	30	30	KV	AIR	PASS
299	12/7/2022	140	132	13:15	13:20	30	30	KV	AIR	PASS
300	12/7/2022	140	138	13:25	13:30	30	30	KV	AIR	PASS
301	12/7/2022	140	142	-- ext weld --				KV	Vac Test	PASS
302	12/7/2022	140	143	14:08	14:13	30	30	KV	AIR	PASS
303	12/7/2022	140	144	14:02	14:07	30	30	KV	AIR	PASS
304	12/7/2022	140	145	14:00	14:05	30	30	KV	AIR	PASS
305	12/7/2022	140	146	13:55	14:00	30	30	KV	AIR	PASS
306	12/7/2022	140	147	13:50	13:55	30	30	KV	AIR	PASS
307	12/7/2022	140	148	13:40	13:45	30	30	KV	AIR	PASS
308	12/7/2022	140	149	13:36	13:41	30	30	KV	AIR	PASS
309	12/7/2022	140	150	13:33	13:38	30	30	KV	AIR	PASS
310	12/7/2022	140	151	13:30	13:35	30	30	KV	AIR	PASS
311	12/7/2022	141	142	10:10	10:15	30	30	KV	AIR	PASS
312	12/7/2022	142	143	10:15	10:20	30	30	KV	AIR	PASS
313	12/7/2022	143	144	10:20	10:25	30	30	KV	AIR	PASS
314	12/7/2022	144	145	10:22	10:27	30	30	KV	AIR	PASS
315	12/7/2022	145	146	10:25	10:30	30	30	KV	AIR	PASS
316	12/7/2022	146	147	11:10	11:15	30	30	KV	AIR	PASS
317	12/7/2022	146	153	10:04	10:09	30	30	KV	AIR	PASS
318	12/7/2022	147	148	10:57	11:02	30	30	KV	AIR	PASS
319	12/7/2022	147	153	11:00	11:05	30	30	KV	AIR	PASS
320	12/7/2022	148	149	10:50	10:55	30	30	KV	AIR	PASS
321	12/7/2022	149	150	10:40	10:45	30	30	KV	AIR	PASS
322	12/7/2022	150	151	10:35	10:40	30	30	KV	AIR	PASS
323	12/7/2022	151	138	13:22	13:27	30	30	KV	AIR	PASS
324	12/7/2022	151	152	10:27	10:32	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
325	12/7/2022	152	138	13:20	13:25	30	30	KV	AIR	PASS
326	12/8/2022	154	155	13:05	13:10	30	30	VX	AIR	PASS
327	12/8/2022	155	156	13:06	13:11	30	30	VX	AIR	PASS
328	12/8/2022	156	157	13:07	13:12	30	30	VX	AIR	PASS
329	12/8/2022	157	158	13:08	13:13	30	30	VX	AIR	PASS
330	12/8/2022	157	159	13:21	13:26	30	30	VX	AIR	PASS
331	12/8/2022	158	159	13:18	13:23	30	30	VX	AIR	PASS
332	12/8/2022	158	160	13:09	13:14	30	30	VX	AIR	PASS
333	12/8/2022	158	161	13:14	13:19	30	30	VX	AIR	PASS
334	12/8/2022	159	161	13:16	13:21	30	30	VX	AIR	PASS
335	12/8/2022	160	161	13:12	13:17	30	30	VX	AIR	PASS
336	12/8/2022	161	154	-- ext weld --				SS	Vac Test	PASS
337	12/9/2022	16	155	-- ext weld --				SS	Vac Test	PASS
338	12/9/2022	15	155	-- ext weld --				SS	Vac Test	PASS
339	12/9/2022	15	156	-- ext weld --				SS	Vac Test	PASS
340	12/9/2022	13	156	-- ext weld --				SS	Vac Test	PASS
341	12/9/2022	13	157	-- ext weld --				SS	Vac Test	PASS
342	12/9/2022	12	157	-- ext weld --				SS	Vac Test	PASS
343	12/9/2022	12	158	-- ext weld --				SS	Vac Test	PASS
344	12/9/2022	26	158	-- ext weld --				SS	Vac Test	PASS
345	12/9/2022	158	28	-- ext weld --				SS	Vac Test	PASS
346	12/9/2022	160	28	-- ext weld --				SS	Vac Test	PASS
347	12/9/2022	160	31	-- ext weld --				SS	Vac Test	PASS
348	12/9/2022	161	31	-- ext weld --				SS	Vac Test	PASS
349	12/9/2022	161	33	-- ext weld --				SS	Vac Test	PASS
350	12/9/2022	162	35	-- ext weld --				SS	Vac Test	PASS
351	12/8/2022	162	161	14:10	14:15	30	30	VX	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
352	12/8/2022	162	163	14:08	14:13	30	30	VX	AIR	PASS
353	12/8/2022	163	164	14:06	14:11	30	30	VX	AIR	PASS
354	12/8/2022	164	165	14:00	14:05	30	30	VX	AIR	PASS
355	12/8/2022	161	163	14:07	14:12	30	30	VX	AIR	PASS
356	12/9/2022	163	35	-- ext weld --				SS	Vac Test	PASS
357	12/9/2022	163	36	-- ext weld --				SS	Vac Test	PASS
358	12/8/2022	164	161	14:09	14:14	30	30	VX	AIR	PASS
359	12/9/2022	163	92	-- ext weld --				SS	Vac Test	PASS
360	12/9/2022	164	93	-- ext weld --				SS	Vac Test	PASS
361	12/9/2022	165	94	-- ext weld --				SS	Vac Test	PASS
362	12/16/2022	166	167	09:48	09:53	30	30	KV	AIR	PASS
363	12/16/2022	166	91	10:35	10:40	30	30	KV	AIR	PASS
364	12/16/2022	166	168	09:07	09:12	30	30	KV	AIR	PASS
365	12/16/2022	167	91	11:00	11:05	30	30	KV	AIR	PASS
366	12/16/2022	167	112	11:20	11:25	30	30	KV	AIR	PASS
367	12/16/2022	167	168	09:33	09:38	30	30	KV	AIR	PASS
368	12/16/2022	167	169	09:47	09:52	30	30	KV	AIR	PASS
369	12/16/2022	168	169	09:30	09:35	30	30	KV	AIR	PASS
370	12/16/2022	168	170	10:10	10:15	30	30	KV	AIR	PASS
371	12/16/2022	169	170	10:45	10:50	30	30	KV	AIR	PASS
372	12/16/2022	170	171	10:44	10:49	30	30	KV	AIR	PASS
373	12/17/2022	166	138	07:30	07:35	30	30	KV	AIR	PASS
374	12/17/2022	168	138	07:33	07:38	30	30	KV	AIR	PASS
375	12/17/2022	170	138	07:38	07:43	30	30	KV	AIR	PASS
376	12/17/2022	171	138	07:40	07:45	30	30	KV	AIR	PASS
377	12/17/2022	171	172	09:25	09:30	30	30	VX	AIR	PASS
378	12/17/2022	172	173	08:55	09:00	30	30	VX	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
379	12/17/2022	172	174	09:56	10:01	30	30	VX	AIR	PASS
380	12/17/2022	171	173	09:48	09:53	30	30	VX	AIR	PASS
381	12/17/2022	173	174	10:23	10:28	30	30	VX	AIR	PASS
382	12/17/2022	173	175	10:10	10:15	30	30	VX	AIR	PASS
383	12/17/2022	174	175	09:40	09:45	30	30	VX	AIR	PASS
384	12/17/2022	174	176	11:05	11:10	30	30	VX	AIR	PASS
385	12/17/2022	175	176	10:15	10:20	30	30	VX	AIR	PASS
386	12/17/2022	176	177	10:51	10:56	30	30	VX	AIR	PASS
387	12/17/2022	176	178	11:02	11:07	30	30	VX	AIR	PASS
388	12/17/2022	177	178	10:50	10:55	30	30	VX	AIR	PASS
389	12/17/2022	138	172	12:15	12:20	30	30	VX	AIR	PASS
390	12/17/2022	138	174	12:18	12:23	30	30	VX	AIR	PASS
391	12/17/2022	138	176	12:21	12:26	30	30	VX	AIR	PASS
392	12/17/2022	138	177	12:24	12:29	30	30	VX	AIR	PASS
393	1/6/2023	177	179	15:21	15:26	30	30	KV	AIR	PASS
394	1/6/2023	178	179	13:00	13:05	30	30	KV	AIR	PASS
395	1/6/2023	179	181	15:25	15:30	30	30	KV	AIR	PASS
396	1/6/2023	179	180	08:15	08:20	30	30	KV	AIR	PASS
397	1/6/2023	178	180	08:13	08:18	30	30	KV	AIR	PASS
398	1/6/2023	180	181	08:07	08:12	30	30	KV	AIR	PASS
399	1/6/2023	181	182	08:00	08:05	30	30	KV	AIR	PASS
400	1/6/2023	182	183	15:30	15:35	30	30	KV	AIR	PASS
401	1/6/2023	182	184	08:02	08:07	30	30	KV	AIR	PASS
402	1/6/2023	183	184	12:50	12:55	30	30	KV	AIR	PASS
403	1/6/2023	183	185	15:30	15:35	30	30	KV	AIR	PASS
404	1/6/2023	184	185	07:52	07:57	30	30	KV	AIR	PASS
405	1/6/2023	185	186	07:45	07:50	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
406	1/6/2023	186	187	13:15	13:20	30	30	KV	AIR	PASS
407	1/6/2023	186	188	07:40	07:45	30	30	KV	AIR	PASS
408	1/6/2023	187	188	13:01	13:06	30	30	KV	AIR	PASS
409	1/6/2023	138	179	15:17	15:22	30	30	KV	AIR	PASS
410	1/6/2023	138	181	15:15	15:20	30	30	KV	AIR	PASS
411	1/6/2023	138	182	15:12	15:17	30	30	KV	AIR	PASS
412	1/6/2023	138	183	15:08	15:13	30	30	KV	AIR	PASS
413	1/6/2023	138	185	15:00	15:05	30	30	KV	AIR	PASS
414	1/6/2023	138	186	14:45	14:50	30	30	KV	AIR	PASS
415	1/6/2023	138	187	14:35	14:40	30	30	KV	AIR	PASS
416	1/11/2023	138	189	09:10	09:15	30	30	KV	AIR	PASS
417	1/11/2023	189	190	09:15	09:20	30	30	KV	AIR	PASS
418	1/11/2023	190	191	09:20	09:25	30	30	KV	AIR	PASS
419	1/11/2023	191	192	09:30	09:35	30	30	KV	AIR	PASS
420	1/11/2023	191	193	09:33	09:38	30	30	KV	AIR	PASS
421	1/11/2023	192	193	09:40	09:45	30	30	KV	AIR	PASS
422	1/11/2023	192	194	09:45	09:50	30	30	KV	AIR	PASS
423	1/11/2023	193	194	09:47	09:52	30	30	KV	AIR	PASS
424	1/11/2023	194	195	10:02	10:07	30	30	KV	AIR	PASS
425	1/11/2023	195	196	10:05	10:10	30	30	KV	AIR	PASS
426	1/11/2023	195	197	10:07	10:12	30	30	KV	AIR	PASS
427	1/11/2023	196	197	10:15	10:20	30	30	KV	AIR	PASS
428	1/11/2023	196	198	10:40	10:45	30	30	KV	AIR	PASS
429	1/11/2023	197	198	10:30	10:35	30	30	KV	AIR	PASS
430	1/11/2023	198	199	10:47	10:52	30	30	KV	AIR	PASS
431	1/11/2023	199	200	11:10	11:15	30	30	KV	AIR	PASS
432	1/11/2023	199	201	11:20	11:25	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
433	1/11/2023	200	201	11:15	11:20	30	30	KV	AIR	PASS
434	1/11/2023	187	189	11:31	11:36	30	30	KV	AIR	PASS
435	1/11/2023	187	190	11:33	11:38	30	30	KV	AIR	PASS
436	1/11/2023	187	191	11:35	11:40	30	30	KV	AIR	PASS
437	1/11/2023	189	192	11:37	11:42	30	30	KV	AIR	PASS
438	1/11/2023	189	194	11:40	11:45	30	30	KV	AIR	PASS
439	1/11/2023	189	195	11:43	11:48	30	30	KV	AIR	PASS
440	1/11/2023	188	196	11:45	11:50	30	30	KV	AIR	PASS
441	1/11/2023	188	198	11:47	11:52	30	30	KV	AIR	PASS
442	1/11/2023	188	199	11:50	11:55	30	30	KV	AIR	PASS
443	1/11/2023	188	200	11:52	11:57	30	30	KV	AIR	PASS
444	1/13/2023	200	202	10:00	10:05	30	30	KV	AIR	PASS
445	1/13/2023	201	202	10:03	10:08	30	30	KV	AIR	PASS
446	1/13/2023	202	203	10:10	10:15	30	30	KV	AIR	PASS
447	1/13/2023	203	204	10:15	10:20	30	30	KV	AIR	PASS
448	1/13/2023	203	205	10:25	10:30	30	30	KV	AIR	PASS
449	1/13/2023	204	205	10:35	10:40	30	30	KV	AIR	PASS
450	1/13/2023	204	206	10:30	10:35	30	30	KV	AIR	PASS
451	1/13/2023	205	206	10:33	10:38	30	30	KV	AIR	PASS
452	1/13/2023	206	207	11:10	11:15	30	30	KV	AIR	PASS
453	1/13/2023	207	208	11:22	11:27	30	30	KV	AIR	PASS
454	1/13/2023	208	209	11:32	11:37	30	30	KV	AIR	PASS
455	1/13/2023	209	210	11:40	11:45	30	30	KV	AIR	PASS
456	1/13/2023	188	202	10:50	10:55	30	30	KV	AIR	PASS
457	1/13/2023	188	203	11:00	11:05	30	30	KV	AIR	PASS
458	1/13/2023	188	204	11:05	11:10	30	30	KV	AIR	PASS
459	1/13/2023	188	206	11:07	11:12	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
460	1/13/2023	188	207	11:25	11:30	30	30	KV	AIR	PASS
461	1/13/2023	188	208	11:30	11:35	30	30	KV	AIR	PASS
462	1/13/2023	188	209	11:34	11:39	30	30	KV	AIR	PASS
463	1/13/2023	188	210	11:45	11:50	30	30	KV	AIR	PASS
464	1/13/2023	211	212	13:30	13:35	30	30	KV	AIR	PASS
465	1/13/2023	212	213	13:35	13:40	30	30	KV	AIR	PASS
466	1/13/2023	213	214	13:38	13:43	30	30	KV	AIR	PASS
467	1/13/2023	214	215	13:42	13:47	30	30	KV	AIR	PASS
468	1/13/2023	214	216	13:44	13:49	30	30	KV	AIR	PASS
469	1/13/2023	215	216	13:45	13:50	30	30	KV	AIR	PASS
470	1/13/2023	215	217	13:50	13:55	30	30	KV	AIR	PASS
471	1/13/2023	216	217	14:00	14:05	30	30	KV	AIR	PASS
472	1/13/2023	217	218	14:35	14:40	30	30	KV	AIR	PASS
473	1/13/2023	218	219	14:40	14:45	30	30	KV	AIR	PASS
474	1/13/2023	219	220	14:43	14:48	30	30	KV	AIR	PASS
475	1/13/2023	220	221	14:50	14:55	30	30	KV	AIR	PASS
476	1/13/2023	221	222	14:55	15:00	30	30	KV	AIR	PASS
477	1/13/2023	222	223	15:00	15:05	30	30	KV	AIR	PASS
478	1/13/2023	223	224	15:15	15:20	30	30	KV	AIR	PASS
479	1/13/2023	223	225	15:20	15:25	30	30	KV	AIR	PASS
480	1/13/2023	224	225	15:17	15:22	30	30	KV	AIR	PASS
481	1/13/2023	210	211	15:20	15:25	30	30	KV	AIR	PASS
482	1/13/2023	210	212	15:22	15:27	30	30	KV	AIR	PASS
483	1/13/2023	210	213	15:25	15:30	30	30	KV	AIR	PASS
484	1/13/2023	209	213	15:26	15:31	30	30	KV	AIR	PASS
485	1/13/2023	209	214	15:30	15:35	30	30	KV	AIR	PASS
486	1/13/2023	209	215	15:32	15:37	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
487	1/13/2023	208	215	15:35	15:40	30	30	KV	AIR	PASS
488	1/13/2023	208	217	15:36	15:41	30	30	KV	AIR	PASS
489	1/13/2023	207	218	15:40	15:45	30	30	KV	AIR	PASS
490	1/13/2023	207	219	15:43	15:48	30	30	KV	AIR	PASS
491	1/13/2023	206	219	15:45	15:50	30	30	KV	AIR	PASS
492	1/13/2023	206	220	15:47	15:52	30	30	KV	AIR	PASS
493	1/13/2023	206	221	16:00	16:05	30	30	KV	AIR	PASS
494	1/13/2023	206	222	16:02	16:07	30	30	KV	AIR	PASS
495	1/13/2023	206	223	16:05	16:10	30	30	KV	AIR	PASS
496	1/13/2023	206	204	16:08	16:13	30	30	KV	AIR	PASS
497	1/14/2023	221	226	11:19	11:24	30	30	KV	AIR	PASS
498	1/14/2023	226	227	07:45	07:50	30	30	KV	AIR	PASS
499	1/14/2023	226	228	11:25	11:30	30	30	KV	AIR	PASS
500	1/14/2023	227	228	11:32	11:37	30	30	KV	AIR	PASS
501	1/14/2023	227	229	07:47	07:52	30	30	KV	AIR	PASS
502	1/14/2023	228	229	07:55	08:00	30	30	KV	AIR	PASS
503	1/14/2023	229	230	08:18	08:23	30	30	KV	AIR	PASS
504	1/14/2023	230	231	08:22	08:27	30	30	KV	AIR	PASS
505	1/14/2023	231	232	08:30	08:35	30	30	KV	AIR	PASS
506	1/14/2023	231	233	08:32	08:37	30	30	KV	AIR	PASS
507	1/14/2023	232	233	08:35	08:40	30	30	KV	AIR	PASS
508	1/14/2023	232	234	08:48	08:53	30	30	KV	AIR	PASS
509	1/14/2023	233	234	08:38	08:43	30	30	KV	AIR	PASS
510	1/14/2023	234	235	08:55	09:00	30	30	KV	AIR	PASS
511	1/14/2023	235	236	09:00	09:05	30	30	KV	AIR	PASS
512	1/14/2023	226	188	08:02	08:07	30	30	KV	AIR	PASS
513	1/14/2023	226	186	08:03	08:08	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
514	1/14/2023	227	186	08:10	08:15	30	30	KV	AIR	PASS
515	1/14/2023	229	185	08:14	08:19	30	30	KV	AIR	PASS
516	1/14/2023	230	184	08:20	08:25	30	30	KV	AIR	PASS
517	1/14/2023	231	184	08:25	08:30	30	30	KV	AIR	PASS
518	1/14/2023	231	183	08:26	08:31	30	30	KV	AIR	PASS
519	1/14/2023	232	183	08:45	08:50	30	30	KV	AIR	PASS
520	1/14/2023	232	181	08:46	08:51	30	30	KV	AIR	PASS
521	1/14/2023	234	181	08:50	08:55	30	30	KV	AIR	PASS
522	1/14/2023	235	180	09:05	09:10	30	30	KV	AIR	PASS
523	1/14/2023	236	178	09:07	09:12	30	30	KV	AIR	PASS
524	1/17/2023	236	237	15:15	15:20	30	30	KV	AIR	PASS
525	1/17/2023	237	238	15:24	15:29	30	30	KV	AIR	PASS
526	1/17/2023	238	239	15:27	15:32	30	30	KV	AIR	PASS
527	1/17/2023	239	240	15:28	15:33	30	30	KV	AIR	PASS
528	1/17/2023	239	241	15:29	15:34	30	30	KV	AIR	PASS
529	1/17/2023	240	241	15:36	15:41	30	30	KV	AIR	PASS
530	1/17/2023	240	242	15:52	15:57	30	30	KV	AIR	PASS
531	1/17/2023	240	243	15:40	15:45	30	30	KV	AIR	PASS
532	1/17/2023	241	243	15:30	15:35	30	30	KV	AIR	PASS
533	1/17/2023	242	243	16:02	16:07	30	30	KV	AIR	PASS
534	1/17/2023	242	244	16:05	16:10	30	30	KV	AIR	PASS
535	1/20/2023	243	244	08:00	08:05	30	30	KV	AIR	PASS
536	1/20/2023	243	245	08:02	08:07	30	30	KV	AIR	PASS
537	1/20/2023	244	245	08:08	08:13	30	30	KV	AIR	PASS
538	1/20/2023	244	246	08:10	08:15	30	30	KV	AIR	PASS
539	1/20/2023	245	246	08:12	08:17	30	30	KV	AIR	PASS
540	1/20/2023	246	247	08:15	08:20	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
541	1/20/2023	247	248	09:10	09:15	30	30	KV	AIR	PASS
542	1/20/2023	247	249	08:28	08:33	30	30	KV	AIR	PASS
543	1/20/2023	248	249	09:12	09:17	30	30	KV	AIR	PASS
544	1/20/2023	248	250	09:20	09:25	30	30	KV	AIR	PASS
545	1/20/2023	248	251	09:15	09:20	30	30	KV	AIR	PASS
546	1/20/2023	249	251	08:27	08:32	30	30	KV	AIR	PASS
547	1/20/2023	250	251	09:30	09:35	30	30	KV	AIR	PASS
548	1/20/2023	250	252	09:40	09:45	30	30	KV	AIR	PASS
549	1/20/2023	251	252	08:30	08:35	30	30	KV	AIR	PASS
550	1/20/2023	252	253	08:35	08:40	30	30	KV	AIR	PASS
551	1/20/2023	253	254	08:38	08:43	30	30	KV	AIR	PASS
552	1/20/2023	254	255	08:40	08:45	30	30	KV	AIR	PASS
553	1/20/2023	255	256	08:45	08:50	30	30	KV	AIR	PASS
554	1/20/2023	256	257	08:47	08:52	30	30	KV	AIR	PASS
555	1/20/2023	256	258	08:42	08:47	30	30	KV	AIR	PASS
556	1/20/2023	257	258	08:52	08:57	30	30	KV	AIR	PASS
557	1/20/2023	257	259	08:55	09:00	30	30	KV	AIR	PASS
558	1/20/2023	258	259	08:54	08:59	30	30	KV	AIR	PASS
559	1/20/2023	259	260	09:00	09:05	30	30	KV	AIR	PASS
560	1/17/2023	237	178	15:00	15:05	30	30	KV	AIR	PASS
561	1/17/2023	237	176	15:02	15:07	30	30	KV	AIR	PASS
562	1/17/2023	238	175	15:05	15:20	30	30	KV	AIR	PASS
563	1/17/2023	238	173	15:06	15:11	30	30	LD	AIR	PASS
564	1/17/2023	239	173	15:07	15:12	30	30	KV	AIR	PASS
565	1/17/2023	239	171	15:10	15:15	30	30	KV	AIR	PASS
566	1/17/2023	240	171	15:12	15:17	30	30	KV	AIR	PASS
567	1/17/2023	240	170	15:15	15:20	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
568	1/17/2023	242	169	16:00	16:05	30	30	KV	AIR	PASS
569	1/17/2023	242	167	16:02	16:07	30	30	KV	AIR	PASS
570	1/17/2023	244	167	16:05	16:10	30	30	KV	AIR	PASS
571	1/17/2023	244	112	16:07	16:12	30	30	KV	AIR	PASS
572	1/17/2023	246	122	16:10	16:15	30	30	KV	AIR	PASS
573	1/17/2023	247	122	16:12	16:17	30	30	KV	AIR	PASS
574	1/17/2023	248	122	16:15	16:20	30	30	KV	AIR	PASS
575	1/17/2023	250	122	16:17	16:22	30	30	KV	AIR	PASS
576	1/17/2023	252	122	16:20	16:25	30	30	KV	AIR	PASS
577	1/20/2023	253	122	07:30	07:35	30	30	KV	AIR	PASS
578	1/20/2023	254	111	07:37	07:42	30	30	KV	AIR	PASS
579	1/20/2023	255	111	07:30	07:35	30	30	KV	AIR	PASS
580	1/20/2023	256	110	07:32	07:37	30	30	KV	AIR	PASS
581	1/20/2023	257	110	07:31	07:36	30	30	KV	AIR	PASS
582	1/20/2023	257	109	07:35	07:40	30	30	KV	AIR	PASS
583	1/20/2023	259	109	07:38	07:43	30	30	KV	AIR	PASS
584	1/23/2023	260	109	07:37	07:42	30	30	LD	AIR	PASS
585	1/20/2023	260	108	07:40	07:45	30	30	KV	AIR	PASS
586	1/23/2023	260	261	10:30	10:35	30	30	KV	AIR	PASS
587	1/23/2023	261	262	10:32	10:37	30	30	KV	AIR	PASS
588	1/23/2023	261	263	10:35	10:40	30	30	KV	AIR	PASS
589	1/23/2023	262	263	10:37	10:42	30	30	KV	AIR	PASS
590	1/23/2023	262	264	10:40	10:45	30	30	KV	AIR	PASS
591	1/23/2023	263	264	10:43	10:48	30	30	KV	AIR	PASS
592	1/23/2023	264	265	10:50	10:55	30	30	KV	AIR	PASS
593	1/23/2023	265	266	11:00	11:05	30	30	KV	AIR	PASS
594	1/23/2023	265	267	11:05	11:10	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
595	1/23/2023	266	267	11:10	11:15	30	30	KV	AIR	PASS
596	1/23/2023	266	268	11:13	11:18	30	30	KV	AIR	PASS
597	1/23/2023	267	268	11:08	11:13	30	30	KV	AIR	PASS
598	1/23/2023	268	269	11:15	11:20	30	30	KV	AIR	PASS
599	1/23/2023	269	270	11:20	11:25	30	30	KV	AIR	PASS
600	1/23/2023	269	271	11:22	11:27	30	30	KV	AIR	PASS
601	1/23/2023	270	271	11:23	11:28	30	30	KV	AIR	PASS
602	1/23/2023	270	272	11:26	11:31	30	30	KV	AIR	PASS
603	1/23/2023	271	272	11:25	11:30	30	30	KV	AIR	PASS
604	1/23/2023	261	108	13:00	13:05	30	30	KV	AIR	PASS
605	1/23/2023	262	106	13:05	13:10	30	30	KV	AIR	PASS
606	1/23/2023	264	106	13:10	13:15	30	30	KV	AIR	PASS
607	1/23/2023	265	104	13:13	13:18	30	30	KV	AIR	PASS
608	1/23/2023	266	104	13:20	13:25	30	30	KV	AIR	PASS
609	1/23/2023	266	102	-- ext weld --				LD	Vac Test	PASS
610	1/23/2023	268	102	13:21	13:26	30	30	KV	AIR	PASS
611	1/23/2023	268	103	13:25	13:30	30	30	KV	AIR	PASS
612	1/23/2023	269	103	13:30	13:35	30	30	KV	AIR	PASS
613	1/23/2023	270	103	13:35	13:40	30	30	KV	AIR	PASS
614	1/23/2023	272	100	-- ext weld --				KV	Vac Test	PASS
615	2/10/2023	272	273	08:11	08:16	30	30	SA	AIR	PASS
616	2/10/2023	273	274	08:04	08:09	30	30	SA	AIR	PASS
617	2/10/2023	274	275	07:32	07:37	30	30	SA	AIR	PASS
618	2/10/2023	275	276	07:25	07:30	30	30	SA	AIR	PASS
619	2/11/2023	276	284	09:30	09:35	30	30	SA	AIR	PASS
620	2/11/2023	284	285	09:37	09:42	30	30	SA	AIR	PASS
621	2/11/2023	285	R564	10:30	10:35	30	30	SA	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
622	2/13/2023	285	R565	-- ext weld --				SS	Vac Test	PASS
623	2/13/2023	R564	R565	-- ext weld --				SS	Vac Test	PASS
624	2/11/2023	277	R564	09:52	09:57	30	30	SA	AIR	PASS
625	2/13/2022	277	R565	-- ext weld --				SS	Vac Test	PASS
626	2/13/2023	284	277	-- ext weld --				KV	Vac Test	PASS
627	2/11/2023	284	278	10:04	10:09	30	30	KV	AIR	PASS
628	2/13/2023	285	277	-- ext weld --				SS	Vac Test	PASS
629	2/11/2023	277	278	10:04	10:09	30	30	SA	AIR	PASS
630	2/11/2023	277	279	10:05	10:10	30	30	SA	AIR	PASS
631	2/11/2023	278	279	11:08	11:13	30	30	SA	AIR	PASS
632	2/7/2023	279	280	09:10	09:15	30	30	KV	AIR	PASS
633	2/7/2023	280	281	09:05	09:10	30	30	KV	AIR	PASS
634	2/7/2023	281	282	08:02	08:07	30	30	KV	AIR	PASS
635	2/10/2023	272	274	11:00	11:05	30	30	SA	AIR	PASS
636	2/10/2023	272	275	12:40	12:45	30	30	SA	AIR	PASS
637	2/10/2023	272	276	13:01	13:06	30	30	SA	AIR	PASS
638	2/10/2023	272	100	-- ext weld --				SS	Vac Test	PASS
639	2/10/2023	273	98	-- ext weld --				SS	Vac Test	PASS
640	2/10/2023	274	98	-- ext weld --				SS	Vac Test	PASS
641	2/10/2023	275	98	-- ext weld --				SS	Vac Test	PASS
642	2/10/2023	275	96	-- ext weld --				SS	Vac Test	PASS
643	2/10/2023	276	96	-- ext weld --				SS	Vac Test	PASS
644	2/10/2023	284	96	-- ext weld --				SS	Vac Test	PASS
645	2/10/2023	284	95	-- ext weld --				SS	Vac Test	PASS
646	2/10/2023	285	95	-- ext weld --				SS	Vac Test	PASS
647	2/10/2023	R565	95	-- ext weld --				SS	Vac Test	PASS
648	2/10/2023	277	95	-- ext weld --				SS	Vac Test	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
649	2/10/2023	279	165	-- ext weld --				SS	Vac Test	PASS
650	2/10/2023	280	165	-- ext weld --				SS	Vac Test	PASS
651	2/10/2023	281	165	-- ext weld --				SS	Vac Test	PASS
652	2/10/2023	282	165	-- ext weld --				SS	Vac Test	PASS
653	2/7/2023	282	283	09:00	09:05	30	30	KV	AIR	PASS
654	2/13/2023	283	286	09:46	09:51	30	30	SA	AIR	PASS
655	2/13/2023	286	287	09:50	09:55	30	30	SA	AIR	PASS
656	2/13/2023	288	289	10:15	10:20	30	30	SA	AIR	PASS
657	2/13/2023	289	290	13:26	13:31	30	30	SA	AIR	PASS
658	2/15/2023	290	291	13:21	13:26	30	30	SS	AIR	PASS
659	2/15/2023	291	R581	13:20	13:25	30	30	SS	AIR	PASS
660	2/15/2023	291	292	13:37	13:42	30	30	SS	AIR	PASS
661	2/15/2023	283	165	-- ext weld --				SS	Vac Test	PASS
662	2/15/2023	286	165	-- ext weld --				SS	Vac Test	PASS
663	2/15/2023	286	R581	-- ext weld --				SS	Vac Test	PASS
664	2/15/2023	286	291	-- ext weld --				SS	Vac Test	PASS
665	2/15/2023	287	292	-- ext weld --				SS	Vac Test	PASS
666	2/15/2023	R581	164	-- ext weld --				SS	Vac Test	PASS
667	2/15/2023	290	R581	-- ext weld --				SS	Vac Test	PASS
668	2/13/2023	290	164	-- ext weld --				SS	Vac Test	PASS
669	2/13/2023	289	164	-- ext weld --				SS	Vac Test	PASS
670	2/13/2023	289	163	-- ext weld --				SS	Vac Test	PASS
671	2/13/2023	288	163	-- ext weld --				SS	Vac Test	PASS
672	2/13/2023	288	35	-- ext weld --				SS	Vac Test	PASS
673	2/13/2023	288	33	-- ext weld --				SS	Vac Test	PASS
674	2/13/2023	288	161	-- ext weld --				SS	Vac Test	PASS
675	2/13/2023	288	158	-- ext weld --				SS	Vac Test	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
676	2/13/2023	288	157	-- ext weld --				SS	Vac Test	PASS
677	2/13/2023	288	156	-- ext weld --				SS	Vac Test	PASS
678	2/13/2023	288	155	-- ext weld --				SS	Vac Test	PASS
679	2/13/2023	288	154	-- ext weld --				SS	Vac Test	PASS
680	2/18/2023	292	293	09:45	09:50	30	30	KV	AIR	PASS
681	2/18/2023	293	294	10:06	10:11	30	30	KV	AIR	PASS
682	2/18/2023	294	295	10:12	10:17	30	30	KV	AIR	PASS
683	2/18/2023	295	296	10:18	10:23	30	30	KV	AIR	PASS
684	2/18/2023	295	297	10:15	10:20	30	30	KV	AIR	PASS
685	2/18/2023	296	297	10:23	10:28	30	30	KV	AIR	PASS
686	2/18/2023	296	298	10:21	10:26	30	30	KV	AIR	PASS
687	2/18/2023	297	298	10:25	10:30	30	30	KV	AIR	PASS
688	2/18/2023	298	299	10:26	10:31	30	30	KV	AIR	PASS
689	2/18/2023	299	300	10:32	10:37	30	30	KV	AIR	PASS
690	2/18/2023	299	301	10:37	10:42	30	30	KV	AIR	PASS
691	2/18/2023	300	301	10:42	10:47	30	30	KV	AIR	PASS
692	2/18/2023	300	302	10:43	10:48	30	30	KV	AIR	PASS
693	2/18/2023	301	302	10:40	10:45	30	30	KV	AIR	PASS
694	2/18/2023	302	303	12:15	12:20	30	30	KV	AIR	PASS
695	2/18/2023	303	304	12:27	12:32	30	30	KV	AIR	PASS
696	2/18/2023	303	305	12:25	12:30	30	30	KV	AIR	PASS
697	2/18/2023	304	305	12:36	12:41	30	30	KV	AIR	PASS
698	2/18/2023	304	306	12:37	12:42	30	30	KV	AIR	PASS
699	2/18/2023	305	306	12:40	12:45	30	30	KV	AIR	PASS
700	2/18/2023	287	293	14:15	14:20	30	30	KV	AIR	PASS
701	2/18/2023	287	294	14:16	14:21	30	30	KV	AIR	PASS
702	2/18/2023	287	295	14:26	14:31	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
703	2/18/2023	287	298	14:28	14:33	30	30	KV	AIR	PASS
704	2/18/2023	287	298	14:30	14:35	30	30	KV	AIR	PASS
705	2/18/2023	323	299	14:35	14:40	30	30	KV	AIR	PASS
706	2/18/2023	323	301	15:20	15:25	30	30	KV	AIR	PASS
707	2/18/2023	323	302	15:22	15:27	30	30	KV	AIR	PASS
708	2/18/2023	323	303	15:24	15:29	30	30	KV	AIR	PASS
709	2/18/2023	323	305	15:30	15:35	30	30	KV	AIR	PASS
710	2/18/2023	303	306	15:31	15:36	30	30	KV	AIR	PASS
711	2/18/2023	322	323	15:29	15:34	30	30	KV	AIR	PASS
712	2/18/2023	322	306	15:30	15:35	30	30	KV	AIR	PASS
713	2/18/2023	306	321	15:35	15:40	30	30	KV	AIR	PASS
714	2/18/2023	306	320	15:36	15:41	30	30	KV	AIR	PASS
715	2/18/2023	306	319	15:46	15:51	30	30	KV	AIR	PASS
716	2/18/2023	306	318	15:47	15:52	30	30	KV	AIR	PASS
717	2/18/2023	306	317	15:50	15:55	30	30	KV	AIR	PASS
718	2/18/2023	306	315	15:51	15:56	30	30	KV	AIR	PASS
719	2/18/2023	306	314	15:55	16:00	30	30	KV	AIR	PASS
720	2/18/2023	306	313	15:56	16:01	30	30	KV	AIR	PASS
721	2/18/2023	306	312	16:00	16:05	30	30	KV	AIR	PASS
722	2/18/2023	306	311	16:01	16:06	30	30	KV	AIR	PASS
723	2/18/2023	306	307	13:07	13:12	30	30	KV	AIR	PASS
724	2/18/2023	307	308	14:10	14:15	30	30	KV	AIR	PASS
725	2/18/2023	308	309	13:16	13:21	30	30	KV	AIR	PASS
726	2/18/2023	308	310	13:15	13:20	30	30	KV	AIR	PASS
727	2/18/2023	308	311	13:10	13:15	30	30	KV	AIR	PASS
728	2/18/2023	309	310	13:18	13:23	30	30	KV	AIR	PASS
729	2/18/2023	310	311	13:20	13:25	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
730	2/18/2023	311	312	13:25	13:30	30	30	KV	AIR	PASS
731	2/18/2023	312	313	13:30	13:35	30	30	KV	AIR	PASS
732	2/18/2023	313	314	13:31	13:36	30	30	KV	AIR	PASS
733	2/18/2023	314	315	13:33	13:38	30	30	KV	AIR	PASS
734	2/18/2023	315	316	13:35	13:40	30	30	KV	AIR	PASS
735	2/18/2023	315	317	13:34	13:39	30	30	KV	AIR	PASS
736	2/18/2023	316	317	13:36	13:41	30	30	KV	AIR	PASS
737	2/18/2023	316	318	13:37	13:42	30	30	KV	AIR	PASS
738	2/18/2023	318	319	13:45	13:50	30	30	KV	AIR	PASS
739	2/18/2023	319	320	15:37	15:42	30	30	KV	AIR	PASS
740	2/18/2023	320	321	15:37	15:42	30	30	KV	AIR	PASS
741	2/18/2023	317	318	13:40	13:45	30	30	KV	AIR	PASS
742	2/18/2023	321	322	15:32	15:37	30	30	KV	AIR	PASS
743	2/19/2023	323	324	09:00	09:05	30	30	KV	AIR	PASS
744	2/19/2023	324	325	09:03	09:08	30	30	KV	AIR	PASS
745	2/19/2023	324	326	09:12	09:17	30	30	KV	AIR	PASS
746	2/19/2023	325	326	09:20	09:25	30	30	KV	AIR	PASS
747	2/19/2023	325	327	09:15	09:20	30	30	KV	AIR	PASS
748	2/19/2023	326	327	09:26	09:31	30	30	KV	AIR	PASS
749	2/19/2023	327	328	09:30	09:35	30	30	KV	AIR	PASS
750	2/19/2023	328	329	09:35	09:40	30	30	KV	AIR	PASS
751	2/19/2023	329	330	09:40	09:45	30	30	KV	AIR	PASS
752	2/19/2023	330	331	09:50	09:55	30	30	KV	AIR	PASS
753	2/19/2023	330	332	09:55	10:00	30	30	KV	AIR	PASS
754	2/19/2023	331	332	09:46	09:51	30	30	KV	AIR	PASS
755	2/19/2023	331	333	10:05	10:10	30	30	KV	AIR	PASS
756	2/19/2023	332	333	10:05	10:10	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
757	2/19/2023	333	334	10:10	10:15	30	30	KV	AIR	PASS
758	2/19/2023	334	335	10:12	10:17	30	30	KV	AIR	PASS
759	2/19/2023	334	336	10:40	10:45	30	30	KV	AIR	PASS
760	2/19/2023	335	336	10:13	10:18	30	30	KV	AIR	PASS
761	2/19/2023	335	337	13:20	13:25	30	30	KV	AIR	PASS
762	2/19/2023	336	337	13:10	13:15	30	30	KV	AIR	PASS
763	2/19/2023	337	338	13:15	13:20	30	30	KV	AIR	PASS
764	2/19/2023	338	339	13:18	13:23	30	30	KV	AIR	PASS
765	2/19/2023	339	340	14:00	14:05	30	30	KV	AIR	PASS
766	2/19/2023	340	341	14:05	14:10	30	30	KV	AIR	PASS
767	2/19/2023	341	342	14:10	14:15	30	30	KV	AIR	PASS
768	2/19/2023	342	343	14:17	14:22	30	30	KV	AIR	PASS
769	2/19/2023	343	344	14:25	14:30	30	30	KV	AIR	PASS
770	2/19/2023	344	345	14:27	14:32	30	30	KV	AIR	PASS
771	2/19/2023	345	346	14:30	14:35	30	30	KV	AIR	PASS
772	2/19/2023	346	347	14:32	14:37	30	30	KV	AIR	PASS
773	2/19/2023	346	348	14:35	14:40	30	30	KV	AIR	PASS
774	2/19/2023	347	348	14:34	14:39	30	30	KV	AIR	PASS
775	2/19/2023	323	287	11:10	11:15	30	30	KV	AIR	PASS
776	2/19/2023	324	286	11:05	11:10	30	30	KV	AIR	PASS
777	2/19/2023	325	283	11:04	11:09	30	30	KV	AIR	PASS
778	2/19/2023	327	252	11:02	11:07	30	30	KV	AIR	PASS
779	2/19/2023	328	281	11:00	11:05	30	30	KV	AIR	PASS
780	2/19/2023	329	280	10:55	11:00	30	30	KV	AIR	PASS
781	2/19/2023	330	279	10:50	10:55	30	30	KV	AIR	PASS
782	2/19/2023	331	278	10:40	10:45	30	30	KV	AIR	PASS
783	2/19/2023	333	276	12:21	12:26	30	30	KV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
784	2/19/2023	333	272	12:23	12:28	30	30	KV	AIR	PASS
785	2/19/2023	334	272	12:24	12:29	30	30	KV	AIR	PASS
786	2/19/2023	334	271	12:25	12:30	30	30	KV	AIR	PASS
787	2/19/2023	335	271	12:30	12:35	30	30	KV	AIR	PASS
788	2/19/2023	335	269	10:35	10:40	30	30	KV	AIR	PASS
789	2/20/2023	337	269	07:45	07:50	30	30	TV	AIR	PASS
790	2/20/2023	337	268	07:51	07:56	30	30	TV	AIR	PASS
791	2/20/2023	338	268	08:00	08:05	30	30	TV	AIR	PASS
792	2/20/2023	338	267	08:00	08:05	30	30	TV	AIR	PASS
793	2/20/2023	339	267	08:02	08:07	30	30	TV	AIR	PASS
794	2/20/2023	339	265	08:08	08:13	30	30	TV	AIR	PASS
795	2/20/2023	340	265	08:08	08:13	30	30	TV	AIR	PASS
796	2/20/2023	341	264	08:15	08:20	30	30	TV	AIR	PASS
797	2/20/2023	342	263	08:15	08:20	30	30	TV	AIR	PASS
798	2/20/2023	343	261	08:24	08:29	30	30	TV	AIR	PASS
799	2/20/2023	344	261	08:24	08:29	30	30	TV	AIR	PASS
800	2/20/2023	344	260	08:47	08:52	30	30	TV	AIR	PASS
801	2/20/2023	345	260	08:47	08:52	30	30	TV	AIR	PASS
802	2/20/2023	345	259	08:50	08:55	30	30	TV	AIR	PASS
803	2/20/2023	346	259	08:50	08:55	30	30	TV	AIR	PASS
804	2/20/2023	346	258	09:01	09:06	30	30	TV	AIR	PASS
805	2/20/2023	347	258	09:01	09:06	30	30	TV	AIR	PASS
806	2/20/2023	347	256	12:50	12:55	30	30	TV	AIR	PASS
807	2/20/2023	347	349	12:02	12:07	30	30	TV	AIR	PASS
808	2/20/2023	348	349	12:13	12:18	30	30	TV	AIR	PASS
809	2/20/2023	349	350	12:03	12:08	30	30	TV	AIR	PASS
810	2/20/2023	350	351	12:11	12:16	30	30	TV	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
811	2/20/2023	349	255	12:50	12:55	30	30	TV	AIR	PASS
812	2/20/2023	350	255	12:58	13:03	30	30	TV	AIR	PASS
813	2/20/2023	350	254	13:04	13:09	30	30	TV	AIR	PASS
814	2/20/2023	354	254	13:04	13:09	30	30	TV	AIR	PASS
815	2/20/2023	351	253	13:04	13:09	30	30	TV	AIR	PASS
816	2/23/2023	351	353	13:19	13:24	30	30	PP	AIR	PASS
817	2/23/2023	351	352	15:35	15:40	30	30	PP	AIR	PASS
818	2/24/2023	352	353	07:30	07:35	30	30	ND	AIR	PASS
819	2/24/2023	352	354	15:47	15:52	30	30	PP	AIR	PASS
820	2/24/2023	353	354	15:48	15:53	30	30	PP	AIR	PASS
821	2/24/2023	354	355	07:40	07:45	30	30	ND	AIR	PASS
822	2/24/2023	355	356	07:47	07:52	30	30	ND	AIR	PASS
823	2/24/2023	355	357	07:54	07:59	30	30	ND	AIR	PASS
824	2/24/2023	356	357	08:00	08:05	30	30	ND	AIR	PASS
825	2/24/2023	356	R713	08:14	08:19	30	30	ND	AIR	PASS
826	2/24/2023	357	358	08:33	08:38	30	30	ND	AIR	PASS
827	2/24/2023	R713	358	08:21	08:26	30	30	ND	AIR	PASS
828	2/24/2023	356	258	08:27	08:32	30	30	ND	AIR	PASS
829	2/24/2023	351	254	13:04	13:09	30	30	ND	AIR	PASS
830	2/24/2023	351	253	13:04	13:09	30	30	ND	AIR	PASS
831	2/23/2023	352	253	08:40	08:45	30	30	ND	AIR	PASS
832	2/23/2023	354	252	08:46	08:51	30	30	ND	AIR	PASS
833	2/23/2023	354	251	08:52	08:57	30	30	ND	AIR	PASS
834	2/23/2023	355	251	13:08	13:13	30	30	ND	AIR	PASS
835	2/24/2023	355	249	09:11	09:16	30	30	ND	AIR	PASS
836	2/23/2023	356	249	-- ext weld --				ND	Vac Test	PASS
837	2/23/2023	R713	247	09:29	09:34	30	30	ND	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
838	2/23/2023	358	240	09:30	09:35	30	30	ND	AIR	PASS
839	2/24/2023	358	359	09:51	09:56	30	30	ND	AIR	PASS
840	2/24/2023	359	360	09:57	10:02	30	30	ND	AIR	PASS
841	2/24/2023	360	361	10:05	10:10	30	30	ND	AIR	PASS
842	2/24/2023	360	362	12:19	12:24	30	30	ND	AIR	PASS
843	2/24/2023	360	363	12:31	12:36	30	30	ND	AIR	PASS
844	2/24/2023	360	364	12:37	12:42	30	30	ND	AIR	PASS
845	2/24/2023	361	362	10:40	10:45	30	30	ND	AIR	PASS
846	2/24/2023	362	363	12:25	12:30	30	30	ND	AIR	PASS
847	2/25/2023	363	364	07:55	08:00	30	30	ND	AIR	PASS
848	2/24/2023	363	365	13:00	13:05	30	30	ND	AIR	PASS
849	2/24/2023	359	245	12:40	12:45	30	30	ND	AIR	PASS
850	2/24/2023	359	243	-- ext weld --				ND	Vac Test	PASS
851	2/24/2023	360	243	12:49	12:54	30	30	ND	AIR	PASS
852	2/27/2023	360	241	-- ext weld --				ND	Vac Test	PASS
853	2/27/2023	361	241	12:55	13:00	30	30	ND	AIR	PASS
854	2/25/2023	362	239	13:01	13:06	30	30	ND	AIR	PASS
855	2/25/2023	363	238	08:51	08:56	30	30	ND	AIR	PASS
856	2/25/2023	364	237	07:29	07:34	30	30	ND	AIR	PASS
857	2/25/2023	365	236	07:45	07:50	30	30	ND	AIR	PASS
858	2/24/2023	366	367	13:35	13:40	30	30	ND	AIR	PASS
859	2/24/2023	367	368	14:10	14:15	30	30	ND	AIR	PASS
860	2/24/2023	368	369	14:16	14:21	30	30	ND	AIR	PASS
861	2/24/2023	369	370	14:22	14:27	30	30	ND	AIR	PASS
862	2/24/2023	370	371	08:13	08:18	30	30	ND	AIR	PASS
863	2/24/2023	370	372	09:19	09:24	30	30	ND	AIR	PASS
864	2/24/2023	371	372	08:25	08:30	30	30	ND	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
865	2/24/2023	371	373	08:40	08:45	30	30	ND	AIR	PASS
866	2/24/2023	372	373	08:31	08:36	30	30	ND	AIR	PASS
867	2/24/2023	373	374	08:33	08:38	30	30	ND	AIR	PASS
868	2/24/2023	374	375	08:43	08:48	30	30	ND	AIR	PASS
869	2/24/2023	374	376	08:35	08:40	30	30	ND	AIR	PASS
870	2/24/2023	375	376	08:36	08:41	30	30	ND	AIR	PASS
871	2/24/2023	375	377	08:40	08:45	30	30	ND	AIR	PASS
872	2/24/2023	376	377	08:41	08:46	30	30	ND	AIR	PASS
873	2/24/2023	366	307	09:47	09:52	30	30	ND	AIR	PASS
874	2/24/2023	367	308	09:40	09:45	30	30	ND	AIR	PASS
875	2/24/2023	368	309	09:29	09:34	30	30	ND	AIR	PASS
876	2/24/2023	368	310	09:29	09:34	30	30	ND	AIR	PASS
877	2/24/2023	369	310	09:39	09:44	30	30	ND	AIR	PASS
878	2/24/2023	369	311	08:44	08:49	30	30	ND	AIR	PASS
879	2/24/2023	370	311	08:45	08:50	30	30	ND	AIR	PASS
880	2/24/2023	370	312	08:46	08:51	30	30	ND	AIR	PASS
881	2/24/2023	371	312	08:47	08:52	30	30	ND	AIR	PASS
882	2/24/2023	371	313	08:48	08:53	30	30	ND	AIR	PASS
883	2/24/2023	373	313	08:50	08:55	30	30	ND	AIR	PASS
884	2/24/2023	373	314	08:50	08:55	30	30	ND	AIR	PASS
885	2/24/2023	374	314	08:57	09:02	30	30	ND	AIR	PASS
886	2/24/2023	374	315	09:02	09:07	30	30	ND	AIR	PASS
887	2/24/2023	375	317	09:07	09:12	30	30	ND	AIR	PASS
888	2/24/2023	377	318	09:07	09:12	30	30	ND	AIR	PASS
889	2/25/2023	377	378	09:13	09:18	30	30	ND	AIR	PASS
890	2/25/2023	378	319	08:37	08:42	30	30	ND	AIR	PASS
891	2/28/2023	380	365	08:39	08:44	30	30	ND	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
892	2/28/2023	379	365	08:21	08:26	30	30	ND	AIR	PASS
893	2/28/2023	379	380	08:33	08:38	30	30	ND	AIR	PASS
894	2/28/2023	379	381	08:48	08:53	30	30	ND	AIR	PASS
895	2/28/2023	380	381	08:54	08:59	30	30	ND	AIR	PASS
896	2/28/2023	381	382	09:21	09:26	30	30	ND	AIR	PASS
897	2/28/2023	382	383	09:38	09:43	30	30	ND	AIR	PASS
898	2/28/2023	383	384	09:55	10:00	30	30	ND	AIR	PASS
899	2/28/2023	383	385	10:01	10:06	30	30	ND	AIR	PASS
900	2/28/2023	384	385	10:18	10:23	30	30	ND	AIR	PASS
901	2/28/2023	384	386	10:24	10:29	30	30	ND	AIR	PASS
902	2/28/2023	385	386	10:30	10:35	30	30	ND	AIR	PASS
903	2/28/2023	386	387	10:45	10:50	30	30	ND	AIR	PASS
904	2/28/2023	387	388	12:11	12:16	30	30	ND	AIR	PASS
905	2/28/2023	388	389	12:33	12:38	30	30	ND	AIR	PASS
906	2/28/2023	388	390	12:47	12:52	30	30	ND	AIR	PASS
907	2/28/2023	389	390	12:54	12:59	30	30	ND	AIR	PASS
908	2/28/2023	389	391	13:00	13:05	30	30	ND	AIR	PASS
909	2/28/2023	390	391	13:06	13:11	30	30	ND	AIR	PASS
910	2/28/2023	391	392	13:24	13:29	30	30	ND	AIR	PASS
911	2/28/2023	392	393	13:45	13:50	30	30	ND	AIR	PASS
912	2/28/2023	379	335	-- ext weld --				ND	Vac Test	PASS
913	2/28/2023	381	334	-- ext weld --				ND	Vac Test	PASS
914	2/28/2023	382	333	-- ext weld --				ND	Vac Test	PASS
915	2/28/2023	383	331	-- ext weld --				ND	Vac Test	PASS
916	2/28/2023	384	330	-- ext weld --				ND	Vac Test	PASS
917	2/28/2023	386	329	-- ext weld --				ND	Vac Test	PASS
918	3/1/2023	387	328	-- ext weld --				ND	Vac Test	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
919	3/1/2023	389	211	-- ext weld --				ND	Vac Test	PASS
920	3/1/2023	391	212	-- ext weld --				ND	Vac Test	PASS
921	3/1/2023	392	213	-- ext weld --				ND	Vac Test	PASS
922	3/1/2023	393	214	-- ext weld --				ND	Vac Test	PASS
923	3/2/2023	393	395	08:15	08:20	30	30	ND	AIR	PASS
924	3/2/2023	394	395	08:45	08:50	30	30	ND	AIR	PASS
925	3/2/2023	395	396	09:09	09:14	30	30	ND	AIR	PASS
926	3/2/2023	396	397	09:20	09:25	30	30	ND	AIR	PASS
927	3/2/2023	396	398	09:35	09:40	30	30	ND	AIR	PASS
928	3/2/2023	397	398	10:05	10:10	30	30	ND	AIR	PASS
929	3/2/2023	397	399	10:19	10:24	30	30	ND	AIR	PASS
930	3/2/2023	398	399	10:11	10:16	30	30	ND	AIR	PASS
931	3/2/2023	399	400	10:47	10:52	30	30	ND	AIR	PASS
932	3/2/2023	400	401	10:05	10:10	30	30	ND	AIR	PASS
933	3/2/2023	401	402	12:32	12:37	30	30	ND	AIR	PASS
934	3/2/2023	394	216	-- ext weld --				LD	Vac Test	PASS
935	3/2/2023	395	217	-- ext weld --				LD	Vac Test	PASS
936	3/2/2023	396	218	-- ext weld --				LD	Vac Test	PASS
937	3/2/2023	397	219	-- ext weld --				LD	Vac Test	PASS
938	3/2/2023	399	220	-- ext weld --				LD	Vac Test	PASS
939	3/2/2023	400	221	-- ext weld --				LD	Vac Test	PASS
940	3/2/2023	401	222	-- ext weld --				LD	Vac Test	PASS
941	3/2/2023	402	223	-- ext weld --				LD	Vac Test	PASS
942	3/9/2023	403	404	13:55	14:00	30	30	LD	AIR	PASS
943	3/9/2023	404	405	14:05	14:10	30	30	LD	AIR	PASS
944	3/9/2023	405	406	13:57	14:02	30	30	LD	AIR	PASS
945	3/9/2023	405	407	14:10	14:15	30	30	LD	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
946	3/9/2023	406	407	13:58	14:03	30	30	LD	AIR	PASS
947	3/9/2023	406	408	14:11	14:16	30	30	LD	AIR	PASS
948	3/9/2023	406	409	14:03	14:08	30	30	LD	AIR	PASS
949	3/9/2023	408	409	14:12	14:17	30	30	LD	AIR	PASS
950	3/9/2023	408	410	14:14	14:19	30	30	LD	AIR	PASS
951	3/9/2023	409	410	14:16	14:21	30	30	LD	AIR	PASS
952	3/9/2023	107	409	14:05	14:10	30	30	LD	AIR	PASS
953	3/9/2023	410	411	14:35	14:40	30	30	LD	AIR	PASS
954	3/9/2023	410	412	14:20	14:25	30	30	LD	AIR	PASS
955	3/9/2023	411	412	14:21	14:26	30	30	LD	AIR	PASS
956	3/9/2023	411	413	14:31	14:36	30	30	LD	AIR	PASS
957	3/9/2023	411	414	14:25	14:30	30	30	LD	AIR	PASS
958	3/9/2023	412	414	14:24	14:29	30	30	LD	AIR	PASS
959	3/9/2023	413	414	14:32	14:37	30	30	LD	AIR	PASS
960	3/10/2023	413	415	08:33	08:38	30	30	LD	AIR	PASS
961	3/11/2023	413	416	08:00	08:05	30	30	LD	AIR	PASS
962	3/11/2023	414	416	08:05	08:10	30	30	LD	AIR	PASS
963	3/11/2023	415	416	08:29	08:34	30	30	LD	AIR	PASS
964	3/11/2023	416	417	08:32	08:37	30	30	LD	AIR	PASS
965	3/11/2023	416	417	08:15	08:20	30	30	LD	AIR	PASS
966	3/11/2023	416	418	08:15	08:20	30	30	LD	AIR	PASS
967	3/11/2023	417	418	08:16	08:21	30	30	LD	AIR	PASS
968	3/11/2023	418	420	08:22	08:27	30	30	LD	AIR	PASS
969	3/11/2023	419	420	08:38	08:43	30	30	LD	AIR	PASS
970	3/11/2023	419	421	08:48	08:53	30	30	LD	AIR	PASS
971	3/11/2023	419	422	08:38	08:43	30	30	LD	AIR	PASS
972	3/11/2023	420	422	08:38	08:43	30	30	LD	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
973	3/11/2023	421	422	08:49	08:54	30	30	LD	AIR	PASS
974	3/11/2023	421	423	08:55	09:00	30	30	LD	AIR	PASS
975	3/11/2023	421	424	08:55	09:00	30	30	LD	AIR	PASS
976	3/11/2023	423	424	08:55	09:00	30	30	LD	AIR	PASS
977	3/11/2023	423	425	09:33	09:38	30	30	LD	AIR	PASS
978	3/11/2023	424	425	09:03	09:08	30	30	LD	AIR	PASS
979	3/11/2023	417	419	08:38	08:43	30	30	LD	AIR	PASS
980	3/11/2023	417	420	08:21	08:26	30	30	LD	AIR	PASS
981	3/11/2023	422	424	08:19	08:24	30	30	LD	AIR	PASS
982	3/13/2023	425	426	09:41	09:46	30	30	ND	AIR	PASS
983	3/13/2023	426	427	08:50	08:55	30	30	ND	AIR	PASS
984	3/13/2023	426	428	09:58	10:03	30	30	ND	AIR	PASS
985	3/13/2023	4257	428	08:42	08:47	30	30	ND	AIR	PASS
986	3/13/2023	427	429	09:05	09:10	30	30	ND	AIR	PASS
987	3/13/2023	428	429	09:10	09:15	30	30	ND	AIR	PASS
988	3/13/2023	428	430	10:25	10:30	30	30	ND	AIR	PASS
989	3/13/2023	429	430	08:59	09:04	30	30	ND	AIR	PASS
990	3/13/2023	429	431	09:35	09:40	30	30	ND	AIR	PASS
991	3/13/2023	430	431	09:47	09:52	30	30	ND	AIR	PASS
992	3/13/2023	430	432	10:37	10:42	30	30	ND	AIR	PASS
993	3/13/2023	431	432	09:24	09:29	30	30	ND	AIR	PASS
994	3/13/2023	431	433	10:14	10:19	30	30	ND	AIR	PASS
995	3/13/2023	432	433	10:20	10:25	30	30	ND	AIR	PASS
996	3/13/2023	432	434	11:10	11:15	30	30	ND	AIR	PASS
997	3/13/2023	433	434	10:08	10:13	30	30	ND	AIR	PASS
998	3/13/2023	433	435	10:44	10:49	30	30	ND	AIR	PASS
999	3/13/2023	434	435	11:20	11:25	30	30	ND	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1000	3/13/2023	435	436	13:22	13:27	30	30	ND	AIR	PASS
1001	3/13/2023	436	437	12:42	12:47	30	30	ND	AIR	PASS
1002	3/13/2023	437	438	14:00	14:05	30	30	ND	AIR	PASS
1003	3/13/2023	438	439	14:07	14:12	30	30	ND	AIR	PASS
1004	3/13/2023	439	440	14:35	14:40	30	30	ND	AIR	PASS
1005	3/13/2023	440	441	15:00	15:05	30	30	ND	AIR	PASS
1006	3/13/2023	441	442	15:00	15:05	30	30	ND	AIR	PASS
1007	3/13/2023	443	444	16:00	16:05	30	30	ND	AIR	PASS
1008	3/15/2023	444	445	09:58	10:03	30	30	ND	AIR	PASS
1009	3/15/2023	445	446	09:25	09:30	30	30	ND	AIR	PASS
1010	3/15/2023	446	447	09:50	09:55	30	30	ND	AIR	PASS
1011	3/15/2023	447	448	10:38	10:45	30	30	ND	AIR	PASS
1012	3/15/2023	448	449	10:29	10:34	30	30	ND	AIR	PASS
1013	3/15/2023	449	450	11:02	11:07	30	30	ND	AIR	PASS
1014	3/15/2023	450	451	11:10	11:15	30	30	ND	AIR	PASS
1015	3/15/2023	450	452	12:35	12:40	30	30	ND	AIR	PASS
1016	3/15/2023	454	452	13:12	13:17	30	30	ND	AIR	PASS
1017	3/15/2023	451	453	12:45	12:50	30	30	ND	AIR	PASS
1018	3/15/2023	451	454	12:58	13:03	30	30	ND	AIR	PASS
1019	3/15/2023	452	454	13:19	13:24	30	30	ND	AIR	PASS
1020	3/15/2023	453	454	12:51	12:56	30	30	ND	AIR	PASS
1021	3/15/2023	453	455	14:06	14:11	30	30	ND	AIR	PASS
1022	3/15/2023	454	455	14:00	14:05	30	30	ND	AIR	PASS
1023	3/15/2023	455	456	13:40	13:45	30	30	ND	AIR	PASS
1024	3/15/2023	456	457	13:46	13:51	30	30	ND	AIR	PASS
1025	3/15/2023	457	458	13:53	13:58	30	30	ND	AIR	PASS
1026	3/15/2023	458	459	14:05	14:10	30	30	ND	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1027	3/15/2023	459	460	14:58	15:03	30	30	ND	AIR	PASS
1028	3/15/2023	459	461	14:25	14:30	30	30	ND	AIR	PASS
1029	3/15/2023	460	461	15:04	15:09	30	30	ND	AIR	PASS
1030	3/15/2023	460	462	14:52	14:57	30	30	ND	AIR	PASS
1031	3/15/2023	461	462	14:31	14:36	30	30	ND	AIR	PASS
1032	3/23/2023	461	463	-- ext weld --				KA	Vac Test	PASS
1033	3/21/2023	463	464	08:50	08:55	30	30	ND	AIR	PASS
1034	3/21/2023	463	467	09:36	09:41	30	30	ND	AIR	PASS
1035	3/21/2023	463	468	09:34	09:39	30	30	ND	AIR	PASS
1036	3/21/2023	464	465	09:38	09:43	30	30	ND	AIR	PASS
1037	3/21/2023	464	468	09:28	09:33	30	30	ND	AIR	PASS
1038	3/21/2023	465	466	09:05	09:10	30	30	ND	AIR	PASS
1039	3/21/2023	465	468	09:22	09:27	30	30	ND	AIR	PASS
1040	3/21/2023	466	468	09:15	09:20	30	30	ND	AIR	PASS
1041	3/21/2023	467	468	09:44	09:49	30	30	ND	AIR	PASS
1042	3/21/2023	468	469	09:52	09:57	30	30	ND	AIR	PASS
1043	3/21/2023	469	470	09:54	09:59	30	30	ND	AIR	PASS
1044	3/21/2023	470	471	09:58	10:03	30	30	ND	AIR	PASS
1045	3/21/2023	471	472	10:02	10:07	30	30	ND	AIR	PASS
1046	3/21/2023	472	473	10:18	10:23	30	30	ND	AIR	PASS
1047	3/21/2023	472	474	10:24	10:29	30	30	ND	AIR	PASS
1048	3/21/2023	473	474	10:20	10:25	30	30	ND	AIR	PASS
1049	3/21/2023	484	475	10:31	10:36	30	30	ND	AIR	PASS
1050	3/21/2023	473	475	10:20	10:25	30	30	ND	AIR	PASS
1051	3/21/2023	475	476	10:31	10:36	30	30	ND	AIR	PASS
1052	3/21/2023	476	479	10:27	10:32	30	30	ND	AIR	PASS
1053	3/21/2023	479	480	10:52	10:57	30	30	ND	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1054	3/21/2023	480	481	11:03	11:08	30	30	ND	AIR	PASS
1055	3/21/2023	481	482	11:30	11:35	30	30	ND	AIR	PASS
1056	3/21/2023	482	483	11:40	11:45	30	30	ND	AIR	PASS
1057	3/21/2023	483	454	11:46	11:51	30	30	ND	AIR	PASS
1058	3/21/2023	484	485	11:57	12:02	30	30	ND	AIR	PASS
1059	3/21/2023	485	486	12:03	12:08	30	30	ND	AIR	PASS
1060	3/21/2023	486	457	12:05	12:10	30	30	ND	AIR	PASS
1061	3/21/2023	487	488	12:13	12:18	30	30	ND	AIR	PASS
1062	3/21/2023	488	489	12:19	12:24	30	30	ND	AIR	PASS
1063	3/21/2023	489	790	13:19	13:24	30	30	ND	AIR	PASS
1064	3/23/2023	141	467	-- ext weld --				ND	Vac Test	PASS
1065	3/21/2023	467	477	11:19	11:24	30	30	ND	AIR	PASS
1066	3/21/2023	477	478	11:10	11:15	30	30	ND	AIR	PASS
1067	3/23/2023	141	477	-- ext weld --				KA	Vac Test	PASS
1068	3/23/2023	143	477	-- ext weld --				KA	Vac Test	PASS
1069	3/21/2023	463	467	09:36	09:41	30	30	ND	AIR	PASS
1070	3/23/2023	142	477	-- ext weld --				KA	Vac Test	PASS
1071	3/23/2023	143	478	-- ext weld --				KA	Vac Test	PASS
1072	3/23/2023	144	478	-- ext weld --				KA	Vac Test	PASS
1073	3/23/2023	145	478	-- ext weld --				KA	Vac Test	PASS
1074	3/23/2023	153	478	-- ext weld --				KA	Vac Test	PASS
1075	3/21/2023	147	478	14:45	14:50	30	30	ND	AIR	PASS
1076	3/23/2023	491	492	10:16	10:21	30	30	SS	AIR	PASS
1077	3/23/2023	491	493	10:45	10:50	30	30	SS	AIR	PASS
1078	3/23/2023	492	493	08:40	08:45	30	30	SS	AIR	PASS
1079	3/23/2023	492	494	10:22	10:27	30	30	SS	AIR	PASS
1080	3/23/2023	493	494	10:23	10:28	30	30	SS	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1081	3/23/2023	494	495	10:28	10:33	30	30	SS	AIR	PASS
1082	3/23/2023	495	496	10:40	10:45	30	30	SS	AIR	PASS
1083	3/23/2023	496	497	10:47	10:52	30	30	SS	AIR	PASS
1084	3/23/2023	497	498	12:32	12:37	30	30	SS	AIR	PASS
1085	3/23/2023	497	499	11:01	11:06	30	30	SS	AIR	PASS
1086	3/23/2023	498	499	11:02	11:07	30	30	SS	AIR	PASS
1087	3/23/2023	498	500	12:25	12:30	30	30	SS	AIR	PASS
1088	3/23/2023	499	500	12:26	12:31	30	30	SS	AIR	PASS
1089	3/23/2023	478	491	08:55	09:00	30	30	SS	AIR	PASS
1090	3/23/2023	477	491	08:54	08:59	30	30	SS	AIR	PASS
1091	3/23/2023	467	491	09:03	09:08	30	30	SS	AIR	PASS
1092	3/23/2023	468	491	09:04	09:09	30	30	SS	AIR	PASS
1093	3/23/2023	469	4914	09:35	09:40	30	30	SS	AIR	PASS
1094	3/23/2023	470	491	09:34	09:39	30	30	SS	AIR	PASS
1095	3/23/2023	471	491	09:36	09:41	30	30	SS	AIR	PASS
1096	3/23/2023	472	491	09:37	09:42	30	30	SS	AIR	PASS
1097	3/23/2023	474	491	09:35	09:40	30	30	SS	AIR	PASS
1098	3/23/2023	475	491	09:46	09:51	30	30	SS	AIR	PASS
1099	3/23/2023	476	491	09:52	09:57	30	30	SS	AIR	PASS
1100	3/23/2023	479	491	09:53	09:58	30	30	SS	AIR	PASS
1101	3/23/2023	480	491	09:55	10:00	30	30	SS	AIR	PASS
1102	3/23/2023	481	491	09:56	10:01	30	30	SS	AIR	PASS
1103	3/23/2023	482	491	09:58	10:03	30	30	SS	AIR	PASS
1104	3/23/2023	483	491	09:59	10:04	30	30	SS	AIR	PASS
1105	3/23/2023	484	491	10:02	10:07	30	30	SS	AIR	PASS
1106	3/23/2023	485	491	10:03	10:08	30	30	SS	AIR	PASS
1107	3/23/2023	486	491	10:06	10:11	30	30	SS	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1108	3/23/2023	487	491	10:07	10:12	30	30	SS	AIR	PASS
1109	3/23/2023	488	491	10:09	10:14	30	30	SS	AIR	PASS
1110	3/23/2023	489	491	09:18	09:23	30	30	SS	AIR	PASS
1111	3/23/2023	147	491	-- ext weld --				KA	Vac Test	PASS
1112	3/23/2023	148	492	-- ext weld --				KA	Vac Test	PASS
1113	3/23/2023	149	494	-- ext weld --				KA	Vac Test	PASS
1114	3/23/2023	150	495	-- ext weld --				KA	Vac Test	PASS
1115	3/23/2023	151	496	-- ext weld --				KA	Vac Test	PASS
1116	3/23/2023	152	497	-- ext weld --				KA	Vac Test	PASS
1117	3/23/2023	189	497	-- ext weld --				KA	Vac Test	PASS
1118	3/23/2023	189	498	-- ext weld --				KA	Vac Test	PASS
1119	3/23/2023	190	498	-- ext weld --				KA	Vac Test	PASS
1120	3/23/2023	190	500	-- ext weld --				KA	Vac Test	PASS
1121	3/23/2023	191	500	-- ext weld --				KA	Vac Test	PASS
1122	3/27/2023	501	502	10:35	10:40	30	30	SS	AIR	PASS
1123	3/27/2023	501	503	10:18	10:23	30	30	SS	AIR	PASS
1124	3/27/2023	502	503	09:55	10:00	30	30	SS	AIR	PASS
1125	3/27/2023	502	504	10:25	10:30	30	30	SS	AIR	PASS
1126	3/27/2023	502	505	10:37	10:42	30	30	SS	AIR	PASS
1127	3/27/2023	503	505	10:38	10:43	30	30	SS	AIR	PASS
1128	3/27/2023	504	505	10:25	10:30	30	30	SS	AIR	PASS
1129	3/27/2023	504	506	11:03	11:08	30	30	SS	AIR	PASS
1130	3/27/2023	505	506	10:48	10:53	30	30	SS	AIR	PASS
1131	3/27/2023	505	507	10:55	11:00	30	30	SS	AIR	PASS
1132	3/27/2023	506	507	10:49	10:54	30	30	SS	AIR	PASS
1133	3/27/2023	506	508	12:15	12:20	30	30	SS	AIR	PASS
1134	3/27/2023	507	508	10:51	10:56	30	30	SS	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1135	3/27/2023	508	509	13:55	14:00	30	30	SS	AIR	PASS
1136	3/27/2023	509	510	13:56	14:01	30	30	SS	AIR	PASS
1137	3/27/2023	510	511	13:35	13:40	30	30	SS	AIR	PASS
1138	3/27/2023	510	512	14:31	14:36	30	30	SS	AIR	PASS
1139	3/27/2023	510	513	14:12	14:17	30	30	SS	AIR	PASS
1140	3/27/2023	511	512	13:40	13:45	30	30	SS	AIR	PASS
1141	3/27/2023	511	514	14:38	14:43	30	30	SS	AIR	PASS
1142	3/27/2023	512	513	13:47	13:52	30	30	SS	AIR	PASS
1143	3/27/2023	512	514	14:34	14:39	30	30	SS	AIR	PASS
1144	3/27/2023	513	514	14:19	14:24	30	30	SS	AIR	PASS
1145	3/27/2023	514	515	15:21	15:26	30	30	SS	AIR	PASS
1146	3/27/2023	515	516	15:45	15:50	30	30	SS	AIR	PASS
1147	3/27/2023	515	517	15:10	15:15	30	30	SS	AIR	PASS
1148	3/27/2023	516	517	14:50	14:55	30	30	SS	AIR	PASS
1149	3/27/2023	500	502	15:56	16:01	30	30	SS	AIR	PASS
1150	3/27/2023	500	504	15:57	16:02	30	30	SS	AIR	PASS
1151	3/27/2023	500	506	16:04	16:09	30	30	SS	AIR	PASS
1152	3/27/2023	500	508	16:03	16:09	30	30	SS	AIR	PASS
1153	3/27/2023	500	509	16:11	16:17	30	30	SS	AIR	PASS
1154	3/27/2023	500	510	16:10	16:15	30	30	SS	AIR	PASS
1155	3/27/2023	500	511	15:42	15:47	30	30	SS	AIR	PASS
1156	3/27/2023	500	514	15:43	15:48	30	30	SS	AIR	PASS
1157	3/27/2023	500	515	15:46	15:51	30	30	SS	AIR	PASS
1158	3/28/2023	500	516	15:47	15:52	30	30	SS	AIR	PASS
1159	3/28/2023	191	502	-- ext weld --				KA	Vac Test	PASS
1160	3/28/2023	193	502	-- ext weld --				KA	Vac Test	PASS
1161	3/28/2023	194	502	-- ext weld --				KA	Vac Test	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1162	3/28/2023	195	502	-- ext weld --				KA	Vac Test	PASS
1163	3/28/2023	197	502	-- ext weld --				KA	Vac Test	PASS
1164	3/28/2023	198	502	-- ext weld --				KA	Vac Test	PASS
1165	3/28/2023	199	502	-- ext weld --				KA	Vac Test	PASS
1166	3/28/2023	201	502	-- ext weld --				KA	Vac Test	PASS
1167	3/28/2023	201	501	-- ext weld --				KA	Vac Test	PASS
1168	3/28/2023	202	501	-- ext weld --				KA	Vac Test	PASS
1169	3/28/2023	203	501	-- ext weld --				KA	Vac Test	PASS
1170	3/28/2023	205	501	-- ext weld --				KA	Vac Test	PASS
1171	3/28/2023	206	501	-- ext weld --				KA	Vac Test	PASS
1172	3/27/2023	224	501	14:15	14:20	30	30	SS	AIR	PASS
1173	3/28/2023	225	501	-- ext weld --				KA	Vac Test	PASS
1174	3/27/2023	402	501	14:12	14:17	30	30	SS	AIR	PASS
1175	3/28/2023	402	502	-- ext weld --				KA	Vac Test	PASS
1176	3/28/2023	518	493	12:34	12:39	30	30	LD	AIR	PASS
1177	3/28/2023	518	519	12:48	12:53	30	30	LD	AIR	PASS
1178	3/28/2023	518	520	13:15	13:20	30	30	LD	AIR	PASS
1179	3/28/2023	519	520	13:16	13:21	30	30	LD	AIR	PASS
1180	3/28/2023	519	521	12:50	12:55	30	30	LD	AIR	PASS
1181	3/28/2023	520	521	13:18	13:23	30	30	LD	AIR	PASS
1182	3/28/2023	521	522	13:02	13:07	30	30	LD	AIR	PASS
1183	3/28/2023	521	523	13:22	13:27	30	30	LD	AIR	PASS
1184	3/28/2023	522	523	13:25	13:30	30	30	LD	AIR	PASS
1185	3/28/2023	522	524	13:05	13:10	30	30	LD	AIR	PASS
1186	3/28/2023	523	524	13:26	13:31	30	30	LD	AIR	PASS
1187	3/28/2023	524	525	13:08	13:13	30	30	LD	AIR	PASS
1188	3/28/2023	525	526	13:09	13:14	30	30	LD	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1189	3/28/2023	526	500	13:31	13:36	30	30	LD	AIR	PASS
1190	3/28/2023	526	527	13:35	13:41	30	30	LD	AIR	PASS
1191	3/28/2023	526	528	14:18	14:23	30	30	LD	AIR	PASS
1192	3/28/2023	527	528	14:12	14:17	30	30	LD	AIR	PASS
1193	3/28/2023	527	529	13:50	13:55	30	30	LD	AIR	PASS
1194	3/28/2023	528	529	14:11	14:16	30	30	LD	AIR	PASS
1195	3/28/2023	529	530	13:56	14:01	30	30	LD	AIR	PASS
1196	3/28/2023	518	493	12:34	12:39	30	30	LD	AIR	PASS
1197	3/28/2023	518	494	12:32	12:37	30	30	LD	AIR	PASS
1198	3/28/2023	519	498	12:45	12:50	30	30	LD	AIR	PASS
1199	3/28/2023	521	496	12:46	12:51	30	30	LD	AIR	PASS
1200	3/28/2023	522	497	12:56	13:01	30	30	LD	AIR	PASS
1201	3/28/2023	524	499	13:03	13:08	30	30	LD	AIR	PASS
1202	3/28/2023	525	500	13:06	13:11	30	30	LD	AIR	PASS
1203	3/28/2023	526	516	13:32	13:37	30	30	LD	AIR	PASS
1204	3/28/2023	527	516	13:33	13:38	30	30	LD	AIR	PASS
1205	3/28/2023	529	516	13:38	13:43	30	30	LD	AIR	PASS
1206	3/29/2023	530	516	13:48	13:53	30	30	SS	AIR	PASS
1207	3/28/2023	531	518	14:49	14:54	30	30	LD	AIR	PASS
1208	3/28/2023	531	532	15:05	15:10	30	30	LD	AIR	PASS
1209	3/28/2023	532	533	15:02	15:07	30	30	LD	AIR	PASS
1210	3/28/2023	534	535	15:25	15:30	30	30	LD	AIR	PASS
1211	3/28/2023	535	536	15:28	15:33	30	30	LD	AIR	PASS
1212	3/28/2023	536	537	15:31	15:36	30	30	LD	AIR	PASS
1213	3/28/2023	537	538	15:38	15:43	30	30	LD	AIR	PASS
1214	3/28/2023	531	493	14:58	15:03	30	30	LD	AIR	PASS
1215	3/28/2023	532	491	15:01	15:06	30	30	LD	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1216	3/28/2023	533	491	15:10	15:15	30	30	LD	AIR	PASS
1217	3/28/2023	533	489	15:11	15:16	30	30	LD	AIR	PASS
1218	3/28/2023	533	490	15:13	15:18	30	30	LD	AIR	PASS
1219	3/28/2023	534	533	15:21	15:26	30	30	LD	AIR	PASS
1220	3/28/2023	535	533	15:22	15:27	30	30	LD	AIR	PASS
1221	3/28/2023	536	533	15:26	15:31	30	30	LD	AIR	PASS
1222	3/28/2023	537	533	15:30	15:35	30	30	LD	AIR	PASS
1223	3/28/2023	538	533	15:37	15:42	30	30	LD	AIR	PASS
1224	3/28/2023	534	490	15:20	15:25	30	30	LD	AIR	PASS
1225	3/29/2023	530	539	09:07	09:12	30	30	SS	AIR	PASS
1226	3/29/2023	539	540	08:40	08:45	30	30	SS	AIR	PASS
1227	3/29/2023	530	540	08:50	08:55	30	30	SS	AIR	PASS
1228	3/29/2023	540	541	09:09	09:14	30	30		AIR	PASS
1229	3/29/2023	541	542	09:18	09:23	30	30	SS	AIR	PASS
1230	3/29/2023	541	543	09:26	09:31	30	30	SS	AIR	PASS
1231	3/29/2023	542	543	09:19	09:24	30	30	SS	AIR	PASS
1232	3/29/2023	542	544	10:42	10:47	30	30	SS	AIR	PASS
1233	3/29/2023	543	544	10:45	10:50	30	30	SS	AIR	PASS
1234	3/29/2023	544	545	10:50	10:55	30	30	SS	AIR	PASS
1235	3/29/2023	545	546	10:52	10:57	30	30	SS	AIR	PASS
1236	3/29/2023	545	547	10:02	10:07	30	30	SS	AIR	PASS
1237	3/29/2023	546	547	10:00	10:05	30	30	SS	AIR	PASS
1238	3/29/2023	546	548	10:55	11:00	30	30	SS	AIR	PASS
1239	3/29/2023	547	548	10:09	10:14	30	30	SS	AIR	PASS
1240	3/29/2023	548	549	11:02	11:07	30	30	SS	AIR	PASS
1241	3/29/2023	548	550	12:12	12:17	30	30	SS	AIR	PASS
1242	3/29/2023	549	550	12:13	12:18	30	30	SS	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1243	3/29/2023	549	551	11:10	11:15	30	30	SS	AIR	PASS
1244	3/29/2023	550	551	12:18	12:23	30	30	SS	AIR	PASS
1245	3/29/2023	551	552	12:43	12:48	30	30	SS	AIR	PASS
1246	3/29/2023	551	553	12:36	12:41	30	30	SS	AIR	PASS
1247	3/29/2023	552	553	12:31	12:36	30	30	SS	AIR	PASS
1248	3/29/2023	552	554	12:49	12:54	30	30	SS	AIR	PASS
1249	3/29/2023	553	554	12:48	12:53	30	30	SS	AIR	PASS
1250	3/29/2023	554	555	13:05	13:10	30	30	SS	AIR	PASS
1251	3/29/2023	555	556	13:12	13:17	30	30	SS	AIR	PASS
1252	3/29/2023	555	557	13:09	13:14	30	30	SS	AIR	PASS
1253	3/29/2023	556	557	13:10	13:15	30	30	SS	AIR	PASS
1254	3/29/2023	556	558	13:20	13:25	30	30	SS	AIR	PASS
1255	3/29/2023	556	559	12:16	12:21	30	30	SS	AIR	PASS
1256	3/29/2023	557	559	13:15	13:20	30	30	SS	AIR	PASS
1257	3/29/2023	558	559	13:21	13:26	30	30	SS	AIR	PASS
1258	3/29/2023	558	560	13:21	13:26	30	30	SS	AIR	PASS
1259	3/29/2023	537	516	13:46	13:51	30	30	SS	AIR	PASS
1260	3/29/2023	541	516	13:45	13:50	30	30	SS	AIR	PASS
1261	3/29/2023	542	516	13:43	13:48	30	30	SS	AIR	PASS
1262	3/29/2023	544	516	13:42	13:47	30	30	SS	AIR	PASS
1263	3/29/2023	545	516	13:37	13:42	30	30	SS	AIR	PASS
1264	3/29/2023	545	517	13:35	13:40	30	30	SS	AIR	PASS
1265	3/29/2023	548	516	13:36	13:41	30	30	SS	AIR	PASS
1266	3/29/2023	549	517	13:23	13:28	30	30	SS	AIR	PASS
1267	3/29/2023	551	517	13:37	13:42	30	30	SS	AIR	PASS
1268	3/29/2023	552	517	13:45	13:50	30	30	SS	AIR	PASS
1269	3/29/2023	554	517	13:46	13:51	30	30	SS	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1270	3/29/2023	555	517	13:48	13:53	30	30	SS	AIR	PASS
1271	3/29/2023	555	517	13:49	13:54	30	30	SS	AIR	PASS
1272	3/29/2023	558	517	13:50	13:55	30	30	SS	AIR	PASS
1273	3/29/2023	560	517	13:51	13:56	30	30	SS	AIR	PASS
PHASE 2										
1274	12/4/2023	R1091	575	08:10	08:15	35	35	PWC	AIR	PASS
1275	12/4/2023	575	574	08:10	08:15	35	34	PWC	AIR	PASS
1276	12/4/2023	574	573	08:16	08:21	35	35	PWC	AIR	PASS
1277	12/4/2023	573	572	08:20	08:25	35	35	PWC	AIR	PASS
1278	12/4/2023	572	571	08:24	08:29	35	35	PWC	AIR	PASS
1279	12/4/2023	571	570	08:30	08:35	35	35	PWC	AIR	PASS
1280	12/4/2023	570	567	08:35	08:40	35	35	PWC	AIR	PASS
1281	12/4/2023	R1090	572	08:40	08:45	35	35	PWC	AIR	PASS
1282	12/4/2023	570	568	08:46	08:51	35	34	PWC	AIR	PASS
1283	12/4/2023	571	568	08:46	08:51	35	35	PWC	AIR	PASS
1284	12/4/2023	569	568	08:50	08:55	35	35	PWC	AIR	PASS
1285	12/4/2023	568	567	08:57	09:02	35	35	PWC	AIR	PASS
1286	12/4/2023	567	562	08:57	09:02	35	35	PWC	AIR	PASS
1287	12/4/2023	568	562	08:58	09:03	35	35	PWC	AIR	PASS
1288	12/4/2023	566	562	09:03	09:08	35	35	PWC	AIR	PASS
1289	12/4/2023	565	562	09:03	09:08	35	35	PWC	AIR	PASS
1290	12/4/2023	565	566	09:03	09:08	35	35	PWC	AIR	PASS
1291	12/4/2023	564	562	09:09	09:14	35	35	PWC	AIR	PASS
1292	12/4/2023	563	562	09:09	09:14	35	35	PWC	AIR	PASS
1293	12/4/2023	562	561	09:15	09:20	35	35	PWC	AIR	PASS
1294	12/7/2023	577	561	09:19	09:24	40	40	PWC	AIR	PASS
1295	12/7/2023	577	579	09:18	09:23	40	38	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1296	12/7/2023	576	562	10:48	10:53	40	40	PWC	AIR	PASS
1297	12/7/2023	582	580	11:16	11:21	40	39	PWC	AIR	PASS
1298	12/7/2023	583	580	11:15	11:20	40	39	PWC	AIR	PASS
1299	12/7/2023	583	582	01:17	01:22	40	40	PWC	AIR	PASS
1300	12/7/2023	582	585	11:18	11:23	40	39	PWC	AIR	PASS
1301	12/7/2023	583	585	11:19	11:24	40	38	PWC	AIR	PASS
1302	12/7/2023	594	592	14:46	14:51	40	39	PWC	AIR	PASS
1303	12/7/2023	595	592	14:45	14:50	40	39	PWC	AIR	PASS
1304	12/7/2023	594	595	14:47	14:52	40	38	PWC	AIR	PASS
1305	12/7/2023	597	594	14:49	14:54	40	39	PWC	AIR	PASS
1306	12/7/2023	597	595	14:50	14:55	40	40	PWC	AIR	PASS
1307	12/8/2023	559	601	08:00	08:05	40	40	PWC	AIR	PASS
1308	12/8/2023	559	602	08:01	08:06	40	39	PWC	AIR	PASS
1309	12/8/2023	602	601	08:02	08:07	40	40	PWC	AIR	PASS
1310	12/8/2023	604	602	08:03	08:08	40	38	PWC	AIR	PASS
1311	12/11/2023	600	599	14:05	14:10	35	35	PWC	AIR	PASS
1312	12/11/2023	600	597	14:05	14:10	35	35	PWC	AIR	PASS
1313	12/11/2023	600	602	14:11	14:16	35	33	PWC	AIR	PASS
1314	12/8/2023	601	604	08:40	08:45	40	38	PWC	AIR	PASS
1315	12/8/2023	604	603	08:41	08:46	40	40	PWC	AIR	PASS
1316	12/8/2023	604	606	08:43	08:48	40	40	PWC	AIR	PASS
1317	12/8/2023	603	606	08:44	08:49	40	39	PWC	AIR	PASS
1318	12/8/2023	603	605	09:20	09:25	40	40	PWC	AIR	PASS
1319	12/8/2023	606	605	09:21	09:26	40	40	PWC	AIR	PASS
1320	12/8/2023	605	608	09:23	09:28	40	39	PWC	AIR	PASS
1321	12/8/2023	605	607	09:50	09:55	40	40	PWC	AIR	PASS
1322	12/8/2023	608	607	09:51	09:56	40	40	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1323	12/8/2023	608	610	09:52	09:57	40	39	PWC	AIR	PASS
1324	12/8/2023	607	610	09:53	09:58	40	40	PWC	AIR	PASS
1325	12/8/2023	607	609	10:20	10:25	40	40	PWC	AIR	PASS
1326	12/8/2023	610	609	10:21	10:26	40	40	PWC	AIR	PASS
1327	12/8/2023	610	611	10:22	10:27	40	38	PWC	AIR	PASS
1328	12/8/2023	609	611	10:23	10:28	40	40	PWC	AIR	PASS
1329	12/8/2023	581	580	14:30	14:35	35	35	PWC	AIR	PASS
1330	12/8/2023	581	580	14:30	14:35	35	35	PWC	AIR	PASS
1331	12/8/2023	598	596	07:30	07:35	40	39	PWC	AIR	PASS
1332	12/8/2023	599	598	07:31	07:36	40	40	PWC	AIR	PASS
1333	12/8/2023	598	601	07:32	07:37	40	39	PWC	AIR	PASS
1334	12/8/2023	599	601	07:33	07:38	40	40	PWC	AIR	PASS
1335	12/11/2023	576	562	12:50	12:55	35	34	PWC	AIR	PASS
1336	12/11/2023	576	562	12:50	12:55	35	35	PWC	AIR	PASS
1337	12/11/2023	576	567	12:57	13:02	35	35	PWC	AIR	PASS
1338	12/11/2023	583	586	13:20	13:25	30	30	PWC	AIR	PASS
1339	12/11/2023	585	586	13:20	13:25	30	30	PWC	AIR	PASS
1340	12/11/2023	588	586	13:26	13:31	35	34	PWC	AIR	PASS
1341	12/11/2023	588	585	13:26	13:31	35	35	PWC	AIR	PASS
1342	12/8/2023	594	595	14:48	14:53	40	40	PWC	AIR	PASS
1343	12/11/2023	587	588	13:35	13:40	30	30	PWC	AIR	PASS
1344	12/11/2023	590	588	13:44	13:49	30	30	PWC	AIR	PASS
1345	12/11/2023	593	592	13:51	13:56	35	35	PWC	AIR	PASS
1346	12/11/2023	590	593	13:51	13:56	35	35	PWC	AIR	PASS
1347	12/11/2023	595	593	13:58	14:03	35	35	PWC	AIR	PASS
1348	12/21/2023	578	619	14:15	14:20	35	35	PWC	AIR	PASS
1349	12/21/2023	619	620	14:15	14:20	35	35	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1350	12/21/2023	620	621	14:16	14:21	35	34	PWC	AIR	PASS
1351	12/21/2023	621	622	14:16	14:21	35	35	PWC	AIR	PASS
1352	12/21/2023	622	623	14:25	14:30	35	35	PWC	AIR	PASS
1353	12/21/2023	623	624	14:36	14:41	30	29	PWC	AIR	PASS
1354	12/21/2023	624	625	14:42	14:47	30	30	PWC	AIR	PASS
1355	12/21/2023	625	626	14:47	14:52	30	29	PWC	AIR	PASS
1356	12/21/2023	626	627	14:57	15:02	30	29	PWC	AIR	PASS
1357	12/21/2023	627	628	15:00	15:05	30	30	PWC	AIR	PASS
1358	12/21/2023	628	629	15:06	15:11	30	29	PWC	AIR	PASS
1359	12/21/2023	629	630	15:19	15:24	30	30	PWC	AIR	PASS
1360	12/21/2023	630	631	15:26	15:31	30	29	PWC	AIR	PASS
1361	12/21/2023	631	633	15:33	15:38	30	30	PWC	AIR	PASS
1362	12/21/2023	633	634	15:35	15:40	30	30	PWC	AIR	PASS
1363	12/21/2023	634	637	15:43	15:48	30	30	PWC	AIR	PASS
1364	12/21/2023	637	639	15:50	15:55	30	30	PWC	AIR	PASS
1365	12/29/2023	645	646	11:23	11:28	35	33	PWC	AIR	PASS
1366	12/29/2023	646	647	11:23	11:28	35	35	PWC	AIR	PASS
1367	12/29/2023	647	648	11:23	11:28	35	34	PWC	AIR	PASS
1368	12/29/2023	648	649	11:23	11:28	35	33	PWC	AIR	PASS
1369	12/29/2023	649	650	11:23	11:28	35	35	PWC	AIR	PASS
1370	12/29/2023	650	651	11:23	11:28	35	35	PWC	AIR	PASS
1371	12/29/2023	651	652	12:00	12:05	35	35	PWC	AIR	PASS
1372	12/29/2023	651	653	12:00	12:05	35	35	PWC	AIR	PASS
1373	12/29/2023	653	652	12:00	12:05	35	33	PWC	AIR	PASS
1374	12/29/2023	652	654	12:00	12:05	35	34	PWC	AIR	PASS
1375	12/29/2023	653	654	-- ext weld --					Vac Test	PASS
1376	12/29/2023	655	657	13:35	13:40	35	35	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1377	12/29/2023	655	656	13:42	13:47	35	35	PWC	AIR	PASS
1378	12/29/2023	656	657	13:40	13:45	35	35	PWC	AIR	PASS
1379	12/29/2023	656	658	13:42	13:47	35	35	PWC	AIR	PASS
1380	12/29/2023	657	658	13:35	13:40	35	35	PWC	AIR	PASS
1381	12/29/2023	654	655	--ext weld --					Vac Test	PASS
1382	12/29/2023	658	659	13:47	13:52	35	33	PWC	R1242 -> S	PASS
1383	12/29/2023	658	659	13:47	13:52	35	33	PWC	R1242 -> N	PASS
1384	12/30/2023	659	660	11:32	11:37	35	33	PWC	AIR	PASS
1385	12/30/2023	660	661	10:00	10:05	35	35	PWC	AIR	PASS
1386	12/30/2023	661	663	10:50	10:55	35	33	PWC	AIR	PASS
1387	12/30/2023	661	662	11:05	11:10	35	35	PWC	AIR	PASS
1388	12/30/2023	661	662	will cap from R1245/48 -> TI					Vac Test	PASS
1389	12/30/2023	662	664	10:50	10:55	35	34	PWC	AIR	PASS
1390	12/30/2023	662	663	10:50	10:55	35	34	PWC	AIR	PASS
1391	12/30/2023	663	664	10:50	10:55	35	35	PWC	AIR	PASS
1392	12/30/2023	664	666	11:47	11:52	35	35	PWC	AIR	PASS
1393	12/30/2023	664	665	11:47	11:52	35	34	PWC	AIR	PASS
1394	12/30/2023	665	666	11:47	11:52	35	34	PWC	AIR	PASS
1395	12/30/2023	665	667	11:50	11:55	35	35	PWC	AIR	PASS
1396	12/30/2023	666	667	11:56	12:01	35	35	PWC	AIR	PASS
1397	12/30/2023	667	669	14:00	14:05	35	35	PWC	AIR	PASS
1398	12/30/2023	667	668	12:25	12:30	35	35	PWC	AIR	PASS
1399	12/30/2023	668	669	12:25	12:30	35	35	PWC	AIR	PASS
1400	12/30/2023	669	670	14:00	14:05	35	35	PWC	AIR	PASS
1401	12/30/2023	668	670	12:32	12:37	35	35	PWC	AIR	PASS
1402	12/30/2023	670	671	14:07	14:12	35	35	PWC	AIR	PASS
1403	12/30/2023	670	672	14:07	14:12	35	35	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1404	12/30/2023	671	672	12:33	12:38	35	35	PWC	AIR	PASS
1405	01/18/24	674	675	10:30	10:35	35	35	PWC	AIR	PASS
1406	01/18/24	676	674	10:30	10:35	35	34	PWC	AIR	PASS
1407	01/18/24	676	675	10:30	10:35	35	35	PWC	AIR	PASS
1408	01/18/24	678	676	10:37	10:42	35	35	PWC	AIR	PASS
1409	01/18/24	677	676	10:37	10:42	35	35	PWC	AIR	PASS
1410	01/18/24	677	678	10:37	10:42	35	35	PWC	AIR	PASS
1411	01/18/24	679	677	10:39	10:44	35	35	PWC	AIR	PASS
1412	01/18/24	679	678	10:39	10:44	35	33	PWC	AIR	PASS
1413	01/18/24	680	679	10:45	10:50	35	35	PWC	AIR	PASS
1414	01/18/24	682	680	10:51	10:56	35	35	PWC	AIR	PASS
1415	01/18/24	682	680	10:51	10:56	34	35	PWC	AIR	PASS
1416	01/18/24	682	683	12:30	12:35	35	34	PWC	AIR	PASS
1417	01/18/24	682	684	12:30	12:35	35	35	PWC	AIR	PASS
1418	01/18/24	683	684	13:33	13:38	35	35	PWC	AIR	PASS
1419	01/18/24	685	683	13:33	13:38	35	35	PWC	AIR	PASS
1420	01/18/24	685	684	13:33	13:38	35	35	PWC	AIR	PASS
1421	01/18/24	686	685	12:45	12:50	35	35	PWC	AIR	PASS
1422	01/18/24	688	686	12:45	12:50	35	34	PWC	AIR	PASS
1423	01/18/24	689	688	12:46	12:51	35	35	PWC	AIR	PASS
1424	01/18/24	691	689	12:51	12:56	35	35	PWC	AIR	PASS
1425	01/18/24	690	689	13:00	13:05	35	35	PWC	AIR	PASS
1426	01/18/24	689	690	13:00	13:05	35	35	PWC	AIR	PASS
1427	01/18/24	691	690	13:02	13:07	35	35	PWC	AIR	PASS
1428	01/18/24	686	687	13:09	13:14	35	34	PWC	AIR	PASS
1429	01/18/24	688	687	13:09	13:14	35	34	PWC	AIR	PASS
1430	01/18/24	687	685	13:08	13:13	35	35	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1431	01/18/24	680	681	13:20	13:25	35	35	PWC	AIR	PASS
1432	01/18/24	682	681	13:20	13:25	35	34	PWC	AIR	PASS
1433	01/18/24	681	679	13:21	13:26	35	35	PWC	AIR	PASS
1434	01/18/24	675	672	- ext weld whole seam - R1303				PWC	Vac Test	PASS
1435	01/18/24	692	691	13:30	13:35	35	34	PWC	AIR	PASS
1436	01/18/24	693	691	13:30	13:35	35	35	PWC	AIR	PASS
1437	01/18/24	692	693	13:30	13:35	35	35	PWC	AIR	PASS
1438	01/18/24	694	692	13:40	13:45	35	34	PWC	AIR	PASS
1439	01/18/24	694	693	13:40	13:45	35	35	PWC	AIR	PASS
1440	01/18/24	695	694	13:55	14:00	35	35	PWC	AIR	PASS
1441	01/18/24	696	694	13:55	14:00	35	35	PWC	AIR	PASS
1442	01/18/24	695	696	13:55	14:00	35	35	PWC	AIR	PASS
1443	01/18/24	697	695	14:02	14:07	35	35	PWC	AIR	PASS
1444	01/18/24	697	696	14:02	14:07	35	34	PWC	AIR	PASS
1445	01/18/24	698	697	14:12	14:17	35	34	PWC	AIR	PASS
1446	01/18/24	699	697	14:12	14:17	35	35	PWC	AIR	PASS
1447	01/18/24	698	699	14:12	14:17	35	34	PWC	AIR	PASS
1448	01/18/24	700	698	14:17	14:22	35	34	PWC	AIR	PASS
1449	01/18/24	700	699	14:17	14:22	35	35	PWC	AIR	PASS
1450	01/18/24	701	700	14:35	14:40	35	35	PWC	AIR	PASS
1451	01/18/24	702	701	14:36	14:41	35	35	PWC	AIR	PASS
1452	01/19/24	702	703	09:55	10:00	35	35	PWC	AIR	PASS
1453	01/19/24	703	704	09:58	10:03	35	35	PWC	AIR	PASS
1454	01/19/24	704	705	10:03	10:08	35	35	PWC	AIR	PASS
1455	01/19/24	705	706	13:05	13:10	35	34	PWC	AIR	PASS
1456	01/19/24	703	704	09:58	10:03	35	34	PWC	AIR	PASS
1457	02/07/24	709	708	14:09	14:14	35	35	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1458	02/07/24	710	709	14:10	14:15	35	34	PWC	AIR	PASS
1459	02/08/24	710	711	13:30	13:35	35	34	PWC	AIR	PASS
1460	02/08/24	710	712	13:31	13:36	35	35	PWC	AIR	PASS
1461	02/08/24	711	712	13:32	13:37	35	35	PWC	AIR	PASS
1462	02/08/24	712	713	13:40	13:45	35	35	PWC	AIR	PASS
1463	02/08/24	711	713	13:40	13:45	35	35	PWC	AIR	PASS
1464	02/08/24	713	714	13:46	13:51	35	35	PWC	AIR	PASS
1465	02/15/24	756	755	15:53	15:58	35	34	PWC	AIR	PASS
1466	02/15/24	755	754	15:53	15:58	35	35	PWC	AIR	PASS
1467	02/15/24	754	753	15:44	15:49	35	35	PWC	AIR	PASS
1468	02/15/24	753	752	15:43	15:48	35	35	PWC	AIR	PASS
1469	02/15/24	752	751	15:43	15:48	35	34	PWC	AIR	PASS
1470	02/15/24	751	750	15:36	15:41	35	35	PWC	AIR	PASS
1471	02/15/24	750	749	15:35	15:40	35	35	PWC	AIR	PASS
1472	02/15/24	749	748	15:35	15:40	35	34	PWC	AIR	PASS
1473	02/15/24	748	747	15:21	15:26	35	35	PWC	AIR	PASS
1474	02/15/24	747	746	15:20	15:25	35	35	PWC	AIR	PASS
1475	02/15/24	746	745	15:20	15:25	35	35	PWC	AIR	PASS
1476	02/15/24	745	744	15:14	15:19	35	35	PWC	AIR	PASS
1477	02/15/24	745	743	15:14	15:19	35	35	PWC	AIR	PASS
1478	02/15/24	744	743	15:07	15:12	35	35	PWC	AIR	PASS
1479	02/15/24	744	742	15:07	15:12	35	35	PWC	AIR	PASS
1480	02/15/24	743	742	15:08	15:13	35	35	PWC	AIR	PASS
1481	02/15/24	742	741	15:04	15:09	35	34	PWC	AIR	PASS
1482	02/15/24	741	740	14:57	15:02	35	35	PWC	AIR	PASS
1483	02/15/24	741	739	14:57	15:02	35	35	PWC	AIR	PASS
1484	02/15/24	740	739	14:51	14:56	35	34	PWC	AIR	PASS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Seam Pressure Test Log

Item	Date	Seam Number		Duration		Pressure		CQA Monitor	Test Type (Air/Vac)	Results Pass or Fail
		1st Panel	2nd Panel	Start Time	Finish Time	Initial Pressure	Final Pressure			
1485	02/15/24	740	738	14:50	14:55	35	35	PWC	AIR	PASS
1486	02/15/24	739	738	14:50	14:55	35	35	PWC	AIR	PASS

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1	2/3 50W	DS-1	2X5	7	KC	7/11/2022	7/12/2022	VX
R - 2	5/6 100E	DS-2	2X5	7	KC	7/11/2022	7/12/2022	VX
R - 3	7/9 85E	DS-3	2X5	7	KC	7/11/2022	7/12/2022	VX
R - 4	4/5 48W	PATCH	2X2	7	KC	7/11/2022	7/12/2022	VX
R - 5	7/8/9	T	2X4	7	KC	7/11/2022	7/12/2022	VX
R - 6	1/2/10	T	2X2	7	KC	7/11/2022	7/12/2022	VX
R - 7	2/3/10	T	2X2	7	KC	7/11/2022	7/12/2022	VX
R - 8	3/4/10	T	2X2	7	KC	7/11/2022	7/12/2022	VX
R - 9	4/5/10	T	2X2	7	KC	7/11/2022	7/12/2022	VX
R - 10	5P6/10	T	2X2	7	KC	7/11/2022	7/12/2022	VX
R - 11	10/11 66S	DS-4	2X5	9	SS	7/11/2022	7/12/2022	VX
R - 12	12/13/14	T	2X2	9	SS	7/11/2022	7/12/2022	VX
R - 13	13/14/15	T	2X2	9	SS	7/11/2022	7/12/2022	VX
R - 14	15/16/17	T	2X2	9	SS	7/11/2022	7/12/2022	VX
R - 15	12/14 12S	PATCH	2X2	9	SS	7/11/2022	7/12/2022	VX
R - 16	7/9/18/19	T	2X2	7	KC	7/12/2022	7/12/2022	VX
R - 17	6/7/19/20	T	2X2	7	KC	7/12/2022	7/12/2022	VX
R - 18	5/6/20/21	T	2X2	7	KC	7/12/2022	7/12/2022	VX
R - 19	18/19 406W	DS-5	2X5	7	KC	7/12/2022	7/12/2022	VX
R - 20	18/19	T	2X2	7	KC	7/12/2022	7/12/2022	VX
R - 21	6/9/2020 515W	DS-6	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 22	19/20 468W	T	2X2	7	KC	7/13/2022	7/13/2022	VX
R - 23	19/20 13W	DS-7	2X5	7	KC	7/12/2022	7/12/2022	VX
R - 24	4/5/21/22	T	2X2	7	KC	7/12/2022	7/12/2022	VX
R - 25	3/4/22/23	T	2X3	7	KC	7/12/2022	7/12/2022	VX
R - 26	20/21 505W	DS-8	2X5	9	SS	7/12/2022	7/12/2022	VX
R - 27	20/21 550W	T	2X2	9	SS	7/12/2022	7/12/2022	VX
R - 28	21/22 298E	DS-9	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 29	2/3/23/24	T	2X3	7	KC	7/12/2022	7/12/2022	VX
R - 30	1/2/24/25	T	2X2	7	KC	7/12/2022	7/12/2022	VX
R - 31	22/23 207E	DS-10	2X5	9	SS	7/12/2022	7/12/2022	VX
R - 32	22/23 610E	DS-11	2X5	7	KC	7/12/2022	7/12/2022	VX
R - 33	23/24 192E	PATCH	2X2	7	KC	7/13/2022	7/13/2022	VX
R - 34	23/24 50E	DS-12	2X5	9	SS	7/12/2022	7/12/2022	VX
R - 35	23/24 500E	DS-13	2X5	9	SS	7/12/2022	7/12/2022	VX
R - 36	24/25 298E	DS-14	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 37	1/25/26/27	T	2X2	7	KC	7/13/2022	7/13/2022	VX
R - 38	1/26 90E	DS-15	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 39	1/10/26	T	2X2	7	KC	7/13/2022	7/13/2022	VX

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 40	10/11/26	T	2X2	7	KC	7/13/2022	7/13/2022	VX
R - 41	26/28/29	T	2X2	7	KC	7/13/2022	7/13/2022	VX
R - 42	26/27/29/30	T	2X3	7	KC	7/13/2022	7/13/2022	VX
R - 43	25/27 95E	DS-16	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 44	25/27 105W	DS-17	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 45	27/30 353W	DS-18	2X5	7	KC	7/13/2022	7/13/2022	VX
R - 46	27/30 22W	PATCH	2X3	7	KC	7/13/2022	7/13/2022	VX
R - 47	28/29/31	T	2X2	7	KC	7/15/2022	7/15/2022	VX
R - 48	29/30/31/32	T	2X3	7	KC	7/15/2022	7/15/2022	VX
R - 49	28/31 30E	DS-19	2X5	7	KC	7/15/2022	7/15/2022	VX
R - 50	31/32/33/34	T	2X2	7	KC	7/15/2022	7/15/2022	VX
R - 51	33/34/36/37	T	2X2	7	KC	7/15/2022	7/15/2022	VX
R - 52	33/35/36	T	2X2	7	KC	7/15/2022	7/15/2022	VX
R - 53	35/36 8N	DS-20	2X5	7	KC	7/15/2022	7/15/2022	VX
R - 54	30/32 410W	DS-21	2X5	7	KC	7/15/2022	7/15/2022	VX
R - 55	32.34 100W	DS-22	2X5	7	KC	7/15/2022	7/15/2022	VX
R - 56	32/34 602W	DS-23	2X5	7	KC	7/15/2022	7/15/2022	VX
R - 57	34/37 310W	DS-24	2X5	7	KC	7/15/2022	7/15/2022	VX
R - 58	32/34/38/39	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 59	30/32/39/40	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 60	27/30/40/41	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 61	39/40 177W	DS-25	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 62	38/39 177W	DS-26	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 63	40/41 177W	DS-27	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 64	25/27/41/42	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 65	24/25/42/43	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 66	23/24/43/44	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 67	22/23/44/45	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 68	21/22/45/46	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 69	20/21/46/47	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 70	41/42 177W	DS-28	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 71	42/43 175W	DS-29	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 72	43/44 173W	DS-30	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 73	19/20/47/48	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 74	18/19/48/49	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 75	48/49/50	T	2X2	9	KC	7/19/2022	7/19/2022	VX
R - 76	47/48/50	T	2X2	9	KC	7/19/2022	7/19/2022	VX
R - 77	46/47/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 78	45/46/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 79	44/45/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 80	43/44/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 81	42/43/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 82	41/42/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 83	40/41/50	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 84	39/40/50	T	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 85	38/39/50	T	2X6	9	KC	7/20/2020	7/20/2020	VX
R - 86	47/48 177W	PATCH	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 87	48/49 100W	PATCH	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 88	45/46 160W	PATCH	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 89	47/48 155W	DS-31	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 90	22/45 8N	DS-32	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 91	42/50 8N	DS-33	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 92	50/52 52N	DS-34	2X5	9	KC	7/20/2020	7/20/2020	VX
R - 93	50/51/52	T	3X7	9	KC	7/20/2020	7/20/2020	VX
R - 94	50/51 15N	PATCH	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 95	50/51 43N	PATCH	2X2	9	KC	7/20/2020	7/19/2022	VX
R - 96	51 9N/10E	BOOT	20X20	9	KC	7/20/2020	7/20/2020	VX
R - 97	51/52/53	T	2X2	7	SS	7/20/2020	7/20/2020	VX
R - 98	52/53/54	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 99	53/54/55	T	2X2	9	KC	7/20/2020	7/20/2020	VX
R - 100	55/57 100N	DS-35	2X5	7	SS	7/19/2022	7/20/2020	VX
R - 101	55/56/57	T	2X2	7	SS	7/19/2022	7/20/2020	VX
R - 102	56/57/58	T	2X2	7	SS	7/19/2022	7/19/2022	VX
R - 103	57/58/59	T	2X2	7	SS	7/19/2022	7/19/2022	VX
R - 104	58/59/60	T	2X2	7	SS	7/19/2022	7/19/2022	VX
R - 105	59/60/61	T	2X2	7	SS	7/19/2022	7/20/2020	VX
R - 106	62/63 40N	DS-36	2X5	7	SS	7/19/2022	7/20/2020	VX
R - 107	62/63 AT	PATCH	2X3	7	SS	7/19/2022	7/19/2022	VX
R - 108	55/66 AT	PATCH	2X5	7	SS	7/19/2022	7/19/2022	VX
R - 109	64/65/66	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 110	63/64/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 111	62/63/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 112	61/62/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 113	59/61/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 114	57/59/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 115	55/57/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 116	54/55/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 117	52/54/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 118	50/52/65	T	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 119	38/50/65	T	2X6	7	SS	9/15/2022	9/15/2022	EL
R - 120	38/65 233E	PATCH	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 121	38/65 215E	PATCH	2X3	7	SS	9/15/2022	9/15/2022	EL
R - 122	38/65 207E	PATCH	2X2	7	SS	9/15/2022	9/15/2022	EL
R - 123	50/65 10E	DS-37	2X5	7	SS	9/15/2022	9/15/2022	EL
R - 124	67/68/73	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 125	68/72/73	T	2X2	7	SS	9/19/2022	9/19/2022	EL
R - 126	68/71/72	T	2X2	7	SS	9/19/2022	9/19/2022	EL
R - 127	68/69/70	T	2X2	7	SS	9/19/2022	9/19/2022	EL
R - 128	71/72 27S	DS-38	2X5	7	SS	9/19/2022	9/19/2022	EL
R - 129	73/73 76S	DS-39	2X5	7	EL	9/19/2022	9/19/2022	EL
R - 130	69/70 71	T	2X2	7	EL	9/19/2022	9/19/2022	EL
R - 131	69/70/132	T	2X2	7	EL	9/19/2022	9/19/2022	EL
R - 132	69/70 AT	CAP	2X50			N/A		EL
R - 133	66/67 220E	PATCH	2X2	7	OP	9/22/2022	9/22/2022	EL
R - 134	66/67/74	T	2X2	9	SS	9/22/2022	9/22/2022	EL
R - 135	37/66/74	T	2X2	7	SA	9/21/2022	9/21/2022	EL
R - 136	34/37/38/66	T	2X2	7	SA	9/21/2022	9/21/2022	EL
R - 137	66/74 532E	DS-40	2X5	7	SS	9/27/2022	9/27/2022	EL
R - 138	66/74 80E	DS-41	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 139	67/73/74/75	T	3X4	9	SS	9/20/2022	9/20/2022	EL
R - 140	73/75/76	T	2X4	9	SS	9/20/2022	9/20/2022	EL
R - 141	73/76/77	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 142	73/77/78	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 143	73/78/79	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 144	73/79/80	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 145	74/75 167E	PATCH	1X1	9	SS	9/20/2022	9/20/2022	EL
R - 146	74/75 250E	DS-42	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 147	75/76 664E	DS-43	2X5	8	SA	9/21/2022	9/21/2022	EL
R - 148	75/76 159E	DS-44	2X5	9	SS	9/21/2022	9/21/2022	EL
R - 149	76/77 356E	DS-45	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 150	77/78 688E	DS-46	2X5	7	SA	9/21/2022	9/21/2022	EL
R - 151	77/78 135E	DS-47	2X5	9	SS	9/21/2022	9/21/2022	EL
R - 152	78/79 374E	DS-48	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 153	79/80 548E	DS-49	2X5	7	SA	9/21/2022	9/21/2022	EL
R - 154	79/80 202E	PATCH	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 155	79/80 45E	DS-50	2X5	9	SS	9/21/2022	9/21/2022	EL
R - 156	82/83 35S	DS-51	2X5	9	SS	9/20/2022	9/20/2022	EL

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Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 157	72/73/82/83	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 158	71/72/81/82	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 159	81/82/83	T	2X2	9	SS	9/20/2022	9/20/2022	EL
R - 160	73/80/84	T	2X6	9	SS	9/21/2022	9/21/2022	EL
R - 161	73/84/85	T	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 162	73/85 10N	PATCH	1X1	9	SS	9/21/2022	9/21/2022	EL
R - 163	73/85/86	T	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 164	73/86/87	T	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 165	73/83/87	T	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 166	83/87/88	T	2X4	9	SS	9/21/2022	9/21/2022	EL
R - 167	83/88/89	T	2X4	9	SS	9/21/2022	9/21/2022	EL
R - 168	80/84 100E	PATCH	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 169	80/84 298E	DS-52	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 170	84/85 600E	DS-53	2X5	7	SA	9/21/2022	9/21/2022	EL
R - 171	84/85 103E	DS-54	2X5	9	SS	9/21/2022	9/21/2022	EL
R - 172	85/86 300E	DS-55	2X5	9	OP	9/22/2022	9/22/2022	EL
R - 173	86/87 600E	DS-56	2X5	7	SA	9/21/2022	9/21/2022	EL
R - 174	86/87 101E	DS-57	2X5	9	SS	9/21/2022	9/21/2022	EL
R - 175	87/88 348E	DS-58	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 176	87/88 551E	DS-59	2X5	7	SA	9/21/2022	9/21/2022	EL
R - 177	88/89 177E	PATCH	2X2	9	SS	9/21/2022	9/21/2022	EL
R - 178	88/89 151E	DS-60	2X5	9	SS	9/21/2022	9/21/2022	EL
R - 179	83/89/90	T	2X6	7	OP	9/22/2022	9/22/2022	EL
R - 180	83/90/91	T	2X4	7	OP	9/22/2022	9/22/2022	EL
R - 181	89/90 195E	PATCH	2X2	7	OP	9/22/2022	9/22/2022	EL
R - 182	89/90 355E	DS-61	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 183	89/90 485E	PATCH	2X2	7	OP	9/22/2022	9/22/2022	EL
R - 184	90/91 552E	DS-62	2X5	7	OP	9/22/2022	9/21/2022	EL
R - 185	90/91 70E	DS-63	2X5	7	OP	9/22/2022	9/22/2022	EL
R - 186	92/93 58E	DS-64	2X5	9	OP	9/28/2022	9/28/2022	EL
R - 187	93/94 185E	DS-65	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 188	94/95 303E	DS-66	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 189	94/95 625E	DS-67	2X5	9	SS	10/3/2022	10/3/2022	EL
R - 190	37/92 225E	DS-68	2X5	9	SS	9/29/2022	9/29/2022	EL
R - 191	36/92 115E	DS-69	2X5	6	OP	9/29/2022	9/29/2022	EL
R - 192	77/78/95/96	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 193	76/77/94/95	T	2X6	6	OP	9/28/2022	9/28/2022	EL
R - 194	75/76/93/94	T	2X2	6	OP	9/28/2022	9/28/2022	EL
R - 195	74/75/92/93	T	2X4	6	OP	9/28/2022	9/28/2022	EL

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 196	74/75/92/93	T	2X6	6	OP	9/28/2022	9/28/2022	EL
R - 197	92/93 20E	PATCH	2X2	6	OP	9/28/2022	9/28/2022	EL
R - 198	92/93 223E	PATCH	2X2	6	OP	9/28/2022	9/28/2022	EL
R - 199	37/92 325E	PATCH	2X2	9	SS	9/29/2022	9/29/2022	EL
R - 200	37/92 350E	PATCH	2X2	9	SS	9/29/2022	9/29/2022	EL
R - 201	37/92 408E	PATCH	2X2	9	SS	9/29/2022	9/29/2022	EL
R - 202	37/92 445E	PATCH	2X2	9	SS	9/29/2022	9/29/2022	EL
R - 203	36/37/92	T	2X2	6	OP	9/29/2022	9/29/2022	EL
R - 204	36/92 40E	PATCH	2X6	6	OP	9/29/2022	9/29/2022	EL
R - 205	37/92 48E	PATCH	2X4	6	OP	9/28/2022	9/28/2022	EL
R - 206	95/96 100E	DS-70	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 207	96/97 248W	DS-71	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 208	97/98 11N	DS-72	2X5	9	SS	10/3/2022	10/3/2022	EL
R - 209	102/104 228E	DS-73	2X5	9	SS	10/3/2022	10/3/2022	EL
R - 210	99/102 123W	DS-74	2X5	9	SS	10/3/2022	10/3/2022	EL
R - 211	84/101 10N	DS-75	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 212	85/86/104/105	T	3X6	6	OP	10/3/2022	10/3/2022	EL
R - 213	84/85/101/104	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 214	80/84/99/101	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 215	79/80/97/99	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 216	78/79/96/97	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 217	99/101/102	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 218	101/102/104	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 219	97/99/100	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 220	99/100/102	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 221	100/102/103	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 222	97/98/100	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 223	96/97/98	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 224	104/105 276E	DS-76	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 225	108/109 170W	DS-77	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 226	110/111 152W	DS-78	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 227	105/108 75E	DS-79	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 228	91/112 10N	DS-80	2X5	6	OP	10/3/2022	10/3/2022	EL
R - 229	90/91/111/112	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 230	89/90/110/111	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 231	88/89/109/110	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 232	87/88/107/109	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 233	86/87/105/107	T	2X2	6	OP	10/3/2022	10/3/2022	EL
R - 234	107/108/109	T	2X2	9	SS	10/3/2022	10/3/2022	EL

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 235	106/107/108	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 236	104/105/106	T	2X2	9	SS	10/3/2022	10/3/2022	EL
R - 237	105/108 All Seam	CAP	ALL SEAM	9	SS	10/3/2022	10/3/2022	EL
R - 238	37/92 All Seam	CAP	ALL SEAM	9	SS	9/29/2022	9/29/2022	EL
R - 239	36/92 All Seam	CAP	ALL SEAM	6	OP	9/29/2022	9/29/2022	EL
R - 240	113/114 98S	PATCH	2X4	9	MS	12/1/2022	12/1/2022	SS
R - 241	113/114 62S	PATCH	2X4	9	MS	12/1/2022	12/1/2022	SS
R - 242	113/114 48S	PATCH	2X4	9	MS	12/1/2022	12/1/2022	SS
R - 243	113/114	T	2X6	9	MS	12/1/2022	12/1/2022	SS
R - 244	81/83/114/115	T	2X6	9	MS	12/1/2022	12/1/2022	SS
R - 245	91/115/116	T	2X6	9	MS	12/1/2022	12/1/2022	SS
R - 246	91/116/118	T	2X6	9	MS	12/1/2022	12/1/2022	SS
R - 247	91/118/119	T	2X6	9	MS	12/1/2022	12/1/2022	SS
R - 248	91/119/120	T	2X2	9	MS	12/1/2022	12/1/2022	SS
R - 249	91/120/121	T	2X2	9	SS	12/5/2022	12/5/2022	SS
R - 250	91/121/122	T	2X8	9	SS	12/5/2022	12/5/2022	SS
R - 251	116/117/118	T	2X2	9	SS	12/5/2022	12/5/2022	SS
R - 252	115/116/117	T	2X2	9	SS	12/5/2022	12/5/2022	SS
R - 253	116/117 10E	DS-81	2X5	9	SS	12/5/2022	12/5/2022	SS
R - 254	118/119 50X	DS-82	2X5	9	SS	12/5/2022	12/5/2022	SS
R - 255	121/122 77S	DS-83	2X5	9	SS	12/5/2022	12/5/2022	SS
R - 256	114/115/123/124	T	2X2	9	SS	12/4/2022	12/4/2022	SS
R - 257	123/124 27S	PATCH	2X2	9	SS	12/4/2022	12/4/2022	SS
R - 258	123/124/125	T	2X2	9	SS	12/4/2022	12/4/2022	SS
R - 259	115/117/124/126	T	4X4	9	SS	12/4/2022	12/4/2022	SS
R - 260	117/118/126/128	T	2X2	9	SS	12/4/2022	12/4/2022	SS
R - 261	124/126/127	T	2X4	9	SS	12/6/2022	12/6/2022	SS
R - 262	124/126/127	T	2X3	9	SS	12/6/2022	12/6/2022	SS
R - 263	126/127/128	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 264	124/126 31S	DS-84	2X4	9	SS	12/4/2022	12/4/2022	SS
R - 265	118/119/128/129	T	2X2	9	SS	12/4/2022	12/4/2022	SS
R - 266	128/129 123S	DS-85	2X4	9	SS	12/6/2022	12/6/2022	SS
R - 267	119/120/129/130	T	2X2	9	SS	12/6/2022	12/4/2022	SS
R - 268	120/121/130/131	T	3X3	9	SS	12/4/2022	12/4/2022	SS
R - 269	121/122/131/132	T	2X6	9	SS	12/4/2022	12/4/2022	SS
R - 270	131/132 200S	DS-86	2X5	9	SS	12/6/2022	12/6/2022	SS
R - 271	115/124 10E	PATCH	2X2	9	SS	12/4/2022	12/4/2022	SS
R - 272	132/138 35S	DS-87	2X5	9	SS	12/6/2022	12/6/2022	SS
R - 273	91/122/133	T	2X3	9	SS	12/6/2022	12/6/2022	SS

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 274	91/133/134	T	2X3	9	SS	12/6/2022	12/6/2022	SS
R - 275	91/134/135	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 276	91/135/137	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 277	91/137/138	T	3X4	9	SS	12/6/2022	12/6/2022	SS
R - 278	134/135 50S	DS-88	2X5	9	SS	12/6/2022	12/6/2022	SS
R - 279	122/133/134	T	2X4	9	SS	12/6/2022	12/6/2022	SS
R - 280	134/135/136	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 281	135/136/137	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 282	122/134/136	T	2X4	9	SS	12/6/2022	12/6/2022	SS
R - 283	122/136/137	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 284	122/137/138	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 285	122/137/138	T	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 286	137/138 15S	PATCH	2X2	9	SS	12/6/2022	12/6/2022	SS
R - 287	125/127/139	T	2X2	9	SS	#########	12/12/2022	KT
R - 288	127/128/139	T	2X6	9	SS	#########	12/12/2022	KT
R - 289	128/139/140	T	2X2	9	SS	#########	12/12/2022	KT
R - 290	128/129/140	T	2X2	9	SS	#########	12/12/2022	KT
R - 291	129/130/140	T	2X2	9	SS	#########	12/12/2022	KT
R - 292	130/131/140	T	2X2	9	SS	#########	12/12/2022	KT
R - 293	131/132/140	T	2X2	9	SS	#########	12/12/2022	KT
R - 294	132/138/140	T	2X2	9	SS	#########	12/12/2022	SS
R - 295	140/142/143	T	2X2	9	SS	12/7/2022	12/7/2022	SS
R - 296	140/143/144	T	2X4	9	SS	12/7/2022	12/7/2022	SS
R - 297	140/144/145	T	2X5	9	SS	#########	12/12/2022	KT
R - 298	140/145/146 51N	T	3X4	9	SS	#########	12/12/2022	KT
R - 299	142/143	DS-89	2X5	9	SS	#########	12/12/2022	KT
R - 300	140/146/147	T	2X2	9	SS	#########	12/12/2022	KT
R - 301	140/147/148	T	2X2	9	SS	#########	12/12/2022	KT
R - 302	140/148/149	T	2X2	9	SS	#########	12/12/2022	KT
R - 303	140/149/150	T	2X2	9	SS	#########	12/12/2022	KT
R - 304	140/150/151	T	2X5	9	SS	#########	12/12/2022	KT
R - 305	138/140/151	T	2X2	9	SS	#########	12/12/2022	KT
R - 306	138/151/152	T	2X2	9	SS	#########	12/12/2022	KT
R - 307	146/147/153	T	2X2	9	SS	#########	12/12/2022	KT
R - 308	149/150 16S	DS-90	2X5	9	SS	#########	12/12/2022	KT
R - 309	16/154/155	T	2X2	8	ST	12/8/2022	12/9/2022	SS
R - 310	15/16/155	T	2X2	8	ST	12/8/2022	12/9/2022	SS
R - 311	15/155/156	T	2X2	8	ST	12/8/2022	12/9/2022	SS
R - 312	13/15/156	T	1X1	8	ST	12/8/2022	12/9/2022	SS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 313	13/156/157	T	2X2	8	ST	12/8/2022	12/9/2022	SS
R - 314	12/13/157	T	1X1	8	ST	12/8/2022	12/9/2022	SS
R - 315	12/157/158	T	1X1	8	ST	12/8/2022	12/9/2022	SS
R - 316	11/12/26/158	T	1X1	8	ST	12/8/2022	12/9/2022	SS
R - 317	26/28/158/160	T	2X5	9	SS	12/8/2022	12/9/2022	SS
R - 318	158/160/161	T	2X2	9	SS	12/8/2022	12/9/2022	SS
R - 319	28/31/160/161	T	2X2	9	SS	12/8/2022	12/9/2022	SS
R - 320	157/158/159	T	2X5	9	SS	12/8/2022	12/9/2022	SS
R - 321	158/159/161	T	2X2	9	SS	12/8/2022	12/9/2022	SS
R - 322	156/157 34S	DS-91	2X5	9	SS	12/8/2022	12/9/2022	SS
R - 323	31/33/161	T	1X1	9	SS	12/8/2022	12/9/2022	SS
R - 324	163/164 68E	DS-92	2X5	49	KI	12/8/2022	12/9/2022	SS
R - 325	35/161/162	T	2X2	9	SS	12/8/2022	12/9/2022	SS
R - 326	161/162/163	T	2X4	9	SS	12/8/2022	12/9/2022	SS
R - 327	161/163/164	T	2X4	9	SS	12/8/2022	12/9/2022	SS
R - 328	35/162/164	T	1X1	49	KI	12/8/2022	12/9/2022	SS
R - 329	35/36/163	T	1X1	49	KI	12/8/2022	12/9/2022	SS
R - 330	36/92/163	T	2X2	49	KI	12/8/2022	12/9/2022	SS
R - 331	92/93/163/164	T	2X2	49	KI	12/8/2022	12/9/2022	SS
R - 332	93/94/164/165	T	2X2	49	KI	12/8/2022	12/9/2022	SS
R - 333	91/138/166	T	3X5	9	SS	#########	12/17/2022	KV
R - 334	138/166/168	T	1X1	9	SS	#########	12/17/2022	KV
R - 335	138/168/170	T	1X1	9	SS	#########	12/17/2022	KV
R - 336	138/170/171	T	1X1	9	SS	#########	12/17/2022	KV
R - 337	166/168 10W	PATCH	2X2	9	SS	#########	12/18/2022	VX
R - 338	166/167/168	T	2X4	9	SS	#########	12/17/2022	KV
R - 339	91/166/167	T	2X2	9	SS	#########	12/17/2022	KV
R - 340	167/168/169	T	2X2	9	SS	#########	12/18/2022	VX
R - 341	168/169/170	T	2X2	9	SS	#########	12/18/2022	VX
R - 342	91/112/167	T	2X2	9	SS	#########	12/18/2022	VX
R - 343	170/171 50E	DS-93	2X5	9	SS	#########	12/17/2022	KV
R - 344	168/170 150E	DS-94	2X5	9	SS	#########	12/17/2022	VX
R - 345	166/167 10N	DS-95	2X5	9	SS	#########	12/18/2022	KV
R - 346	91/167 100E	DS-96	2X5	9	SS	#########	12/18/2022	VX
R - 347	138/171/172	T	2X2	9	SS	#########	12/17/2022	KV
R - 348	171/172/173	T	2X2	9	SS	#########	12/18/2022	VX
R - 349	138/172/174	T	3X10	9	SS	#########	12/17/2022	KV
R - 350	172/173/174	T	2X2	9	SS	#########	12/18/2022	VX
R - 351	172/173 10N	PATCH	2X4	9	SS	#########	12/18/2022	VX

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 352	173/174/175	T	2X2	9	SS	#########	12/18/2022	VX
R - 353	138/174/176	T	2X2	9	SS	#########	12/17/2022	KV
R - 354	174/175/176	T	2X2	9	SS	#########	12/18/2022	VX
R - 355	171/173 52E	DS-97	2X5	9	SS	#########	12/18/2022	VX
R - 356	172/174 50E	DS-98	2X5	9	SS	#########	12/17/2022	VX
R - 357	138/176/177	T	2X2	9	SS	#########	12/17/2022	KV
R - 358	176/177/178	T	2X2	9	SS	#########	12/17/2022	KV
R - 359	174/176 320E	DS-99	2X5	9	SS	#########	12/18/2022	VX
R - 360	176/178 97W	DS-100	2X5	9	SS	#########	12/18/2022	VX
R - 361	91/167 All Seam	CAP	ALL SEAM	9	SS	1/3/2023	1/3/2023	LD
R - 362	171/173 All Seam	CAP	ALL SEAM	49	RI	1/3/2023	1/3/2023	LD
R - 363	138/177/179	T	4X7	6	SS	1/9/2023	1/9/2023	LD
R - 364	138/179/181	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 365	138/181/182	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 366	138/182/183	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 367	138/183/185	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 368	138/185/186	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 369	138/186/187	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 370	186/187/188	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 371	183/184/185	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 372	182/183/184	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 373	179/180/181	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 374	178/179/180	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 375	185/186 47E	DS-101	2X5	6	SS	1/9/2023	1/9/2023	LD
R - 376	177/179 110E	DS-102	2X5	6	SS	1/9/2023	1/9/2023	LD
R - 377	180/181 45E	DS-103	2X5	6	SS	1/9/2023	1/9/2023	LD
R - 378	183/184 10N	DS-104	2X5	6	SS	1/9/2023	1/9/2023	LD
R - 379	186/188 57E	DS-105	2X5	6	SS	1/9/2023	1/9/2023	LD
R - 380	187/188 10N	DS-106	2X5	6	SS	1/9/2023	1/9/2023	LD
R - 381	177/178/179	T	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 382	186/187 67E	PATCH	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 383	185/186 227E	PATCH	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 384	186/188 230E	PATCH	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 385	181/182 325E	PATCH	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 386	138/185 10N	PATCH	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 387	178/180 10E	PATCH	2X2	6	SS	1/9/2023	1/9/2023	LD
R - 388	177/179 All Seam	CAP	ALL SEAM	6	SS	1/9/2023	1/9/2023	LD
R - 389	138/187189	T	3X8	6	SS	1/11/2023	1/11/2023	LD
R - 390	138/189 27S	PATCH	2X4	6	SS	1/11/2023	1/11/2023	LD

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 391	187/189/190	T	2X2	6	SS	1/11/2023	1/11/2023	LD
R - 392	187/190/191	T	2X2	6	SS	1/11/2023	1/11/2023	LD
R - 393	138/189127S	PATCH	3X8	6	SS	1/11/2023	1/11/2023	LD
R - 394	187/191/192	T	2X4	6	SS	1/11/2023	1/11/2023	LD
R - 395	189/190 18S	DS-107	2X5	6	SS	1/11/2023	1/11/2023	LD
R - 396	191/192/193	T	2X2	9	BM	1/11/2023	1/11/2023	LD
R - 397	192/193 10E	DS-108	2X5	9	BM	1/11/2023	1/11/2023	LD
R - 398	192/193/194	T	2X2	9	BM	1/11/2023	1/11/2023	LD
R - 399	187/192/193	T	2X2	6	SS	1/11/2023	1/11/2023	LD
R - 400	187/194/195	T	2X2	6	SS	1/11/2023	1/11/2023	LD
R - 401	187/188/195/196	T	2X5	6	SS	1/11/2023	1/11/2023	LD
R - 402	193/194 DES	DS-109	2X5	9	BM	1/11/2023	1/11/2023	LD
R - 403	190/191	PATCH	2X3	6	SS	1/11/2023	1/11/2023	LD
R - 404	188/196/198	T	2X2	6	SS	1/11/2023	1/11/2023	LD
R - 405	195/196/197	T	2X4	9	BM	1/11/2023	1/11/2023	LD
R - 406	196/197/198	T	2X2	9	BM	1/11/2023	1/11/2023	LD
R - 407	188/198/199	T	2X2	6	SS	1/11/2023	1/11/2023	LD
R - 408	188/199/200	T	2X4	6	SS	1/11/2023	1/11/2023	LD
R - 409	199/200/201	T	2X4	9	BM	1/11/2023	1/11/2023	LD
R - 410	199/201 35S	DS-110	2X5	6	BM	1/11/2023	1/11/2023	LD
R - 411	188/200/202	T	2X8	6	SS	1/16/2023	1/16/2023	LD
R - 412	200/201/202	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 413	188/202/203	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 414	202/203 30S	PATCH	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 415	188/203/204	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 416	203/204/205	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 417	188/204/206	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 418	204/205/206	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 419	200/202 10N	DS-111	2X5	6	SS	1/16/2023	1/16/2023	LD
R - 420	202/203 95S	DS-112	2X5	6	SS	1/16/2023	1/16/2023	LD
R - 421	188/206/207	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 422	188/207/208	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 423	188/208/209	T	3X4	6	SS	1/16/2023	1/16/2023	LD
R - 424	188/209/210	T	3X4	6	SS	1/16/2023	1/16/2023	LD
R - 425	188/210/211/226	T	4X15	6	SS	1/20/2023	1/20/2023	LD
R - 426	210/211/212	T	2X6	6	SS	1/16/2023	1/16/2023	LD
R - 427	210/212/213	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 428	206/207	T	2X10	6	SS	1/16/2023	1/16/2023	LD
R - 429	209/213/214	T	2X2	6	SS	1/16/2023	1/16/2023	LD

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 430	209/214/215	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 431	208/209/215	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 432	208/215/217	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 433	207/208/217/218	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 434	209/210/213	T	2X2	6	SS	1/16/2023	1/20/2023	LD
R - 435	215/217 24W	PATCH	2X2	6	SS	1/20/2023	1/20/2023	LD
R - 436	215/217 10W	PATCH	2X2	6	SS	1/20/2023	1/20/2023	LD
R - 437	215/216/217	T	2X2	6	SS	1/20/2023	1/20/2023	LD
R - 438	214/215/216	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 439	207/218/219	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 440	206/207/219	T	4X4	6	SS	1/16/2023	1/16/2023	LD
R - 441	206/219/220	T	2X2	6	SS	1/16/2023	1/16/2023	LD
R - 442	206/220/221	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 443	206/212/222	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 444	206/222/223	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 445	206/223/224	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 446	223/224/225	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 447	204/206 55S	DS-113	2X5	6	SS	1/16/2023	1/16/2023	LD
R - 448	204/205 10E	DS-114	2X5	6	SS	1/16/2023	1/16/2023	LD
R - 449	217/218 78E	DS-115	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 450	215/216 10S	DS-116	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 451	212/213 50E	DS-117	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 452	211/226 95E	DS-118	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 453	227/228 10N	DS-119	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 454	234/235 39E	DS-120	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 455	184/230 8N	DS-121	2X5	9	SA	1/20/2023	1/20/2023	LD
R - 456	188/210/226	T	2X6	6	SA	1/20/2023	1/20/2023	LD
R - 457	186/188/226/227	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 458	185/186/227/229	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 459	184/185/229/230	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 460	184/230/231	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 461	182/231/232	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 462	181/231/234	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 463	180/181/234/235	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 464	178/180/235/236	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 465	226/227/228	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 466	227/228/229	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 467	231/232/233	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 468	232/233/2334	T	2X2	9	BM	1/20/2023	1/20/2023	LD

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 469	182/184/231	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 470	236/231 48W	PATCH	2X4	9	BM	1/20/2023	1/20/2023	LD
R - 471	178/236/237	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 472	176/178/237	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 473	175/176/237/238	T	2X4	6	SA	1/20/2023	1/20/2023	LD
R - 474	173/175/238/239	T	2X4	6	SA	1/20/2023	1/20/2023	LD
R - 475	171/173/239	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 476	171/239/240	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 477	239/240/241	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 478	240/241/243	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 479	170/171/240	T	2X2	6	SA	1/20/2023	1/20/2023	LD
R - 480	240/242/243	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 481	242/243/244	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 482	269/270/240/242	T	2X4	6	SS	1/23/2023	1/23/2023	LD
R - 483	167/169/242/244	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 484	112/167/244	T	2X4	6	SS	1/23/2023	1/23/2023	LD
R - 485	112/244/246	T	2X4	6	SS	1/23/2023	1/23/2023	LD
R - 486	112/246/247	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 487	112/247/248	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 488	112/248/250	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 489	247/248/249	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 490	248/249/251	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 491	248/250/251	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 492	250/251/252	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 493	112/250/252	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 494	112/252 15N	PATCH	2X4	6	SS	1/23/2023	1/23/2023	LD
R - 495	112/252/253	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 496	111/112/253/254	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 497	111/254/255	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 498	110/111/255/256	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 499	110/256/257	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 500	109/110/257	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 501	109/257/359	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 502	109/259/260	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 503	108/109/260	T	2X2	6	SS	1/23/2023	1/23/2023	LD
R - 504	257/258/259	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 505	256/257/258	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 506	244/245/246	T	2X2	9	BM	1/20/2023	1/20/2023	LD
R - 507	243/244/245	T	2X2	9	BM	1/20/2023	1/20/2023	LD

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 508	237/238 52W	DS-122	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 509	238/239 28W	DS-123	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 510	241/243 42W	DS-124	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 511	244/245 10N	DS-125	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 512	246/247 47W	DS-126	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 513	249/251 49W	DS-127	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 514	253/254 37W	DS-128	2X5	9	BM	1/20/2023	1/20/2023	LD
R - 515	111/254 10N	DS-129	2X5	6	SS	1/23/2023	1/23/2023	LD
R - 516	112/247 12W	DS-130	2X5	6	SS	1/23/2023	1/23/2023	LD
R - 517	108/260/261	T	3X6	9	SA	1/23/2023	1/23/2023	LD
R - 518	106/108/261/262	T	3X6	9	SA	1/23/2023	1/23/2023	LD
R - 519	106/262/264	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 520	261/262/263	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 521	262/263/264	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 522	261/262 50E	DS-131	2X5	9	SA	1/23/2023	1/23/2023	LD
R - 523	104/106/264/265	T	2X4	9	SA	1/23/2023	1/23/2023	LD
R - 524	104/265/266	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 525	102/103/266/268	T	2X8	9	SA	1/23/2023	1/23/2023	LD
R - 526	204/205 140W	DS-132	2X5	9	SA	1/23/2023	1/23/2023	LD
R - 527	265/266/267	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 528	266/267/268	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 529	103/268/269	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 530	100/103/269/270	T	2X10	9	SA	1/23/2023	1/23/2023	LD
R - 531	100/270/272	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 532	269/270/271	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 533	270/271/272	T	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 534	267268 25W	DS-133	2X5	9	SA	1/23/2023	1/23/2023	LD
R - 535	265/266 92E	PATCH	2X2	9	SA	1/23/2023	1/23/2023	LD
R - 536	272/273 100E	PATCH	2X2	9	SS	2/10/2023	2/10/2023	LD
R - 537	98/273/274	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 538	98/274/275	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 539	96/98/275	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 540	96/275/276	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 541	273/274 18N	PATCH	2X3	6	SS	2/10/2023	2/10/2023	LD
R - 542	272/273/274	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 543	272/274/275	T	2X4	6	SS	2/10/2023	2/10/2023	LD
R - 544	272/275/276	T	4X8	6	SS	2/10/2023	2/10/2023	LD
R - 545	272/276 7X	PATCH	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 546	274/275 35N	PATCH	3X7	6	SS	2/10/2023	2/10/2023	LD

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 547	274/275 15 R546	PATCH	2X4	6	SS	2/10/2023	2/10/2023	LD
R - 548	275/276 50S	PATCH	2X4	6	SS	2/10/2023	2/10/2023	LD
R - 549	274/275 22S	DS-134	2X5	6	SS	2/11/2023	2/11/2023	LD
R - 550	94/95/277/279	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 551	165/279/280	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 552	165/280/281	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 553	165/281/282	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 554	165/282/283	T	2X2	6	SS	2/10/2023	2/10/2023	LD
R - 555	281/282 67S	PATCH	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 556	281/282 50S	DS-135	2X5	6	SS	2/11/2023	2/11/2023	LD
R - 557	96/276/284	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 558	93/284/285	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 559	276/284 48S	DS-136	2X5	6	SS	2/11/2023	2/11/2023	LD
R - 560	277/284 285	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 561	284/277/278	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 562	277/278/279	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 563	276/284 60S	PATCH	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 564	275/277/565	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 565	95/277/285/565	T	2X2	6	SS	2/11/2023	2/11/2023	LD
R - 566	286/287 30N	DS-137	2X5	6	SS	2/11/2023	2/11/2023	LD
R - 567	165/283/286	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 568	164/165/286/581	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 569	290/291/581	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 570	164/290/581	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 571	163/288/289	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 572	290/291/581	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 573	33/35/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 574	33/36/288	T	2X4	6	SS	2/13/2023	2/13/2023	LD
R - 575	33/35/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 576	158/161/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 577	157/158/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 578	156/157/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 579	155/156/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 580	154/155/288	T	2X2	6	SS	2/13/2023	2/13/2023	LD
R - 581	165/286/291	T	15X22	6	SS	2/15/2023	2/15/2023	LD
R - 582	290/291 89W	PATCH	2X2	6	SS	2/15/2023	2/15/2023	LD
R - 583	291/292 60W	DS-138	2X5	6	SS	2/15/2023	2/15/2023	LD
R - 584	291/292 27W	DS-139	2X5	6	SS	2/15/2023	2/15/2023	LD
R - 585	285/291/292	T	2X2	6	SS	2/15/2023	2/15/2023	LD

Geomembrane Repair Log

Repair Location		Repair Type	Repair Dimensions	Repair Machine	Repair Tech	Repair Date	Vacuum Test Date	Test QC Tech
Repair	Location							
R - 586	288/289 50W	PATCH	2X2	6	SS	2/15/2023	2/15/2023	LD
R - 587	292/293 120E	PATCH	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 588	292/293 137E	DS-140	2X5	6	SS	2/15/2023	2/15/2023	VA
R - 589	293/294 20W	DS-141	2X5	6	SS	2/15/2023	2/15/2023	VA
R - 590	294/295 12W	DS-142	2X5	6	SS	2/15/2023	2/15/2023	VA
R - 591	292/293 91E	PATCH	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 592	292/293 117E	PATCH	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 593	287/292/293	T	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 594	287/293/294	T	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 595	287/294/295	T	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 596	287/295/296	T	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 597	287/297.298	T	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 598	298/299 15E	BOOT	10X10	6	SS	2/15/2023	2/15/2023	VA
R - 599	293/294 137W	PATCH	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 600	293/294 110W	PATCH	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 601	294/295 137E	PATCH	2X4	6	SS	2/15/2023	2/15/2023	VA
R - 602	294/295 57E	PATCH	3X5	6	SS	2/15/2023	2/15/2023	VA
R - 603	295/296 50W	PATCH	2X2	6	SS	2/15/2023	2/15/2023	VA
R - 604	296/298 25E	PATCH	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 605	295/296/297	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 606	296/297/298	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 607	298/299 58E	PATCH	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 608	298/299 78E	PATCH	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 609	299/300 54E	PATCH	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 610	299/301/302	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 611	300/301/302	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 612	303/304 38E	PATCH	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 613	303/304 29E	PATCH	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 614	303/304/305	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 615	304/305/306	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 616	302/303 50W	DS-143	2X5	6	SS	2/20/2023	2/21/2023	VA
R - 617	303/304 19E	DS-144	2X5	6	SS	2/20/2023	2/21/2023	VA
R - 618	305/306 75W	DS-145	2X5	6	SS	2/20/2023	2/21/2023	VA
R - 619	306/307/308/311	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 620	308/310/311	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 621	308/309/310	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 622	306/311312	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 623	306/312/313	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 624	306/313/314	T	2X2	6	SS	2/20/2023	2/21/2023	VA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 625	306/314/315	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 626	306/315/316	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 627	315/316/317	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 628	316/317/318	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 629	306/316/317	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 630	306/318/319	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 631	306/318/320	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 632	306/320/321	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 633	306/321/322	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 634	298/299/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 635	299/301/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 636	301/302/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 637	302/303/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 638	303/305/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 639	305/306/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 640	306/322/323	T	2X2	6	SS	2/20/2023	2/21/2023	VA
R - 641	321/322 15S	PATCH	2X2	6	TV	2/21/2023	2/21/2023	VA
R - 642	322/323 100N	DS-146	2X5	6	SS	2/20/2023	2/21/2023	VA
R - 643	287/298 10N	DS-147	2X5	6	SS	2/20/2023	2/21/2023	VA
R - 644	306/322 10E	DS-148	2X5	6	SS	2/20/2023	2/21/2023	VA
R - 645	303/304	T	2X2	6	TV	2/21/2023	2/21/2023	VA
R - 646	323/324/286/287 12W	PATCH	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 647	283/286/324/325	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 648	324/325/326	T	2X2	9	SP	2/22/2023	2/22/2023	VA
R - 649	325/326/327	T	2X2	9	SP	2/22/2023	2/22/2023	VA
R - 650	282/283/325/327	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 651	281/282/327/328	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 652	280/281/328/329	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 653	323/324 75S	DS-149	2X5	9	SP	2/22/2023	2/22/2023	VA
R - 654	324/325 32S	DS-150	2X5	6	SS	2/27/2023	2/27/2023	VA
R - 655	327/328 126N	DS-151	2X5	9	SP	2/22/2023	2/22/2023	VA
R - 656	279/280/329/330	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 657	278/279/330/331	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 658	331/333/276/278	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 659	330/331/332	T	2X2	6	SS	2/27/2023	2/22/2023	VA
R - 660	331/332/333	T	2X2	6	SS	2/27/2023	2/22/2023	VA
R - 661	333/334/271/272	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 662	271/334/335	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 663	331/333 52S	DS-152	2X5	6	SS	2/27/2023	2/27/2023	VA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 664	334/335/336	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 665	335/336/337	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 666	333/334 150N	DS-153	2X5	6	SS	2/27/2023	2/22/2023	VA
R - 667	330/332 75N	DS-154	2X5	6	SS	2/27/2023	2/22/2023	VA
R - 668	271/269/335	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 669	269/335/337	T	2X2	6	SS	2/27/2023	2/22/2023	VA
R - 670	268/269/337	T	2X2	6	SS	2/27/2023	2/22/2023	VA
R - 671	268/337/338	T	2X2	6	SS	2/27/2023	2/22/2023	VA
R - 672	267/268/338	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 673	267/338/339	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 674	265/276/339	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 675	265/339/340	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 676	339/340 25S	DS-155	2X5	6	SS	2/27/2023	2/27/2023	VA
R - 677	264/265/340/341	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 678	263/264/341/342	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 679	34/341 65S	DS-156	2X5	6	SS	2/27/2023	2/27/2023	VA
R - 680	341/342 85S	DS-157	2X5	6	SS	2/27/2023	2/27/2023	VA
R - 681	261/263/342/343	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 682	261/343/344	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 683	260/261/344	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 684	260/344/345	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 685	260/261/345	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 686	259/345/346	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 687	258/259/346	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 688	258/346/347	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 689	256/258/347	T	2X2	6	SS	2/27/2023	2/27/2023	VA
R - 690	346/347/348	T	2X2	6	SS	2/28/2023	2/27/2023	VA
R - 691	256/258/347/349	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 692	347/348/349	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 693	255/256/349	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 694	349/350 68S	PATCH	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 695	255/256/349/350	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 696	254/255/350	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 697	254/350/351	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 698	349/350 94S	DS-158	2X5	6	SS	3/1/2023	3/1/2023	VA
R - 699	350/351 113S	DS-159	2X5	6	SS	3/1/2023	3/1/2023	VA
R - 700	253/254/351	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 701	348/349 17S	PATCH	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 702	351/352/353	T	2X2	6	SS	3/1/2023	3/1/2023	VA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 703	252/352/353	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 704	252/252/254	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 705	351/352/353	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 706	352/353/354	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 707	352/353 10E	DS-160	2X5	6	SS	3/1/2023	3/1/2023	VA
R - 708	251/252/254	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 709	251/354/355	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 710	251/249/355	T	2X2	6	SS	3/1/2023	3/1/2023	VA
R - 711	247/249/355/356	T	7X10	6	SS	3/1/2023	3/1/2023	VA
R - 712	355/356/357	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 713	351/353 21N	PATCH	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 714	355/356 90S	DS-161	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 715	356/357/358	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 716	246/249/356/358	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 717	245/246/358/359	T	2X6	6	SS	3/1/2023	3/1/2023	KA
R - 718	243/245/359/360	T	2X6	6	SS	3/1/2023	3/1/2023	KA
R - 719	241/243/301/302	T	2X6	6	SS	3/1/2023	3/1/2023	KA
R - 720	329/341/361/362	T	2X4	6	SS	3/1/2023	3/1/2023	KA
R - 721	360/301/302	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 722	358/359 62N	DS-162	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 723	359/360 20S	DS-163	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 724	238/239/362/363	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 725	361/362 13S	PATCH	2X15	6	SS	3/1/2023	3/1/2023	KA
R - 726	360/363/364	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 727	360/362/363	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 728	263/264/237/238	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 729	236/237/364/365	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 730	307/308/366/367	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 731	308/309/367/368	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 732	367/368 30S	PATCH	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 733	310/368/369	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 734	311/369/370	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 735	367/368 52S	DS-164	2X5	6	SS	2/25/2023	2/25/2023	KA
R - 736	368/369 28S	DS-165	2X5	6	SS	2/25/2023	2/25/2023	KA
R - 737	369/370 45S	PATCH	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 738	311/312/370	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 739	312/370/371	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 740	370/371/372	T	2X2	9	SP	2/25/2023	2/25/2023	KA
R - 741	371/372/373	T	2X2	9	SP	2/25/2023	2/25/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 742	312/313/371	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 743	313/371/373	T	2X2	9	SP	2/25/2023	2/25/2023	KA
R - 744	313/314/373	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 745	314/373/374	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 746	314/315/374	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 747	310/311/369	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 748	310/368/369	T	2X2	6	SS	2/25/2023	2/25/2023	KA
R - 749	374/375/376	T	2X2	9	SP	2/25/2023	2/25/2023	KA
R - 750	374/375 40S	DS-166	2X5	9	SP	2/25/2023	2/25/2023	KA
R - 751	366/367 10W	PATCH	2X3	6	SS	2/25/2023	2/25/2023	KA
R - 752	315/366/367	T	2X2	9	SP	2/25/2023	2/25/2023	KA
R - 753	315/317/374/375	T	2X2	9	SP	2/25/2023	2/25/2023	KA
R - 754	312/318/375/377	T	2X2	9	SP	2/25/2023	2/25/2023	KA
R - 755	318/319/377/378	T	2X2	6	SP	2/25/2023	2/25/2023	KA
R - 756	235/236/365/379	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 757	234/235/379/381	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 758	365/379/380	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 759	379/380/381	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 760	233/234/381/382	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 761	365/380 14W	DS-167	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 762	231/233/382/383	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 763	230/231/382/383	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 764	383/384/385	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 765	384/385/386	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 766	229/230/384386	T	2X2	6	SS	2/28/2023	2/28/2023	KA
R - 767	382/383 53S	DS-168	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 768	228/229/286/287	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 769	226/228/387/388	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 770	211/226/388/389	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 771	386/387 77S	DS-169	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 772	388/389K/390	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 773	211/212/389/391	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 774	389/390/391	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 775	389/390 10E	DS-170	2X5	6	SS	3/1/2023	3/1/2023	KA
R - 776	2112/213/391/392	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 777	213/214/392/393	T	2X2	6	SS	3/1/2023	3/1/2023	KA
R - 778	350/360 All Seam	CAP	ALL SEAM	6	SS	3/1/2023	3/1/2023	KA
R - 779	215/216/793/794	T	2X2	6	SS	3/7/2023	3/7/2023	KA
R - 780	216/217/394/395	T	2X2	6	SS	3/2/2023	3/2/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 781	217/218/395/396	T	2X2	6	SS	3/2/2023	3/2/2023	KA
R - 782	218/29/396/397	T	2X2	6	SS	3/2/2023	3/2/2023	KA
R - 783	219/220/397/39	T	2X2	6	SS	3/2/2023	3/2/2023	KA
R - 784	220/221/399/400	T	2X2	6	SS	3/2/2023	3/2/2023	KA
R - 785	221/222/400/401	T	2X2	6	SS	3/2/2023	3/2/2023	KA
R - 786	222/223/401/402	T	2X2	6	SS	3/2/2023	3/2/2023	KA
R - 787	393/394 106N	DS-171	2X5	6	BM	3/7/2023	3/7/2023	KA
R - 788	395/396 18N	DS-172	2X5	6	BM	3/7/2023	3/7/2023	KA
R - 789	396/397/398	T	2X2	6	BM	3/7/2023	3/7/2023	KA
R - 790	397/398/399	T	2X2	6	BM	3/7/2023	3/7/2023	KA
R - 791	222/223/401/402	T	2X2	6	BM	3/7/2023	3/7/2023	KA
R - 792	399/400 106N	DS-173	2X5	6	BM	3/7/2023	3/7/2023	KA
R - 793	401/402 55S	DS-174	2X5	6	BM	3/7/2023	3/7/2023	KA
R - 794	403/404 33S	PATCH	2X2	6	SS	3/9/2023	3/9/2023	KA
R - 795	403/404 50S	PATCH	2X2	6	SS	3/9/2023	3/9/2023	KA
R - 796	403/404 92S	PATCH	2X2	6	SS	3/9/2023	3/9/2023	KA
R - 797	404/405 52S	DS-175	2X5	8	SS	3/10/2023	3/10/2023	KA
R - 798	405/406 30N	DS-176	2X5	8	SS	3/10/2023	3/10/2023	KA
R - 799	405/406/407	T	2X2	8	SS	3/10/2023	3/10/2023	KA
R - 800	406/407 20S	DS-177	2X5	6	SS	3/9/2023	3/9/2023	KA
R - 801	408/409/410	T	2X2	6	SS	3/9/2023	3/9/2023	KA
R - 802	407/408/409	T	2X2	8	SS	3/10/2023	3/10/2023	KA
R - 803	408/409/410	T	2X2	8	SS	3/10/2023	3/10/2023	KA
R - 804	410/411/412	T	2X2	9	OP	3/9/2023	3/9/2023	KA
R - 805	411/412/414	T	2X2	9	OP	3/9/2023	3/9/2023	KA
R - 806	411/413/414	T	2X2	9	OP	3/9/2023	3/9/2023	KA
R - 807	410/411 31N	DS-178	2X5	9	OP	3/9/2023	3/9/2023	KA
R - 808	411/413 27N	DS-179	2X5	9	OP	3/9/2023	3/9/2023	KA
R - 809	413/414 10E	DS-180	2X5	9	OP	3/9/2023	3/9/2023	KA
R - 810	403/404 125S	PATCH	2X2	8	SS	3/10/2023	3/10/2023	KA
R - 811	403/404 150S	PATCH	2X2	8	SS	3/10/2023	3/10/2023	KA
R - 812	411/413 183N	PATCH	2X2	9	OP	3/9/2023	3/9/2023	KA
R - 813	409/410 102N	PATCH	2X2	9	OP	3/9/2023	3/9/2023	KA
R - 814	413/414/416	T	2X2	6	BM	3/11/2023	3/11/2023	KA
R - 815	413/415/416	T	2X2	6	BM	3/11/2023	3/11/2023	KA
R - 816	415/416417	T	2X2	6	BM	3/11/2023	3/11/2023	KA
R - 817	416/417/418	T	2X2	6	BM	3/11/2023	3/11/2023	KA
R - 818	417/418/420	T	2X2	6	BM	3/11/2023	3/11/2023	KA
R - 819	417/419/420	T	2X2	8	SS	3/11/2023	3/11/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 820	413/416 64S	DS-181	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 821	416/418 18S	DS-182	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 822	419/420 10E	DS-183	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 823	419/420/422	T	2X2	8	SS	3/11/2023	3/11/2023	KA
R - 824	419/421/422	T	2X2	8	SS	3/11/2023	3/11/2023	KA
R - 825	421/422/424	T	2X2	8	SS	3/11/2023	3/11/2023	KA
R - 826	421/423/424	T	2X2	8	SS	3/11/2023	3/11/2023	KA
R - 827	420/422 430N	DS-184	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 828	421/423 16N	DS-185	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 829	423/424/425	T	2X2	8	SS	3/11/2023	3/11/2023	KA
R - 830	422/424 100S	DS-186	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 831	424/425 16S	DS-187	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 832	424/425 125N	DS-188	2X5	8	SS	3/11/2023	3/11/2023	KA
R - 833	420/422 280N	PATCH	2X3	6	BM	3/11/2023	3/11/2023	KA
R - 834	420/422 298N	PATCH	1X1	6	BM	3/11/2023	3/11/2023	KA
R - 835	414/416 58S	PATCH	2X2	6	BM	3/11/2023	3/11/2023	KA
R - 836	413/416 13N	PATCH	2X3	6	BM	3/11/2023	3/11/2023	KA
R - 837	826/827/828	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 838	425/426 106S	DS-189	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 839	427/428/429	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 840	426/427 15N	DS-190	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 841	428/429 39S	DS-191	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 842	428/429/430	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 843	429/430/431	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 844	430/431 20N	DS-192	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 845	430/431/432	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 846	431/432/433	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 847	432/433/434	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 848	433/434/435	T	2X2	8	SP	3/15/2023	3/15/2023	KA
R - 849	432/433 45S	DS-193	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 850	433/435 21N	DS-194	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 851	435/436 50S	DS-195	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 852	436/437 87S	DS-196	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 853	436/437 100N	DS-197	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 854	437/438 40N	DS-198	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 855	437/438 76S	DS-199	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 856	438/439 30S	DS-200	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 857	438/439 27N	DS-201	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 858	439/440 33N	DS-202	2X5	8	SP	3/15/2023	3/15/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 859	439/440 52S	DS-203	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 860	440/441 35S	DS-204	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 861	440/441 45N	DS-205	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 862	441/442 45N	DS-206	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 863	441/442 45S	DS-207	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 864	442/443 72S	DS-208	2X5	8	SP	3/15/2023	3/15/2023	KA
R - 865	443/444 487S	DS-209	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 866	444/445 145N	DS-210	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 867	445/446 470S	DS-211	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 868	443/444 397S	PATCH	2X3	8	SS	3/16/2023	3/16/2023	KA
R - 869	446/447 92N	DS-212	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 870	447/448 209S	DS-213	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 871	450/451/452	T	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 872	448/449 423N	DS-214	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 873	449/450 45S	DS-215	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 874	449/450 10S	PATCH	2X3	8	SS	3/16/2023	3/16/2023	KA
R - 875	450/451 279N	DS-216	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 876	451/453/454	T	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 877	451/452/454	T	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 878	451/452 10E	DS-217	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 879	450/452 60N	DS-218	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 880	453/454/455	T	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 881	454/455 98N	PATCH	2X3	8	SS	3/16/2023	3/16/2023	KA
R - 882	454/455 15S	DS-219	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 883	457/458 85S	DS-220	2X5	8	SS	3/16/2023	3/16/2023	KA
R - 884	451/454 80S	PATCH	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 885	459/460/461	T	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 886	460/461/462	T	2X2	8	SS	3/16/2023	3/16/2023	KA
R - 887	141/162/163	T	1X1	6	SS	3/23/2023	3/23/2023	KA
R - 888	463/464 41N	PATCH	2X3	6	SS	3/23/2023	3/23/2023	KA
R - 889	463/467/468	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 890	463/464/468	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 891	464/465/468	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 892	465/466/468	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 893	467/468 14E	DS-221	2X5	6	SS	3/23/2023	3/23/2023	KA
R - 894	468/469 32E	DS-222	2X5	6	SS	3/23/2023	3/23/2023	KA
R - 895	469/470 26E	DS-223	2X5	6	SS	3/23/2023	3/23/2023	KA
R - 896	472/473/474	T	2X4	50	RC	3/23/2023	3/23/2023	KA
R - 897	473/474475	T	2X2	50	RC	3/23/2023	3/23/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 898	473/474 10N	DS-224	2X5	50	RC	3/23/2023	3/23/2023	KA
R - 899	479/480 30W	DS-225	2X5	50	RC	3/23/2023	3/23/2023	KA
R - 900	476/479 48W	DS-226	2X5	50	RC	3/23/2023	3/23/2023	KA
R - 901	481/482 68W	DS-227	2X5	50	RC	3/23/2023	3/23/2023	KA
R - 902	484/485 15W	DS-228	2X5	50	RC	3/23/2023	3/23/2023	KA
R - 903	489/490 25E	DS-229	2X5	50	RC	3/23/2023	3/23/2023	KA
R - 904	141/467/477	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 905	141/142/477	T	1X1	6	SS	3/23/2023	3/23/2023	KA
R - 906	142/143/47/478	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 907	143/144/478	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 908	144/145/478	T	2X4	6	SS	3/23/2023	3/23/2023	KA
R - 909	145/147/478	T	4X8	6	SS	3/23/2023	3/23/2023	KA
R - 910	147/153/478	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 911	477/478/491	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 912	467/477/491	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 913	468/477/491	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 914	468/469/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 915	469/470/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 916	470/471/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 917	471/472/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 918	472/474/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 919	474/475/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 920	475/476/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 921	476/479/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 922	479/480/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 923	480/481/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 924	481/482/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 925	482/483/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 926	483/484/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 927	484/485/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 928	485/486/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 929	486/487/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 930	487/488/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 931	488/489/491	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 932	491/492/493	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 933	492/493/494	T	2X2	50	RC	3/23/2023	3/23/2023	KA
R - 934	147/148/491/492	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 935	148/149/492/494	T	2X2	6	SS	3/23/2023	3/23/2023	KA
R - 936	149/150/494/495	T	2X2	1	SP	3/23/2023	3/23/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 937	150/151/495/496	T	2X2	1	SP	3/23/2023	3/23/2023	KA
R - 938	475/491 10N	DS-230	2X5	10	RC	3/23/2023	3/23/2023	KA
R - 939	492/493 11E	DS-231	2X5	50	MV	3/23/2023	3/23/2023	KA
R - 940	493/494 40N	DS-232	2X5	50	MV	3/23/2023	3/23/2023	KA
R - 941	494/495 244S	DS-233	2X5	50	MV	3/23/2023	3/23/2023	KA
R - 942	151/496/497	T	2X2	1	SP	3/23/2023	3/23/2023	KA
R - 943	496/497 250N	DS-234	2X5	1	SP	3/23/2023	3/23/2023	KA
R - 944	495/496 71S	T	2X2	1	SP	3/23/2023	3/23/2023	KA
R - 945	404/495 53S	T	2X2	1	SP	3/23/2023	3/23/2023	KA
R - 946	497/498/499	T	2X2	50	MV	3/23/2023	3/23/2023	KA
R - 947	497/498 277 S	DS-235	2X5	50	MV	3/23/2023	3/23/2023	KA
R - 948	498/499/500	T	2X2	50	MV	3/23/2023	3/23/2023	KA
R - 949	499/500 21S	DS-236	2X5	50	MV	3/23/2023	3/23/2023	KA
R - 950	152/189/497	T	1X1	1	SP	3/23/2023	3/23/2023	KA
R - 951	189/497/498	T	1X1	1	SP	3/23/2023	3/23/2023	KA
R - 952	189/190/498	T	1X1	1	SP	3/23/2023	3/23/2023	KA
R - 953	190/499/500	T	1X1	1	SP	3/23/2023	3/23/2023	KA
R - 954	190/101/500	T	1X1	1	SP	3/23/2023	3/23/2023	KA
R - 955	199/201/501/502	T	2X2	6	SS	3/27/2023	3/28/2023	KA
R - 956	501/502/503	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 957	502/503/505	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 958	501/503 35N	PATCH	2X2	8	SS	3/27/2023	3/28/2023	KA
R - 959	502/504/505	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 960	504/505/506	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 961	502/503 10N	DS-237	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 962	503/505 40W	DS-238	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 963	504/505 10N	DS-239	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 964	507/508 50N	PATCH	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 965	505/506/507	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 966	506/507/508	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 967	506/508 201W	PATCH	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 968	508/509 35E	DS-240	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 969	509/510 84E	DS-241	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 970	510/511/512	BOOT	10X10	8	SS	3/28/2023	3/28/2023	KA
R - 971	510/512/513	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 972	511/512/514	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 973	512/513/514	T	2X2	8	SS	3/28/2023	3/28/2023	KA
R - 974	510/511 28E	DS-242	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 975	515/516/517	T	2X2	8	SS	3/28/2023	3/28/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 976	513/514 40W	DS-243	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 977	514/515 250E	DS-244	2X5	8	SS	3/28/2023	3/28/2023	KA
R - 978	500/502/504	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 979	500/504/506	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 980	500/506/508	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 981	500/508/509	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 982	500/509/510	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 983	500/510/511	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 984	500/511/514	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 985	500/514/515	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 986	500/515/516	T	2X2	5	BM	3/27/2023	3/27/2023	KA
R - 987	191/193/500/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 988	193/194/502	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 989	194/195/502	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 990	105/107/502	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 991	197/198/502	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 992	198/199/502	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 993	199/201/502	T	1X1	6	SS	3/27/2023	3/27/2023	P
R - 994	201/501/502	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 995	201/202/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 996	202/203/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 997	203/205/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 998	205/206/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 999	206/224/225/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 1000	224/225/501	T	1X1	6	SS	3/27/2023	3/27/2023	KA
R - 1001	402/501/503	T	1X1	6	SS	3/27/2023	3/78/2023	KA
R - 1002	493/494/518	T	4X4	6	SS	3/29/2023	3/30/2023	KA
R - 1003	494/495/5518/519	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1004	495/496/519/521	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1005	518/519/520	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1006	519/520/521	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1007	496/497/521/522	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1008	521/522/523	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1009	497/499/522/524	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1010	522/523/524	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1011	499/500/524/525	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1012	518/519 45S	DS-245	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1013	519/521 32N	DS-246	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1014	521/522 63S	DS-247	2X5	6	SS	3/29/2023	3/30/2023	KA

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1015	500/516/526	T	4X8	6	SS	3/29/2023	3/30/2023	KA
R - 1016	499/500/524/525	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1017	500/525/526	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1018	522/524 53S	DS-248	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1019	524/525 37S	DS-249	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1020	500/525/526	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1021	516/525/527	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1022	516/527/528	T	2X8	6	SS	3/29/2023	3/30/2023	KA
R - 1023	516/527/529	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1024	516/529/530	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1025	500/526 15N	PATCH	4X6	6	SS	3/29/2023	3/30/2023	KA
R - 1026	517/528/529	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1027	529/530	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1028	526/527 20N	DS-250	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1029	527/529 25N	DS-251	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1030	527/529 75N	PATCH	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1031	522/530 100N	DS-252	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1032	493/518/531	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1033	491/493/531/532	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1034	518/531 42S	DS-253	2X5	6	SS	3/29/2023	3/30/2023	KA
R - 1035	491/532/533	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1036	489/491/533	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1037	489/490/533	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1038	490/533/534	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1039	533/534/535	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1040	533/535536	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1041	533/536/537	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1042	533/537/538	T	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1043	518/520 100N	PATCH	2X2	6	SS	3/29/2023	3/30/2023	KA
R - 1044	516/530/539	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1045	538/538/540	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1046	539/540/541	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1047	516/539/541	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1048	516/541/542	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1049	541/542/543	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1050	516/542/544	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1051	542/543/544	T	2X2	10	RC	3/29/2023	3/30/2023	KA
R - 1052	540/541 52N	PATCH	2X4	10	RC	3/29/2023	3/30/2023	KA
R - 1053	516/544/545	T	2X2	8	KK	3/29/2023	3/30/2023	KA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1054	516/545/546	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1055	455/456/457	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1056	539/540 10E	DS-254	2X5	10	RC	3/29/2023	3/30/2023	KA
R - 1057	541/543 204S	DS-255	2X5	10	RC	3/29/2023	3/30/2023	KA
R - 1058	516/546/548	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1059	516/517/548/549	T	2X4	8	KK	3/29/2023	3/30/2023	KA
R - 1060	542/544 29N	DS-256	2X5	10	RC	3/29/2023	3/30/2023	KA
R - 1061	547/548 66S	DS-257	2X5	10	RC	3/29/2023	3/30/2023	KA
R - 1062	546/547/548	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1063	548/549/550	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1064	517/549/551	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1065	517/551/552	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1066	55P 3W	PATCH	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1067	550/551 45S	DS-258	2X5	1	SP	3/29/2023	3/30/2023	KA
R - 1068	516/458	PATCH	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1069	549/550/551	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1070	551/552/553	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1071	552/553/554	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1072	517/552/554	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1073	517/554/555	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1074	55/56/557	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1075	556/557/559	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1076	556/558/559	T	2X2	1	SP	3/29/2023	3/30/2023	KA
R - 1077	555/557 54N	DS-259	2X5	1	SP	3/29/2023	3/30/2023	KA
R - 1078	517/556/558	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1079	517/558/560	T	2X2	8	KK	3/29/2023	3/30/2023	KA
R - 1080	517/554/555	T	2X4	8	KK	3/29/2023	3/30/2023	KA
PHASE 2								
R - 1077	455, 453, 561	Patch	10.5x3x2	50	RP	#########	12/12/2023	SP
R - 1078	453, 451, 561	Patch	22x6x2	50	RP	#########	12/12/2023	SP
R - 1079	446, 445, 561	Patch	5x1.5	50	RP	#########	12/12/2023	SP
R - 1080	445, 444, 561	Patch	3x1.5	50	RP	#########	12/12/2023	SP
R - 1081	442, 443, 561	Patch	3x2	50	RP	#########	12/12/2023	SP
R - 1082	562/561 mid x-seam	DS-260	4x2	50	RP	12/4/2023	12/12/2023	SP
R - 1083	440 - 2' from P562	Patch	2.5x1.5	50	RP	#########	12/12/2023	SP
R - 1084	431, 429, 562	Patch	7x2	50	RP	#########	12/12/2023	SP
R - 1085	562, 567, 568	T	1.5x1	50	RP	12/4/2023	12/12/2023	SP
R - 1086	568/567, 20' from W end	DS-261	5x2	50	RP	12/4/2023	12/12/2023	SP
R - 1087	567, 568, 570	T	1x1	50	RP	12/4/2023	12/12/2023	SP

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1088	569, 568, 571	T	3x2	50	RP	#########	12/12/2023	SP
R - 1089	568, 570, 571	T	1x1	50	RP	12/4/2023	12/12/2023	SP
R - 1090	410, 411, 408, 572, 571	Patch	29x20	50	RP	#########	12/12/2023	SP
R - 1091	575, 403, AT	Patch	13x6x12	50	RP	#########	12/12/2023	SP
R - 1092	575/574, 16' from AT	DS-262	4x2	50	RP	12/4/2023	12/12/2023	SP
R - 1093	572/571, 124' from AT	DS-263	4x2	50	RP	12/4/2023	12/12/2023	SP
R - 1094	561, 562, 577	T	1x1	31	SP	#########	12/12/2023	PL
R - 1095	562, 577, 576	T	2x6	50	SP	#########	12/12/2023	PL
R - 1096	562, 576, 320' to E	BO	2x4	50	SP	#########	12/12/2023	PL
R - 1097	562, 570, 576	T	1x1	50	SP	#########	12/12/2023	PL
R - 1098	576/562, 230' from E	DS-264	2x4	50	SP	#########	12/12/2023	PL
R - 1099	577/569, 10' from W	DS-265	2x4	50	SP	#########	12/12/2023	PL
R - 1100	578/576, 100' from AT	DS-266	2x4	50	SP	#########	12/12/2023	PL
R - 1101	576, 578, 579	T	2x2	50	SP	#########	12/12/2023	PL
R - 1102	579, 576, 577	T	2x2	50	SP	#########	12/12/2023	PL
R - 1103	581/580 mid x-seam	DS-267	2x4	50	SP	#########	12/12/2023	PL
R - 1104	578, 579, 580	T	2x2	50	SP	#########	12/12/2023	PL
R - 1105	579, 580, 581	T	1x1	50	SP	#########	12/12/2023	PL
R - 1106	578/580, 126' from E	DS-268	2x4	50	SP	#########	12/12/2023	PL
R - 1107	582, 583, 580	T	2x2	50	SP	#########	12/12/2023	PL
R - 1108	580, 581, 583	T	1x1	50	SP	#########	12/12/2023	PL
R - 1109	583/580, 60' from W	DS-269	2x4	50	SP	#########	12/12/2023	PL
R - 1110	582/581, 70' from E	DS-270	2x4	50	SP	#########	12/12/2023	PL
R - 1111	582, 584, 585	T	2x2	50	SP	#########	12/12/2023	PL
R - 1112	582, 583, 585	T	2x2	50	SP	#########	12/12/2023	PL
R - 1113	583, 585, 586	T	2x2	50	SP	#########	12/12/2023	PL
R - 1114	582/585, 25' from W	DS-271	2x2	50	SP	#########	12/12/2023	PL
R - 1115	585/586, mid x-seam	DS-272	2x4	50	SP	#########	12/12/2023	PL
R - 1116	587/585, 80' from E	DS-273	2x4	50	SP	#########	12/12/2023	PL
R - 1117	585, 586, 587	T	2x2	50	SP	#########	12/12/2023	PL
R - 1118	585, 586, 588	T	2x2	50	SP	#########	12/12/2023	PL
R - 1119	588/585, 40' from East	DS-274	2x4	50	SP	#########	12/12/2023	PL
R - 1120	584, 585, 587	T	1x1	50	SP	#########	12/12/2023	PL
R - 1121	589, 590, 587	T	2x2	50	SP	#########	12/12/2023	PL
R - 1122	590, 587, 588	T	2x2	50	SP	#########	12/12/2023	PL
R - 1123	590/588, 60' from W	DS-275	2x4	50	SP	#########	12/12/2023	PL
R - 1124	589/587, 20' from W	DS-276	5x2	50	RP	12/9/2023	12/12/2023	PL
R - 1125	582, 584, 591	T	x2, "L" Shap	50	RP	12/9/2023	12/12/2023	PL
R - 1126	584, 587, 591	T	2.5x1	50	RP	12/9/2023	12/12/2023	PL

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1127	592, 590, 589	T	2x2	50	SP	#########	12/12/2023	PL
R - 1128	592, 593, 590	T	2x2	50	SP	#########	12/12/2023	PL
R - 1129	590/592, 70' from W	DS-277	2x4	50	SP	#########	12/12/2023	PL
R - 1130	590/593, from E	DS-278	2x7	50	SP	#########	12/12/2023	PL
R - 1131	592, 594, 595	T	2x2	50	SP	#########	12/12/2023	PL
R - 1132	595, 592, 593	T	2x2	50	SP	#########	12/12/2023	PL
R - 1133	594/592, 50' from R1131	DS-279	2x2	50	SP	#########	12/12/2023	PL
R - 1134	595/593, 14' from R1132	DS-280	2x4	50	SP	#########	12/12/2023	PL
R - 1135	597, 595, 594	T	2x2	50	SP	#########	12/12/2023	PL
R - 1136	597/594, 80' from R1135	DS-281	2x4	50	SP	#########	12/12/2023	PL
R - 1137	596, 597, 594	T	2x2	50	SP	#########	12/12/2023	PL
R - 1138	597/595, 15' from R1136	DS-282	2x4	50	SP	#########	12/12/2023	PL
R - 1139	594, 595 mid x-seam	Rip	2x4	50	SP	#########	12/12/2023	PL
R - 1140	598, 599, 596	T	3x2	50	RP	12/9/2023	12/12/2023	PL
R - 1141	596, 597, 599	T	2x2	50	SP	12/9/2023	12/12/2023	PL
R - 1142	597, 599, 600	T	2x2	50	SP	#########	12/12/2023	PL
R - 1143	599/597, 75' from R1142	DS-283	2x4	50	SP	#########	12/12/2023	PL
R - 1144	599/596, 65' from R1141	DS-284	2x4	50	SP	#########	12/12/2023	PL
R - 1145	598, 601, 37' from E side	BO	2x2	50	SP	#########	12/12/2023	PL
R - 1146	598, 599, 601	T	2x1	50	RP	12/9/2023	12/12/2023	PL
R - 1147	599, 601, 24' from R1146	BO	2x2	50	SP	#########	12/12/2023	PL
R - 1148	599/601, 350' from R114	DS-285	2x4	50	SP	#########	12/12/2023	PL
R - 1149	599, 601, 602	T	2x2	50	SP	#########	12/12/2023	PL
R - 1150	599, 600, 602	T	2x4	50	SP	#########	12/12/2023	PL
R - 1151	602/601, mid x-seam	DS-286	2x4	50	SP	#########	12/12/2023	PL
R - 1152	601, 602, 604	T	1x1	50	SP	#########	12/12/2023	PL
R - 1153	601, 603, 604	T	2x2	50	SP	#########	12/12/2023	PL
R - 1154	601/603, 90' from 1153	DS-287	2x4	50	SP	#########	12/12/2023	PL
R - 1155	603, 605, 606	T	2x2	50	SP	#########	12/12/2023	PL
R - 1156	606, 604, 603	T	2x2	50	SP	#########	12/12/2023	PL
R - 1157	599/598, mid x-seam	DS-288	4x2.5	50	RP	12/9/2023	12/12/2023	PL
R - 1158	604/606, 40' from E	DS-289	2x4	50	SP	#########	12/12/2023	PL
R - 1159	605, 606, 608	T	2x2	50	SP	#########	12/12/2023	PL
R - 1160	607, 608, 605	T	2x2	50	SP	#########	12/12/2023	PL
R - 1161	606/608, 10' from R1159	DS-290	2x4	50	SP	#########	12/12/2023	PL
R - 1162	611, 609, 610	T	2x2	50	SP	#########	12/12/2023	PL
R - 1163	607, 609, 610	T	2x2	50	SP	#########	12/12/2023	PL
R - 1164	607, 608, 610	T	2x2	50	SP	#########	12/12/2023	PL
R - 1165	608/610, 55' from R1164	DS-291	2x4	50	SP	#########	12/12/2023	PL

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1166	610/611, 150' from R116	DS-292	2x4	50	SP	#########	12/12/2023	PL
R - 1167	611/612, 50' from E	DS-293	2x4	50	SP	#########	12/12/2023	PL
R - 1169	611/612, 550' from E	DS-294	2x4	50	SP	#########	12/12/2023	PL
R - 1170	612/613, 30' from E	DS-295	2x4	50	SP	#########	12/12/2023	PL
R - 1171	612/613, 535' from E	DS-296	2x4	50	SP	#########	12/12/2023	PL
R - 1129	400/609	DS-297	2x4	50	RP	12/9/2023	12/12/2023	PL
R - 1172	579, 579-B, 615	T	2x5	50	RP	12/9/2023	12/12/2023	PL
R - 1173	579, 581, 615	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1174	613, 616	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1175	581, 614, 615	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1176	581, 582, 614	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1177	582, 591, 614	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1178	582, 584, 591	T	2x3	50	RP	12/9/2023	12/12/2023	PL
R - 1179	584, 587, 591	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1180	591, 597	Tear	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1181	587, 589	Rip	2x3	50	RP	12/9/2023	12/12/2023	PL
R - 1182	399, 609	Rip	2x4	50	RP	12/9/2023	12/12/2023	PL
R - 1183	562, 576	T	2x2	50	RP	12/9/2023	12/12/2023	PL
R - 1184	616, 613, 58' N of SEOS	BO	2x4	50	RP	12/9/2023	12/12/2023	TC
R - 1185	617, 618, 164' N of SEOS	DS-298	2x4	50	RP	12/9/2023	12/12/2023	TC
R - 1186	616, 617, 353' N of SEOS	DS-299	2x4	50	RP	12/9/2023	12/12/2023	TC
R - 1187	617/618, 26' S of NEOS	DS-301	2x5	50	RP	12/9/2023	12/12/2023	TC
R - 1188	612/613 - entire seam	air of DS	ext weld 668	50	RP	#########	12/12/2023	TC
R - 1189	610/611 - entire seam	air of DS	ext weld 701	90	SP	#########	12/12/2023	TC
R - 1190	616/617 - entire seam	air of DS	ext weld 685	90	SP	#########	12/12/2023	TC
R - 1191	620/621 - entire seam	air of DS	ext weld 687	50	RP	#########	12/12/2023	TC
R - 1192	619, 580, 578	T	2x2	50	RP	#########	12/22/2023	SS
R - 1193	580, 583, 619, 620	T	2x2	50	RP	#########	12/22/2023	SS
R - 1194	583, 586, 620, 621	T	2x2	50	RP	#########	12/22/2023	SS
R - 1195	620/621, 20' from AT	DS302	5x2	50	RP	#########	12/22/2023	SS
R - 1196	622/623, 35' from AT	DS303	5x2	50	RP	#########	12/22/2023	SS
R - 1197	586, 580, 621, 622	T	2x2	50	RP	#########	12/22/2023	SS
R - 1198	588, 590, 622, 623	T	2x2	50	RP	#########	12/22/2023	SS
R - 1199	590, 593, 623, 624	T	2x2	50	RP	#########	12/22/2023	SS
R - 1200	593, 595, 624, 625	T	2x2	50	RP	#########	12/22/2023	SS
R - 1201	595, 597, 625, 626	T	2x2	50	RP	#########	12/22/2023	SS
R - 1202	597, 600, 626, 627	T	2x2	50	RP	#########	12/22/2023	SS
R - 1203	600, 602, 627, 628	T	2x2	50	RP	#########	12/22/2023	SS
R - 1204	602, 604, 628, 629	T	2x2	50	RP	#########	12/22/2023	SS

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1205	604, 606, 629, 630	T	2x2	50	RP	#########	12/22/2023	SS
R - 1206	606, 608, 630, 631	T	2x2	50	RP	#########	12/22/2023	SS
R - 1207	608, 610, 631, 632	T	2x2	50	RP	#########	12/22/2023	SS
R - 1208	631, 632, 633	T	2x2	50	RP	#########	12/22/2023	SS
R - 1209	610, 635, 634	T	2x2	50	RP	#########	12/22/2023	SS
R - 1210	610, 635	T	2x2	50	RP	#########	12/22/2023	SS
R - 1211	634, 633, 632	T	2x2	50	RP	#########	12/22/2023	SS
R - 1212	610, 635, 611	T	3x2	50	RP	#########	12/22/2023	SS
R - 1213	611, 612, 635, 636	T	4x2.5	50	RP	#########	12/22/2023	SS
R - 1214	635, 634, 636	T	2x1	50	RP	#########	12/22/2023	SS
R - 1215	634, 634, 637	T	2x2	50	RP	#########	12/22/2023	SS
R - 1216	613, 636	T	3x2	50	RP	#########	12/22/2023	SS
R - 1217	613, 638, 636	T	3x1.5	50	RP	#########	12/22/2023	SS
R - 1218	636, 638, 637	T	2x2	50	RP	#########	12/22/2023	SS
R - 1219	637, 638, 639	T	4x3x2	50	RP	#########	12/22/2023	SS
R - 1220	638, 639, 640	T	2x1	50	RP	#########	12/22/2023	SS
R - 1221	616, 638, 640	T	1.5x2.5	50	RP	#########	12/22/2023	SS
R - 1222	638, 616, 613	T	4x2	50	RP	#########	12/22/2023	SS
R - 1223	616, 617, 640	T	4x2.5	50	RP	#########	12/22/2023	SS
R - 1224	617, 640, 641	T	1.5x1.5	50	RP	#########	12/22/2023	SS
R - 1225	617, 641, 618	T	3x2	50	RP	#########	12/22/2023	SS
R - 1226	618, 641, 642	T	1.5x1.5	50	RP	#########	12/22/2023	SS
R - 1227	630/631, 15' from R1206	DS-304	2x5	50	RP	#########	12/22/2023	SS
R - 1228	632/633, mid x-seam	DS-305	2x2	50	RP	#########	12/22/2023	SS
R - 1229	634/635, mid x-seam	DS-306	5x3	50	RP	#########	12/22/2023	SS
R - 1230	636, 638, 27' from R1217	BO	3x2	50	RP	#########	12/22/2023	SS
R - 1231	640/641, 20' from R1224	DS-307	5x2	50	RP	#########	12/22/2023	SS
R - 1232	602/628, mid x-seam	DS-308	5x2	50	RP	#########	12/22/2023	SS
R - 1233	580, 619, mid x-seam	BO	2x2	50	SP	#########	12/22/2023	SS
R - 1234	647/648, 46' from TI	DS-309	5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1235	650/651, 26' from TI	DS-310	5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1236	657/658, 26' from NE	DS-311	5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1237	658/659, 128' from SE	DS-312	5x2.5	90	CH	1/2/2024	1/2/2024	SS
R - 1238	651, 652, 563	T	2x2	1	SP	1/2/2024	1/2/2024	SS
R - 1239	652, 653, 654	T	2x1	1	SP	1/2/2024	1/2/2024	SS
R - 1240	655, 656, 657	T	1x1	1	SP	1/2/2024	1/2/2024	SS
R - 1241	656, 657, 658	T	2x1	1	SP	1/2/2024	1/2/2024	SS
R - 1242	658, 659, 84' from SE	BO	7x2	1	SP	1/2/2024	1/2/2024	SS
R - 1243	659/660, 146' from TI	DS-313	6x2	90	CH	1/2/2024	1/2/2024	SS

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Repair Log

Repair Location		Repair Type	Repair Dimensions	Repair Machine	Repair Tech	Repair Date	Vacuum Test Date	Test QC Tech
Repair	Location							
R - 1244	660/661, 70' from TI	DS-314	5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1245	661, 662, 663	T	1x2	50	RP	1/2/2024	1/2/2024	SS
R - 1246	661, 662, 70' N of R1245	BO	26x2	50	RP	1/2/2024	1/2/2024	SS
R - 1247	662, 663, 664	T	2x1	50	RP	1/2/2024	1/2/2024	SS
R - 1248	661, 662, 96' N of 2145	BO	covered by R1246					
R - 1249	664/665, 44' from TI	DS-315	6x2	90	CH	1/2/2024	1/2/2024	SS
R - 1250	665/667, 70' from TI	DS-316	4x2	90	CH	1/2/2024	1/2/2024	SS
R - 1251	664, 665, 666	T	1x2	50	RP	1/2/2024	1/2/2024	SS
R - 1252	665, 666, 667	T	3x2	50	RP	1/2/2024	1/2/2024	SS
R - 1253	667, 668, 669	T	1x1	50	RP	1/2/2024	1/2/2024	SS
R - 1254	668, 669, 670	T	2x1	50	RP	1/2/2024	1/2/2024	SS
R - 1255	667/669, 23' from R1253	Ds-317	5x1.5	90	CH	1/2/2024	1/2/2024	SS
R - 1256	670, 671, 672	T	2x1	50	RP	1/2/2024	1/2/2024	SS
R - 1257	670/672, 36' from R1256	DS-318	5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1258	618, 390, 644	T	8" bead	50	RP	1/2/2024	1/2/2024	SS
R - 1259	618, 644, 64' from W	BO	next 2x1	50	RP	1/2/2024	1/2/2024	SS
R - 1260	644	BO	1.5x1.5	50	RP	1/2/2024	1/2/2024	SS
R - 1261	618, 644, 673	T	3x2	50	RP	1/2/2024	1/2/2024	SS
			2x2	90	CH	1/2/2024	1/2/2024	
R - 1262	618, 673, 643	T	2X2	50	RP	1/2/2024	1/2/2024	SS
R - 1263	618, 673, 643	T	2x2	50	RP	1/2/2024	1/2/2024	SS
R - 1264	673, 672, 670	T	2x2	50	RP	1/2/2024	1/2/2024	SS
R - 1265	673, 669, 670	T	4x2	50	RP	1/2/2024	1/2/2024	SS
R - 1266	673, 667, 669	T	2x1	50	RP	1/2/2024	1/2/2024	SS
R - 1267	673, 666, 667	WS	2.5x2.5	50	RP	1/2/2024	1/2/2024	SS
R - 1268	673, 664, 666	T	2x1	50	RP	1/2/2024	1/2/2024	SS
R - 1269	673, 663, 664	T	3.5x2	50	RP	1/2/2024	1/2/2024	SS
R - 1270	673, 661, 663	T	2x2	50	RP	1/2/2024	1/2/2024	SS
R - 1271	673, 660, 661	T	5x2.5	50	RP	1/2/2024	1/2/2024	SS
R - 1272	673, 644, 659, 660	T	2.5x2.5	50	RP	1/2/2024	1/2/2024	SS
			3x2			1/2/2024	1/2/2024	
R - 1273	644, 658, 659	T	2x1	1	SP	1/2/2024	1/2/2024	SS
R - 1274	644, 657, 658	T	2x2	50	RP	1/2/2024	1/2/2024	SS
R - 1275	644, 655, 657	T	1.5x1.5	50	RP	1/2/2024	1/2/2024	SS
R - 1276	644, 654, 655	T	2x2	50	RP	1/2/2024	1/2/2024	SS
R - 1277	644, 653, 654	T	1x2	50	RP	1/2/2024	1/2/2024	SS
R - 1278	644, 651, 653	T	1x2	50	RP	1/2/2024	1/2/2024	SS
R - 1279	644, 650, 651	T	2x8x0.5	50	RP	1/2/2024	1/2/2024	SS
R - 1280	644, 649, 650	T	2x1	50	RP	1/2/2024	1/2/2024	SS

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1281	644, 648, 649	T	2x2	50	RP	1/2/2024	1/2/2024	SS
R - 1282	644, 647, 648	T	3x2	50	RP	1/2/2024	1/2/2024	SS
R - 1283	644, 645, 649, 647	T-cap	24x6x2	50	RP	1/2/2024	1/2/2024	SS
R - 1284	617, 392, 391	T	1' dia	50	RP	1/2/2024	1/2/2024	SS
R - 1285	391, 618, 4' from W	Rip	11x3x1	50	RP	1/2/2024	1/2/2024	SS
R - 1286	388, 387, 644, 645	T	9x9x0.5	1	SP	1/2/2024	1/2/2024	SS
R - 1287	386, 385, 645, 646	T	1.5' dia	1	SP	1/2/2024	1/2/2024	SS
R - 1288	646, 647, 383	T	1x2x2	1	SP	1/2/2024	1/2/2024	SS
R - 1289	381, 647, 648	T	x1x1 patche	1	SP	1/2/2024	1/2/2024	SS
R - 1290	358, 651, 652	T	2.5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1291	358, 357, 355, 652	T	5.5x0.5	90	CH	1/2/2024	1/2/2024	SS
R - 1292	355, 652, 654	T	2x2	90	CH	1/2/2024	1/2/2024	SS
R - 1293	355, 354, 654	T	2x0.5	90	CH	1/2/2024	1/2/2024	SS
R - 1294	354, 353, 654, 655	T	5.5x2	90	CH	1/2/2024	1/2/2024	SS
R - 1295	655, 353, 351	T	0.5x0.5	90	CH	1/2/2024	1/2/2024	SS
R - 1296	658, 659, 349	T	1.5' dia	90	CH	1/2/2024	1/2/2024	SS
R - 1297	349, 348, 659	T	1' dia	90	CH	1/2/2024	1/2/2024	SS
R - 1298	346, 345, 660	T	1x1	90	CH	1/2/2024	1/2/2024	SS
R - 1299	342, 664, 668	T	2.5x1.5	90	CH	1/2/2024	1/2/2024	SS
R - 1300	667, 1' from P 340	Tear	2x1	90	CH	1/2/2024	1/2/2024	SS
R - 1301	339/668, 10' from W	DS-319	4X2	90	CH	1/2/2024	1/2/2024	SS
R - 1302	381/648, 7' from E	DS-320	4X2	1	SP	1/2/2024	1/2/2024	SS
R - 1303	672, 675, entire seam		53' ext	5	SP	1/13/2024	1/13/2024	SS
R - 1304	674, 673, entire seam		93' ext	5	SP	1/13/2024	1/13/2024	SS
R - 1305	674, 671, entire seam		192 ext	5	SP	1/13/2024	1/13/2024	SS
R - 1306	676, 675, 9' from S. end	BOI	6" bead	5	SP	1/13/2024	1/13/2024	SS
R - 1307	674, 675, 676	T	1x1	5	SP	1/20/2024	1/20/2024	SS
R - 1308	676/677, 20' from R1307	DS-321	5x2	5	SP	1/20/2024	1/20/2024	SS
R - 1309	677/676, 17' from R1310	DS-322	5x2	5	SP	1/19/2024	1/20/2024	SS
R - 1310	676, 677, 678	T	1x1	5	SP	1/19/2024	1/20/2024	SS
R - 1311	679,678, 120' from S. end	DS-323	5x1	5	SP	1/19/2024	1/20/2024	SS
R - 1312	679, 678, 153' from S. en	T	2x1	5	SP	1/19/2024	1/20/2024	SS
R - 1313	680/679, 40' from TI	BO	-- Passed Air Test --					
R - 1314	679, 680, 681	BO	-- Passed Air Test --					
R - 1315	336, 674, 676	DS-324	5x2	50	RP	1/19/2024	1/20/2024	SS
R - 1316	333, 677, 679	T	6x2	50	RP	1/20/2024	1/20/2024	SS
R - 1317	673, 643, 672, 675	T	4x2.5	50	RP	1/13/2024	1/13/2024	SS
R - 1318	333, 677, 679	T	7x4	50	RP	1/13/2024	1/13/2024	SS
R - 1319	673, 643, 672, 675	T	5x2	5	SP	1/13/2024	1/13/2024	SS

GCERG - Site F Landfill
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Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1320	676, 678, 643	T	1.5x1.5	5	SP	1/13/2024	1/13/2024	SS
R - 1321	679, 681, 643	T	1.5x1.5	50	RP	1/13/2024	1/13/2024	SS
R - 1322	682/681, 7' from R1313	DS-325	5X2	50	RP	1/20/2024	1/20/2024	SS
R - 1323	680, 681, 682	T	2X2	50	RP	1/18/2024	1/18/2024	SS
R - 1324	682/684, 100' from SE	DS-326	5X2	50	RP	1/18/2024	1/18/2024	SS
R - 1325	688/686, 50' from TI	DS-327	4X2	50	RP	1/18/2024	1/18/2024	SS
R - 1326	682, 683, 684	T	1X1	50	RP	1/18/2024	1/18/2024	SS
R - 1327	683, 684, 685	T	1X1	50	RP	1/18/2024	1/18/2024	SS
R - 1328	685, 686, 687	T	2X2	50	RP	1/18/2024	1/18/2024	SS
R - 1329	686, 687, 688	T	2X2	50	RP	1/18/2024	1/18/2024	SS
R - 1330	688, 689, 690	T	2X2	50	RP	1/18/2024	1/18/2024	SS
R - 1331	690/688, 10' from 1330	DS-328	5X5	50	RP	1/20/2024	1/20/2024	SS
R - 1332	691, 692, 693	T	3X2	50	RP	1/20/2024	1/20/2024	SS
R - 1333	691, 689, 287' from 1332	S-329, B	DS329, 4X1	50	RP	1/19/2024	1/20/2024	SS
R - 1334	692, 693, 694	T	3X2	50	RP	1/20/2024	1/20/2024	SS
R - 1335	692/693, mid x-seam	DS-330	5X2	50	RP	1/20/2024	1/20/2024	SS
R - 1336	694/692, 27' from TI	DS-331	4X2	50	RP	1/19/2024	1/20/2024	SS
R - 1337	679, 681, 643	T	1X1	50	RP	1/13/2024	1/20/2024	SS
R - 1338	694, 695, 696	T	2X2	50	RP	1/20/2024	1/20/2024	SS
R - 1339	65, 696, 697	T	2X2	50	RP	1/20/2024	1/20/2024	SS
R - 1340	697, 698, 699	T	2X2	50	RP	1/20/2024	1/20/2024	SS
R - 1341	698, 699, 700	T	2X4	50	RP	1/20/2024	1/20/2024	SS
R - 1342	695/694, 40' from R1338	DS-332	2X11	5	RP	1/20/2024	1/20/2024	SS
R - 1343	697/695, 70' from R1339	DS-333	4X2	50	RP	1/20/2024	1/20/2024	SS
R - 1344	701/700, 22' fromTI	DS-334	5X2	90	MC	1/19/2024	1/20/2024	SS
R - 1345	702/701, 30' from TI	DS-335	4X2	90	MC	1/19/2024	1/20/2024	SS
R - 1346	682, 680, 40' from TI	BO	7X2	50	RP	1/19/2024	1/20/2024	SS
R - 1347	643, 700, 701	T	2X1	5	MV	1/18/2024	1/20/2024	SS
R - 1348	643, 618, 50' from W	BO	2X2	50	RP	1/18/2024	1/20/2024	SS
R - 1349	643, 618, 642	T	2X2	50	RP	1/18/2024	1/20/2024	SS
R - 1350	643, 642, 66' from W	BO	1X10	50	RP	1/18/2024	1/20/2024	SS
R - 1351	703, 704, 46' from TI	WS	1.5x2.5	50	RP	1/19/2024	1/20/2024	SS
R - 1352	704/705, 10' from TI	DS-336	5X2	50	RP	1/19/2024	1/20/2024	SS
R - 1353	321/692, 6' from W	DS-337	4X2	50	RP	1/19/2024	1/20/2024	SS
R - 1354	378/701, 15' from W	DS-338	5X2	50	RP	1/19/2024	1/20/2024	SS
R - 1355	709/708, 102' from W	DS-339	5x2	90	RP	2/7/2024	2/7/2024	MA
R - 1356	708/577, mid x-seam	DS-340	4.5x2	90	RP	2/7/2024	2/7/2024	MA
R - 1357	710, 711, 712	T	2x2	90	RP	2/13/2024	2/13/2024	MA
R - 1358	711, 712, 713	T	2x2	90	RP	2/13/2024	2/13/2024	MA

Geomembrane Repair Log

Repair Location		Repair	Repair	Repair	Repair		Vacuum Test	Test QC
Repair	Location	Type	Dimensions	Machine	Tech	Repair Date	Date	Tech
R - 1359	713/711, 25' from R1358	DS-341	5x2	90	RP	2/13/2024	2/13/2024	MA
R - 1360	714/713, 75' from E end	DS-342	5x2	90	RP	2/13/2024	2/13/2024	MA
R - 1361	707, 555, 554	T	10x4	90	RP	2/7/2024	2/7/2024	MA
R - 1362	709, 710, 554	T	2x3	90	RP	2/7/2024	2/7/2024	MA
R - 1363	710, 712, 553	T	8x7	90	RP	2/8/24	2/13/2024	MA
R - 1364	712, 713, 550	T	3x2	90	RP	2/8/24	2/13/2024	MA
R - 1365	715/714, 25' from W end	DS-343	5x2	50	RP	2/13/2024	2/13/2024	MA
R - 1366	716/715, 50' from W end	DS344	5x2	50	RP	2/13/2024	2/13/2024	MA
R - 1367	718/719, 60' from W end	DS-345	6x2	50	RP	2/13/2024	2/13/2024	MA
R - 1368	718, 717, 187' from W en	BO	4x3x2	90	RP	2/9/2024	2/13/2024	MA
R - 1369	720, 718, 142' from E end	WS	3x2	90	RP	2/9/2024	2/13/2024	MA
R - 1370	721/720, 20' from W end	DS-346	5x2	50	RP	2/13/2024	2/13/2024	MA
R - 1371	721, 720, 191' from W en	WS	4.5x2	90	RP	2/9/2024	2/13/2024	MA
R - 1372	723/722, 40' from E end	DS-347	5x2	50	RP	2/13/2024	2/13/2024	MA
R - 1373	723, 722, 127' from E end	BO	2x1.5	90	RP	2/9/2024	2/13/2024	MA
R - 1374	722, 721, 135' from E end	BO	Bead-10'	90	RP	2/9/2024	2/13/2024	MA
R - 1375	724/723, 245' from E end	DS-348	5x2	90	MV	2/13/2024	2/13/2024	MA
R - 1376	725, 726, 727	T	1x2	50	RP	2/14/2024	2/19/2024	MA
R - 1377	725, 727, 728	T	2x2	50	RP	2/14/2024	2/19/2024	MA
R - 1378	725, 728, 729	T	1.5x1.5	50	RP	2/14/2024	2/19/2024	MA
R - 1379	725, 729, 730	T	3x2	90	MV	2/13/2024	2/19/2024	MA
R - 1380	725, 730, 731	T	2x2	90	MV	2/13/2024	2/19/2024	MA
R - 1381	725, 731, 732	T	1x1	50	RP	2/14/2024	2/19/2024	MA
R - 1382	725, 732, 733	T	1x1	50	RP	2/14/2024	2/19/2024	MA
R - 1383	725, 733, 734	T	2x2	50	RP	2/14/2024	2/19/2024	MA
R - 1384	455, 710, 711	T	2x2	50	RP	2/13/2024	2/19/2024	MA
R - 1386	455/717, 16' from N tee	DS-349	tie-in x-seam	50	RP	2/13/2024	2/19/2024	MA
R - 1387	462/730, from S end	DS-350	5x2.5	90	MV	2/13/2024	2/19/2024	MA
R - 1385	726, 735, 736	T	3x2	90	MV	2/14/2024	2/19/2024	MA
R - 1387	736, 726, 725	T	2x1	90	MV	2/14/2024	2/19/2024	MA
R - 1388	737/736, 25' from W end	DS-351	5X2	90	MV	2/14/2024	2/19/2024	MA
R - 1389	735, 736, 737	T	2x1	90	MV	2/14/2024	2/19/2024	MA
R - 1390	724, 725, 736	T	2x1	90	MV	2/14/2024	2/19/2024	MA
R - 1391	728, 729, 740	T	2x2	50	RP	2/16/2024	2/19/2024	MA
R - 1392	739, 740, 741	T	2x2	50	RP	2/16/2024	2/19/2024	MA
R - 1393	740/738, 20' from R1391	DS-352	5x2	50	RP	2/16/2024	2/19/2024	MA
R - 1394	741/739, 20' from R1392	DS-353	5x2	50	RP	2/16/2024	2/19/2024	MA
R - 1395	742, 743, 744	T	2x2	50	RP	2/16/2024	2/19/2024	MA
R - 1396	743, 744, 745	T	2x2	50	RP	2/16/2024	2/19/2024	MA

GCERG - Site F Landfill
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Geomembrane Repair Log

Repair Location		Repair Type	Repair Dimensions	Repair Machine	Repair Tech	Repair Date	Vacuum Test Date	Test QC Tech
Repair	Location							
R - 1397	743/742, 28' from R1395	DS-354	5x2	50	RP	2/16/2024	2/19/2024	MA
R - 1398	749/748, 17' from AT	DS-355	4x2	50	RP	2/16/2024	2/19/2024	MA
R - 1399	756/755, 25' from AT	DS-356	5x2	50	RP	2/16/2024	2/19/2024	MA
R - 1400	714, 715, 738	T	3x2	90	MV	2/15/2024	2/19/2024	MA
R - 1401	715, 716, 738	T	3x2	90	MV	2/15/2024	2/19/2024	MA
R - 1402	716, 717, 738	T	2x1.5	90	MC	2/15/2024	2/19/2024	MA
R - 1403	717, 718, 719	T	2x2	90	MC	2/15/2024	2/19/2024	MA
R - 1404	717, 719, 738	T	4x2	90	MC	2/15/2024	2/19/2024	MA
R - 1405	718, 719, 720	T	2x2	50	RP	2/14/2024	2/19/2024	MA
R - 1406	719, 720, 738	T	1x1	90	MC	2/15/2024	2/19/2024	MA
R - 1407	720, 721, 738	T	2x1	50	RP	2/15/2024	2/19/2024	MA
R - 1408	721, 722, 738	T	1x1	50	RP	2/15/2024	2/19/2024	MA
R - 1409	722, 723, 738	T	1x1	50	RP	2/15/2024	2/19/2024	MA
R - 1410	723, 724, 738	T	3x2	50	RP	2/15/2024	2/19/2024	MA
R - 1411	725, 736, 738	T	1x1	50	RP	2/15/2024	2/19/2024	MA
R - 1412	736, 737, 738	T	2X1	50	RP	2/15/2024	2/19/2024	MA
R - 1413	738/736, 5' from R1411	DS-357	5x2	50	RP	2/16/2024	2/19/2024	MA
R - 1414	738/715, mid-x	DS-358	5x2	90	MC	2/16/2024	2/19/2024	MA
R - 1415	740, 741, 543, 541	T	10x6	50	RP	2/16/2024	2/19/2024	MA
R - 1416	742, 744, 540, 530	T	4x3	50	RP	2/16/2024	2/19/2024	MA
R - 1417	745, 746, 529, 527	T	7x4	50	RP	2/16/2024	2/19/2024	MA
R - 1418	543/740, mid x-seam p54	DS-359	4x2	50	RP	2/16/2024	2/19/2024	MA
R - 1419	746, 747, 527, 528	T	1x1	50	RP	2/16/2024	2/19/2024	MA
R - 1420	747, 748, 528, 525	T	3x2	50	RP	2/16/2024	2/19/2024	MA
R - 1421	788, 749, 525, 524	T	2x1	50	RP	2/16/2024	2/19/2024	MA
R - 1422	524 (749) rip in 524	rip	3x1.5	50	RP	2/16/2024	2/19/2024	MA
R - 1423	749, 750, 524, 523	T	5x2	50	RP	2/16/2024	2/19/2024	MA
R - 1424	523 (in pavel)	rip	4x3	90	MV	2/16/2024	2/19/2024	MA
R - 1425	750, 751, 3' from 521	rip	2x1	90	MV	2/16/2024	2/19/2024	MA
R - 1426	751, 752, 521, 520	T	3.5x2.5	90	MV	2/16/2024	2/19/2024	MA
R - 1427	752, 753, 520, 518	T	1'-dia	90	MV	2/16/2024	2/19/2024	MA
R - 1428	753, 754, 518, 531	T	1x1	90	MV	2/16/2024	2/19/2024	MA
R - 1429	754, 755, 531, 532	T	1' dia	90	MV	2/16/2024	2/19/2024	MA
R - 1430	755, 756, 532, 533	T	2x1	90	MV	2/16/2024	2/19/2024	MA
R - 1431	523/750, mid x-seam	DS-360	4X2	90	MV	2/16/2024	2/19/2024	MA
R - 1432	756, 757, 5' from TI	BO	3x2	90	MV	2/16/2024	2/19/2024	MA
R - 1433	737, 538	RIP	8x4	90	MV	2/16/2024	2/19/2024	MA

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
1	11-Jul 2022	09:30	32	LD	82°	7	850°	S/S	83	84	85	82	84	86	98	92	P
2	11-Jul 2021	10:00	33	SS	82°	7	850°	S/S	85	83	87	87	84	82	94	92	P
3	11-Jul 2021	12:40	32	LD	82°	7	850°	S/S	84	85	82	82	86	80	92	90	P
4	11-Jul 2021	12:45	33	SS	82°	7	850°	S/S	82	80	83	83	80	78	88	87	P
5	11-Jul 2021	12:30	7	KC	97°		260°	T/T	87	85	88	Extrusion Weld			93	95	P
6	11-Jul 2021	14:15	9	SS	97°		260°	T/T	84	81	85	Extrusion Weld			90	87	P
7	12-Jul 2021	08:30	33	SS	83°	7	850°	S/S	86	84	82	82	84	85	93	94	P
8	12-Jul 2021	08:30	32	LD	83°	7	850°	S/S	88	89	93	93	86	88	97	99	P
9	12-Jul 2021	09:45	31	BM	83°	7	850°	S/S	83	82	84	84	85	80	92	93	P
10	12-Jul 2021	12:30	31	BM	98°	7.5	850°	S/S	84	83	82	82	81	83	90	92	P
11	12-Jul 2021	12:30	33	SS	98°	7.5	850°	S/S	85	83	82	82	84	83	93	90	P
12	12-Jul 2021	12:30	32	LD	98°	7.5	850°	S/S	85	83	84	84	82	83	90	94	P
13	12-Jul 2021	12:30	9	KC	98°		260°	T/T	85	82	84	Extrusion Weld			93	92	P
14	12-Jul 2021	14:00	7	SS	98°		260°	T/T	84	82	80	Extrusion Weld			90	88	P
15	12-Jul 2021	08:30	9	KC	83°		260°	S/T	85	87	83	Extrusion Weld			90	91	P
16	13-Jul 2021	08:25	32	LD	85°	7	850°	S/S	90	92	93	93	90	92	102	104	P
17	13-Jul 2021	08:45	31	BM	85°	7	850°	S/S	92	90	95	95	93	97	105	107	P
18	13-Jul 2021	10:15	7	KC	85°		260°	T/T	84	87	82	Extrusion Weld			91	94	P
19	13-Jul 2021	12:50	7	KC	97°		260°	T/T	82	83	81	Extrusion Weld			92	89	P
20	15-Jul 2021	08:10	32	LD	82°	7	850°	S/S	83	82	85	85	87	86	90	92	P
21	15-Jul 2021	08:15	33	SS	82°	7	850°	S/S	95	97	97	97	96	97	98	96	P
22	15-Jul 2021	08:20	31	OP	82°	7	850°	S/S	91	96	95	95	94	94	99	97	P
23	15-Jul 2021	09:25	7	KC	82°		260°	T/T	84	86	83	Extrusion Weld			90	89	P

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									1	2	3	1	2	3	1	2	
24	15-Jul 2021	12:30	7	KC	92°		260°	T/T	85	83	85	Extrusion Weld			91	94	P
25	18-Jul 2021	08:47	32	LD	78°	7	850°	S/S	88	87	89	89	85	87	101	103	P
26	18-Jul 2021	08:57	31	OP	78°	7	850°	S/S	90	87	88	88	91	86	99	104	P
27	18-Jul 2021	08:45	33	SS	78°	7	850°	S/S	89	87	85	85	87	89	105	102	P
28	18-Jul 2021	13:00	31	OP	93°	7	850°	S/S	89	91	87	87	85	87	102	99	P
29	18-Jul 2021	13:15	32	LD	93°	7	850°	S/S	87	88	86	86	85	84	99	101	P
30	19-Jul 2021	08:10	32	LD	82°	7	850°	S/S	88	90	89	89	82	85	95	100	P
31	19-Jul 2021	08:15	31	OP	82°	7	850°	S/S	90	85	87	87	92	87	100	95	P
32	19-Jul 2021	12:00	9	KC	93°		260°	T/T	86	88	87	Extrusion Weld			93	95	P
33	19-Jul 2021	12:00	7	SS	93°		260°	T/T	85	87	86	Extrusion Weld			94	97	P
34	20-Jul 2021	08:00	7	SS	83°		260°	T/T	82	87	85	Extrusion Weld			91	93	P
35	20-Jul 2021	08:10	9	KC	83°		260°	T/T	83	81	84	Extrusion Weld			89	94	P
36	15-Sep 2021	12:30	31	LD	87°	7	850°	S/S	83	80	84	84	82	85	92	95	P
37	15-Sep 2021	12:55	7	SS	87°		260°	T/T	88	81	85	Extrusion Weld			90	92	P
38	19-Sep 2021	08:00	31	SS	75°	7	850°	S/S	87	90	88	88	85	85	97	101	P
39	19-Sep 2021	08:10	32	LD	75°	7	850°	S/S	85	89	85	85	87	87	89	92	P
40	19-Sep 2021	12:45	7	EL	90°		260°	T/T	82	85	81	Extrusion Weld			109	101	P
41	20-Sep 2021	07:45	33	OP	75°	7	850°	S/S	84	90	88	88	83	88	101	97	P
42	20-Sep 2021	07:50	32	LD	75°	7	850°	S/S	92	90	85	85	83	87	89	94	P
43	20-Sep 2021	11:20	31	SS	75°	7	850°	S/S	84	82	86	86	82	83	89	94	P
44	20-Sep 2021	13:30	9	SS	91°		260°	T/T	85	82	83	Extrusion Weld			92	95	P
45	20-Sep 2021	10:15	31	EL	75°	7	850°	S/S	81	84	84	84	87	82	99	95	P
46	21-Sep 2021	07:50	32	LD	75°	7	850°	S/S	100	97	102	99	98	97	101	103	P

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
47	21-Sep 2021	09:00	33	OP	75°	7	850°	S/S	89	88	95	92	87	85	97	93	P
48	21-Sep 2021	08:55	31	SS	75°	7	850°	S/S	83	85	87	85	90	86	99	92	P
49	21-Sep 2022	12:49	9	SS	91°		260°	T/T	83	85	85	Extrusion Weld			90	92	P
50	21-Sep 2022	13:00	7	SA	91°		260°	T/T	87	85	89	Extrusion Weld			92	97	P
51	22-Sep 2022	07:45	32	LD	75°	7	850°	S/S	92	95	97	94	98	97	98	101	P
52	22-Sep 2022	08:00	7	OP	75°		260°	T/T	89	88	86	Extrusion Weld			98	93	P
53	22-Sep 2022	12:30	7	OP	91°		260°	T/T	83	85	80	Extrusion Weld			90	93	P
54	27-Sep 2022	09:25	7	SS	70°		260°	T/T	87	84	85	Extrusion Weld			95	99	P
55	28-Sep 2022	08:00	31	LD	59°	7	850°	S/S	89	90	95	94	92	91	109	101	P
56	28-Sep 2022	08:05	32	OP	59°	7	850°	S/S	92	87	90	90	89	92	99	100	P
57	28-Sep 2022	13:25	9	OP	86°		260°	T/T	84	82	85	Extrusion Weld			92	95	P
58	29-Sep 2022	07:45	32	LD	56°	7	850°	S/S	89	92	85	88	87	89	101	103	P
59	29-Sep 2022	07:50	31	OP	56°	7	850°	S/S	85	92	85	89	87	90	97	95	P
60	29-Sep 2022	12:30	9	SS	70°		260°	T/T	87	83	85	Extrusion Weld			92	95	P
61	29-Sep 2022	12:40	6	OP	70°		260°	T/T	82	82	84	Extrusion Weld			90	95	P
62	30-Sep 2022	07:40	31	OP	58°	7	850°	S/S	93	95	91	90	90	90	109	111	P
63	30-Sep 2022	07:43	32	LD	58°	7	850°	S/S	87	89	93	95	91	90	101	103	P
64	3-Oct 2022	07:35	6	OP	58°		260°	T/T	85	82	87	Extrusion Weld			105	110	P
65	3-Oct 2022	07:37	9	SS	58°		260°	T/T	89	93	90	Extrusion Weld			100	108	P
66	3-Oct 2022	11:55	6	OP	64°		260°	T/T	82	84	79	Extrusion Weld			92	97	P
67	3-Oct 2022	11:58	9	SS	64°		260°	T/T	84	82	87	Extrusion Weld			95	99	P
68	1-Dec 2022	08:30	33	SS	60°	6	850°	S/S	92	87	87	95	90	85	105	101	P
69	1-Dec 2022	08:35	9	MS	60°		270°	T/T	85	87	90	Extrusion Weld			110	108	P

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Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
70	1-Dec 2022	12:25	33	SS	72°	6	850°	S/S	85	89	92	90	95	93	109	101	P
71	1-Dec 2022	12:27	32	MS	72°	6	850°	S/S	92	87	99	90	85	84	111	108	P
72	1-Dec 2022	14:25	9	MS	72°		270°	T/T	89	82	85	Extrusion Weld			107	110	P
73	4-Dec 2022	08:00	33	SS	56°	6	850°	S/S	90	87	89	93	91	95	110	105	P
74	4-Dec 2022	12:45	33	SS	65°	6	850°	S/S	82	87	85	83	90	87	101	107	P
75	4-Dec 2022	13:45	9	SS	65°		270°	T/T	82	90	87	Extrusion Weld			111	105	P
76	5-Dec 2022	09:00	33	SS	65°	6	850°	S/S	95	92	90	87	92	85	101	111	P
77	5-Dec 2022	13:10	33	SS	72°	6	850°	S/S	87	83	90	85	85	89	109	105	P
78	5-Dec 2022	14:00	9	SS	72°		270°	T/T	87	82	85	Extrusion Weld			99	92	P
79	6-Dec 2022	12:30	9	SS	72°		270°	T/T	87	82	83	Extrusion Weld			98	92	P
80	7-Dec 2022	08:00	33	SS	65°	6	850°	S/S	90	87	89	93	91	95	110	105	P
81	7-Dec 2022	12:45	33	SS	77°	6	850°	S/S	82	87	85	83	90	87	101	107	P
82	7-Dec 2022	13:45	9	SS	77°		270°	T/T	82	90	87	Extrusion Weld			111	105	P
83	8-Dec 2022	10:30	33	SS	65°	6	850°	S/S	90	95	91	93	88	92	111	109	P
84	8-Dec 2022	12:45	33	SS	78°	6	850°	S/S	85	80	87	85	82	83	95	99	P
85	8-Dec 2022	14:20	9	SS	78°		270°	T/T	87	82	85	Extrusion Weld			95	92	P
86	8-Dec 2022	14:00	49	SS	78°		265°	T/T	89	87	87	Extrusion Weld			91	95	P
87	8-Dec 2022	14:45	8	SS	78°		270°	T/T	84	84	89	Extrusion Weld			98	98	P
88	16-Dec 2022	08:30	33	SS	48°	6	850°	S/S	92	107	101	106	97	93	100	105	P
89	16-Dec 2022	08:35	35	RI	48°	6	850°	S/S	95	97	99	103	107	95	111	101	P
90	17-Dec 2022	08:36	33	SS	46°	6	850°	S/S	91	93	90	95	94	97	111	115	P
91	17-Dec 2022	08:38	35	RI	46°	6	850°	S/S	87	87	95	90	89	92	105	101	P
92	17-Dec 2022	12:30	9	SS	55°		270°	T/T	88	85	89	Extrusion Weld			95	99	P

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Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
93	18-Dec 2022	08:30	9	SS	46°		270°	T/T	89	84	87	Extrusion Weld			95	99	P
94	3-Jan 2023	08:00	9	SS	50°		270°	T/T	92	89	94	Extrusion Weld			110	105	P
95	3-Jan 2023	08:05	49	RI	50°		270°	T/T	85	86	90	Extrusion Weld			101	105	P
96	6-Jan 2023	07:35	33	OP	48°	6	850°	S/S	89	84	90	92	85	84	109	101	P
97	6-Jan 2023	07:39	31	LD	48°	6	850°	S/S	92	90	87	87	95	93	109	111	P
98	6-Jan 2023	12:35	33	LD	60°	7	850°	S/S	82	84	87	85	85	85	98	105	P
99	9-Jan 2023	07:30	6	SS	46°		270°	T/T	92	89	94	Extrusion Weld			108	104	P
100	11-Jan 2023	07:30	33	OP	60°	6	850°	S/S	92	93	89	94	91	95	108	101	P
101	11-Jan 2023	07:32	32	LD	60°	6	850°	S/S	89	92	83	87	90	84	110	102	P
102	11-Jan 2023	12:30	6	SS	67°		270°	T/T	90	95	92	Extrusion Weld			101	103	P
103	11-Jan 2023	12:35	9	BM	67°		270°	T/T	88	85	90	Extrusion Weld			99	103	P
104	13-Jan 2023	08:30	33	SS	50°	6	850°	S/S	92	95	89	90	91	91	105	107	P
105	13-Jan 2023	08:32	32	LD	50°	6	850°	S/S	89	85	92	91	87	89	109	101	P
106	13-Jan 2023	12:15	33	SS	62°	6	850°	S/S	88	85	84	84	90	92	99	98	P
107	13-Jan 2023	12:17	32	LD	62°	6	850°	S/S	88	82	87	84	84	86	100	109	P
108	14-Jan 2023	08:10	33	OP	58°	6	850°	S/S	90	95	92	92	89	87	110	101	P
109	14-Jan 2023	08:00	32	LD	58°	6	850°	S/S	87	87	90	85	92	88	102	107	P
110	16-Jan 2023	07:45	6		60°		270°	T/T	85	89	87	Extrusion Weld			101	107	P
111	17-Jan 2023	08:00	33	OP	55°	6	850°	S/S	89	87	92	85	94	88	101	107	P
112	17-Jan 2023	08:05	32	LD	55°	6	850°	S/S	82	89	86	83	84	84	110	105	P
113	17-Jan 2023	12:30	33	OP	66°	6	850°	S/S	88	85	82	85	84	82	98	100	P
114	17-Jan 2023	12:33	32	LD	66°	6	850°	S/S	84	85	89	85	90	88	105	101	P
115	20-Jan 2023	07:25	6	SA	58°		270°	T/T	88	85	90	Extrusion Weld			107	105	P

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									1	2	3	1	2	3	1	2	
116	20-Jan 2023	07:30	9	BM	58°		270°	T/T	90	84	89	Extrusion Weld			101	105	P
117	23-Jan 2023	08:30	33	OP	56°	6	850°	S/S	88	89	82	84	84	83	111	107	P
118	23-Jan 2023	08:33	32	LD	56°	6	850°	S/S	92	85	90	89	95	87	105	105	P
119	23-Jan 2023	12:30	32	OP	62°	6	850°	S/S	88	84	82	84	85	89	101	105	P
120	23-Jan 2023	12:20	6	SS	62°		270°	T/T	86	82	84	Extrusion Weld			101	104	P
121	23-Jan 2023	13:25	9	SA	62°		270°	T/T	87	84	82	Extrusion Weld			100	105	P
122	7-Feb 2023	07:45	32	LD	62°	6	850°	S/S	92	89	85	84	88	85	110	105	P
123	7-Feb 2023	07:50	33	OP	62°	6	850°	S/S	92	95	90	87	94	89	115	110	P
124	10-Feb 2023	08:00	6	SS	60°		270°	T/T	89	84	88	Extrusion Weld			100	106	P
125	10-Feb 2023	12:30	6	SS	65°		270°	T/T	92	89	87	Extrusion Weld			99	101	P
126	11-Feb 2023	08:00	33	SS	56°	6	850°	S/S	90	92	85	87	88	89	95	97	P
127	11-Feb 2023	12:20	6		63°		270°	T/T	84	90	88	Extrusion Weld			97	98	P
128	13-Feb 2023	08:00	33	NS	53°	6	850°	S/S	89	88	92	88	90	85	98	98	P
129	13-Feb 2023	12:30	6	SS	62°		270°	T/T	89	85	90	Extrusion Weld			101	105	P
130	15-Feb 2023	08:00	33	NS	45°	6	850°	S/S	94	90	90	88	92	88	109	109	P
131	15-Feb 2023	08:05	6	SS	45°		270°	T/T	85	85	90	Extrusion Weld			98	100	P
132	15-Feb 2023	12:20	33	NS	55°	6	850°	S/S	88	92	85	90	88	90	105	102	P
133	15-Feb 2023	12:25	6	SS	55°		270°	T/T	90	88	90	Extrusion Weld			101	109	P
134	18-Feb 2023	08:20	31	OP	38°	6	850°	S/S	92	88	88	90	89	93	108	108	P
135	18-Feb 2023	08:25	32	LD	38°	6	850°	S/S	85	92	90	91	87	85	98	102	P
136	18-Feb 2023	08:30	33	SS	38°	6	850°	S/S	89	92	91	85	93	87	108	107	P
137	18-Feb 2023	12:15	31	OP	48°	6	850°	S/S	87	89	92	89	90	90	101	101	P
138	18-Feb 2023	12:17	32	LD	48°	6	850°	S/S	88	88	90	92	85	86	100	98	P

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Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
139	18-Feb 2023	12:19	33	SS	48°	6	850°	S/S	86	89	86	92	90	89	101	101	P
140	19-Feb 2023	07:40	31	OP	45°	6	850°	S/S	93	90	93	88	87	92	110	109	P
141	19-Feb 2023	07:45	32	LD	45°	6	850°	S/S	92	94	93	97	90	95	101	107	P
142	19-Feb 2023	07:50	33	SS	45°	6	850°	S/S	89	92	87	85	92	94	104	101	P
143	19-Feb 2023	12:10	31	OP	52°	6	850°	S/S	87	84	92	90	94	91	98	100	P
144	19-Feb 2023	12:15	32	LD	52°	6	850°	S/S	83	85	90	88	87	92	98	97	P
145	19-Feb 2023	12:12	33	SS	52°	6	850°	S/S	93	92	87	87	97	92	100	101	P
146	20-Feb 2023	07:15	33	SS	51°	6	850°	S/S	92	95	90	89	87	90	101	107	P
147	20-Feb 2023	12:12	33	SS	60°	6	850°	S/S	88	89	90	87	87	85	101	110	P
148	23-Feb 2023	07:45	33	SS	54°	6	850°	S/S	88	83	85	85	84	82	95	98	P
149	24-Feb 2023	07:45	4	TV	54°	8	850°	S/S	90	88	92	90	85	87	105	104	P
150	24-Feb 2023	07:47	33	SS	54°	6	850°	S/S	88	85	92	87	87	89	110	105	P
151	24-Feb 2023	12:00	4	TV	62°	8	850°	S/S	82	83	89	85	87	85	105	101	P
152	24-Feb 2023	12:05	33	SS	62°	6	850°	S/S	90	92	89	85	87	86	98	95	P
153	25-Feb 2023	07:30	33	SS	53°	6	850°	S/S	92	94	89	90	89	87	109	111	P
154	25-Feb 2023	07:35	6		53°		270°	T/T	88	90	92	Extrusion Weld			101	109	P
155	25-Feb 2023	07:40	9	SP	53°		270°	T/T	87	88	90	Extrusion Weld			100	105	P
156	28-Feb 2023	07:15	33	SS	54°	6	850°	S/S	86	92	90	87	89	89	110	108	P
157	28-Feb 2023	12:15	33	SS	63°	6	850°	S/S	86	84	89	84	85	83	101	107	P
158	1-Mar 2023	07:12	33	SS	55°	6	850°	S/S	84	87	89	85	87	90	101	101	P
159	1-Mar 2023	07:30	6	SS	55°		270°	T/T	90	87	89	Extrusion Weld			99	101	P
160	1-Mar 2023	12:13	6	SS	64°		270°	T/T	84	85	87	Extrusion Weld			99	97	P
161	2-Mar 2023	07:30	33	SS	57°	6	850°	S/S	90	89	85	92	88	90	105	101	P

GCERG - Site F Landfill
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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
162	2-Mar 2023	12:15	6	SS	63°		270°	T/T	86	87	85	Extrusion Weld			95	98	P
163	7-Mar 2023	07:30	6	BM	60°		270°	T/T	85	83	87	Extrusion Weld			99	96	P
164	9-Mar 2023	09:00	31	BM	67°	6	850°	S/S	90	92	92	91	89	90	98	100	P
165	9-Mar 2023	09:02	99	LD	67°	6	850°	S/S	88	92	86	89	90	90	101	105	P
166	9-Mar 2023	09:05	32	OP	67°	6	850°	S/S	88	91	90	91	87	89	102	105	P
167	9-Mar 2023	09:10	33	SS	67°	6	850°	S/S	90	91	92	88	93	92	110	105	P
168	9-Mar 2023	14:00	6	SS	80°		270°	T/T	89	87	90	Extrusion Weld			98	99	P
169	9-Mar 2023	14:05	9	OP	80°		270°	T/T	90	85	87	Extrusion Weld			100	98	P
170	10-Mar 2023	07:15	8	SS	59°		280°	T/T	90	93	92	Extrusion Weld			110	107	P
171	10-Mar 2023	12:30	31	SS	70°	6	850°	S/S	85	88	90	86	87	88	98	97	P
172	10-Mar 2023	12:20	32	OP	70°	6	850°	S/S	87	83	84	85	89	85	95	98	P
173	10-Mar 2023	12:21	99	LD	70°	6	850°	S/S	89	83	87	86	86	85	97	100	P
174	11-Mar 2023	07:30	8	SS	55°		270°	T/T	90	95	91	Extrusion Weld			110	109	P
175	11-Mar 2023	07:33	6	BM	55°		270°	T/T	92	96	93	Extrusion Weld			109	105	P
176	13-Mar 2023	07:50	32	OP	48°	6	850°	S/S	91	89	95	92	93	94	108	110	P
177	13-Mar 2023	07:10	33	SS	48°	6	850°	S/S	90	92	95	97	92	95	110	107	P
178	13-Mar 2023	08:00	99	LD	48°	6	850°	S/S	88	94	92	91	90	91	107	109	P
179	13-Mar 2023	08:15	31	SA	48°	6	850°	S/S	91	98	95	92	93	94	101	105	P
180	13-Mar 2023	12:30	32	OP	66°	6	850°	S/S	89	89	92	90	90	95	112	108	P
181	13-Mar 2023	12:35	33	SS	66°	6	850°	S/S	88	87	92	90	89	92	110	107	P
182	13-Mar 2023	12:40	99	LD	66°	6	850°	S/S	90	91	95	95	89	88	103	113	P
183	13-Mar 2023	13:00	31	SA	66°	6	850°	S/S	92	87	95	90	89	92	105	109	P
184	15-Mar 2023	07:55	8	SP	52°		270°	T/T	90	95	92	Extrusion Weld			110	111	P

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
185	15-Mar 2023	07:45	32	OP	52°	6	850°	S/S	93	89	90	90	92	95	109	113	P
186	15-Mar 2023	07:50	31	AS	52°	6	850°	S/S	88	91	92	93	95	90	101	111	P
187	15-Mar 2023	07:55	99	SS	52°	6	850°	S/S	90	92	90	89	95	88	113	111	P
188	15-Mar 2023	10:00	33	MA	71°	6	850°	S/S	90	87	88	85	92	89	105	101	P
189	15-Mar 2023	12:15	8	SP	71°		270°	T/T	89	85	87	Extrusion Weld			101	104	P
190	15-Mar 2023	12:17	33	SS	71°	6	850°	S/S	88	89	92	89	85	90	110	102	P
191	15-Mar 2023	12:20	32	OP	71°	6	850°	S/S	85	87	85	90	89	88	101	99	P
192	15-Mar 2023	12:22	31	AS	71°	6	850°	S/S	89	88	92	90	88	87	105	100	P
193	15-Mar 2023	12:30	99	SN	71°	6	850°	S/S	90	84	87	88	89	85	103	103	P
194	16-Mar 2023	07:30	6	SS	55°		270°	T/T	92	95	91	Extrusion Weld			111	115	P
195	21-Mar 2023	08:30	99	SS	55°	6	850°	S/S	92	90	94	88	90	87	110	107	P
196	21-Mar 2023	08:35	33	MA	55°	6	850°	S/S	89	87	93	90	88	90	109	110	P
197	21-Mar 2023	08:37	32	OP	55°	6	850°	S/S	95	92	90	87	92	89	101	105	P
198	21-Mar 2023	08:40	31	AS	55°	6	850°	S/S	89	89	92	88	90	85	111	113	P
199	21-Mar 2023	10:50	311	OP	55°	6	850°	S/S	94	90	95	88	90	89	107	107	P
200	23-Mar 2023	08:15	35	SS	75°	6	850°	S/S	92	89	95	92	90	93	110	113	P
201	23-Mar 2023	08:20	33	AS	75°	6	850°	S/S	89	92	90	91	95	93	109	105	P
202	23-Mar 2023	08:30	71	MA	75°	6	850°	S/S	91	89	94	88	94	92	102	107	P
203	23-Mar 2023	08:33	31	OP	75°	6	850°	S/S	92	90	91	88	94	90	101	108	P
204	23-Mar 2023	12:15	1	SP	82°		270°	T/T	86	89	87	Extrusion Weld			101	103	P
205	23-Mar 2023	12:15	6	SS	82°		270°	T/T	89	86	88	Extrusion Weld			100	98	P
206	23-Mar 2023	12:17	10	RC	82°		270°	T/T	88	85	89	Extrusion Weld			98	98	P
207	23-Mar 2023	12:30	50	MV	82°		270°	T/T	90	92	88	Extrusion Weld			101	103	P

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
208	27-Mar 2023	09:30	33	AS	65°	6	850°	S/S	92	90	95	91	93	94	113	110	P
209	27-Mar 2023	09:35	32	OP	65°	6	850°	S/S	89	90	93	88	90	92	109	108	P
210	27-Mar 2023	09:37	36	LD	65°	6	850°	S/S	90	91	95	91	92	90	105	110	P
211	27-Mar 2023	09:40	31	MA	65°	6	850°	S/S	92	95	94	90	90	92	111	107	P
212	27-Mar 2023	10:00	6	SS	65°		270°	T/T	95	90	91	Extrusion Weld			109	110	P
213	27-Mar 2023	12:15	6	SS	79°		270°	T/T	87	89	85	Extrusion Weld			102	102	P
214	27-Mar 2023	14:00	1	SP	79°		270°	T/T	86	89	90	Extrusion Weld			101	100	P
215	27-Mar 2023	14:30	5	BM	79°		270°	T/T	88	90	92	Extrusion Weld			103	107	P
216	27-Mar 2023	12:30	36	LD	79°	6	850°	S/S	89	90	92	90	87	91	105	107	P
217	27-Mar 2023	12:35	33	AS	79°	6	850°	S/S	85	91	90	85	87	89	101	105	P
218	27-Mar 2023	12:38	32	OP	79°	6	850°	S/S	89	88	84	85	82	88	105	105	P
219	28-Mar 2023	07:50	33	AS	55°	6	850°	S/S	95	97	101	102	101	103	113	110	P
220	28-Mar 2023	08:00	35	KK	55°	6	850°	S/S	93	92	95	92	94	95	110	109	P
221	28-Mar 2023	08:05	31	MA	55°	6	850°	S/S	98	98	92	95	96	96	109	107	P
222	28-Mar 2023	08:10	32	OP	55°	6	850°	S/S	97	95	98	95	95	92	105	1111	P
223	28-Mar 2023	08:15	36	LD	55°	6	850°	S/S	99	102	86	99	95	98	110	107	P
224	28-Mar 2023	08:00	8	SS	55°		270°	T/T	90	95	91	Extrusion Weld			109	103	P
225	28-Mar 2023	12:15	8	SS	70°		270°	T/T	90	88	89	Extrusion Weld			101	104	P
226	28-Mar 2023	12:18	31	MA	70°	6	850°	S/S	89	93	90	94	90	88	110	109	P
227	29-Mar 2023	07:45	33	AS	56°	6	850°	S/S	90	95	92	92	90	91	111	115	P
228	29-Mar 2023	07:50	31	MA	56°	6	850°	S/S	89	92	88	90	92	93	109	114	P
229	29-Mar 2023	07:55	32	OP	56°	6	850°	S/S	88	87	92	93	89	90	109	113	P
230	29-Mar 2023	07:57	35	KK	56°	6	850°	S/S	90	89	88	93	91	94	110	115	P

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
231	29-Mar 2023	08:00	6	SS	56°		270°	S/S	90	85	85	Extrusion Weld			110	109	P
232	29-Mar 2023	12:15	6	SS	71°		270°	T/T	88	85	89	Extrusion Weld			108	111	P
233	29-Mar 2023	14:15	6	KK	71°		270°	T/T	84	88	84	Extrusion Weld			107	107	P
234	29-Mar 2023	14:00	1	SP	71°		270°	T/T	89	90	86	Extrusion Weld			109	113	P
235	29-Mar 2023	14:12	10	RC	71°		270°	T/T	85	89	84	Extrusion Weld			111	115	P
236	29-Mar 2023	12:20	32	OP	71°	6	850°	S/S	85	89	87	83	89	86	111	110	P
237	29-Mar 2023	12:20	31	MA	71°	6	850°	S/S	83	85	87	87	85	82	109	108	P
238	29-Mar 2023	12:30	33	AS	71°	6	850°	S/S	84	88	87	86	89	84	101	107	P
239	29-Mar 2023	12:32	35	KK	71°	6	850°	S/S	88	84	86	86	83	85	105	106	P
240	28-Nov 2023	09:30	W-34	SS	60°	4	860°	S/S	103	105	104	110	109	110	112	115	P
241	28-Nov 2023	10:31	W-31	SP	60°	4.5	860°	S/S	108	103	105	101	106	108	110	110	P
242	28-Nov 2023	12:45	W-31	SP	63°	4.5	860°	S/S	105	103	105	101	103	104	113	110	P
243	28-Nov 2023	12:40	W-34	SS	63°	4	860°	S/S	109	108	106	109	104	105	115	109	P
244	28-Nov 2023	09:28	G-50	RP	60°	-	275°	T/T	115	118	120				115	118	P
245	29-Nov 2023	12:35	W-34	SS	62°	4.5	860°	S/S	101	103	104	110	107	110	113	111	P
246	29-Nov 2023	12:30	W-31	SP	62°	4	860°	S/S	109	107	105	106	101	100	115	109	P
247	30-Nov 2023	08:30	G-50	SP	63°	-	275°	T/T	101	103	101	Extrusion Weld			110	112	P
248	30-Nov 2023	12:45	G-50	SP	69°	-	275°	T/T	100	102	103	Extrusion Weld			115	113	P
249	5-Dec 2023	07:30	W-33	SS	40°	7	860°	S/S	93	91	95	89	90	90	100	104	P
250	5-Dec 2023	07:35	W-31	SP	40°	6.5	860°	S/S	91	93	96	89	91	95	101	103	P
251	5-Dec 2023	12:30	W-33	SS	69°	7	860°	S/S	88	90	88	91	87	91	104	103	P
252	5-Dec 2023	12:35	W-31	SP	69°	6.5	860°	S/S	89	93	90	88	91	89	101	101	P
253	6-Dec 2023	12:35	W-33	SS	48°	7	860°	S/S	89	91	88	93	90	89	108	110	P

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
254	6-Dec 2023	12:35	W-31	SP	48°	6.5	860°	S/S	90	91	85	93	88	101	106	105	P
255	6-Dec 2023	12:35	W-33	SS	64°	7	860°	S/S	89	95	93	88	89	91	103	102	P
256	6-Dec 2023	12:35	W-31	SP	64°	6.5	860°	S/S	91	83	95	90	84	85	105	103	P
257	7-Dec 2023	07:50	W-33	SS	47°	7	860°	S/S	98	84	85	101	106	107	118	109	P
258	7-Dec 2023	07:54	W-31	SP	47°	6.5	860°	S/S	99	91	92	85	99	82	106	109	P
259	7-Dec 2023	12:55	W-33	SS	68°	7	860°	S/S	98	88	93	91	92	85	107	109	P
260	7-Dec 2023	12:45	W-31	SP	68°	6.5	860°	S/S	94	98	88	89	90	92	105	109	P
261	8-Dec 2023	07:44	W-33	SS	65°	7	860°	S/S	83	85	75	96	93	83	103	99	P
262	8-Dec 2023	07:50	W-31	SP	65°	6.5	860°	S/S	94	97	95	89	89	93	100	104	P
263	8-Dec 2023	12:30	W-33	SS	65°	7	860°	S/S	81	86	88	90	91	90	109	106	P
264	8-Dec 2023	12:40	W-31	SP	65°	6.5	860°	S/S	89	88	91	88	89	90	108	106	P
265	9-Dec 2023	12:30	G-50	SP	71°	-	275°	T/T	91	93	94	Extrusion Weld			101	106	P
266	11-Dec 2023	08:00	W-33	SS	44°	7	860°	S/S	91	88	90	90	90	86	103	105	P
267	11-Dec 2023	08:00	W-31	SP	44°	6.5	860°	S/S	88	79	86	91	89	90	106	103	P
268	11-Dec 2023	12:35	G-50	SP	60°	-	275°	T/T	101	103	101	Extrusion Weld			110	112	P
269	11-Dec 2023	12:43	G-5	TR	60°	-	275°	T/T	103	101	104	Extrusion Weld			109	110	P
270	12-Dec 2023	09:30	G-50	SP	45°	-	275°	T/T	101	104	103	Extrusion Weld			110	112	P
271	18-Dec 2023	08:50	G90	SP	43°	-	275°	T/T	104	106	101	Extrusion Weld			106	108	P
272	21-Dec 2023	07:50	W-31	SP	58°	6.5	860°	S/S	76	81	86	98	93	95	106	103	P
273	21-Dec 2023	08:00	W-33	KK	58°	5.5	860°	S/S	82	92	85	90	89	95	105	106	P
274	21-Dec 2023	09:00	W-33	KK	58°	5.5	860°	S/S	86	91	81	82	88	90	100	102	P
275	21-Dec 2023	12:30	W-31	SP	65°	6.5	860°	S/S	89	88	86	80	81	83	104	108	P
276	21-Dec 2023	12:35	W-33	KK	65°	5.5	860°	S/S	88	91	89	90	90	91	110	111	P

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Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
277	22-Dec 2023	07:50	G-50	RP	58°	-	270°	T/T	78	84	84	Extrusion Weld			94	96	P
278	22-Dec 2023	12:40	G-50	RP	63°	-	275°	T/T	81	84	80	Extrusion Weld			90	91	P
279	29-Dec 2023	08:10	W-31	SP	34°	6.5	860°	S/S	85	89	90	91	86	88	110	108	P
280	29-Dec 2023	10:45	W-33	KK	41°	5.5	860°	S/S	88	87	90	90	86	84	106	107	P
281	29-Dec 2023	08:00	W-34	KK	34°	5.5	860°	S/S	91	89	91	93	90	90	105	109	P
282	30-Dec 2023	07:50	W-33	KK	31°	5.5	860°	S/S	91	93	88	90	90	86	104	106	P
283	30-Dec 2023	07:40	W-31	SP	31°	6.5	860°	S/S	83	88	89	86	85	86	103	108	P
284	30-Dec 2023	10:43	W-34	CH	51°	5.5	860°	S/S	84	88	86	87	90	91	106	109	P
285	2-Jan 2024	08:20	G-90	CH	37°	-	275°	T/T	81	84	90	Extrusion Weld			104	106	P
286	2-Jan 2024	08:13	G-1	SP	37°	-	280°	T/T	83	84	86	Extrusion Weld			103	107	P
287	2-Jan 2024	08:15	G-50	RP	37°	-	272°	T/T	85	87	89	Extrusion Weld			104	105	P
288	13-Jan 2024	08:00	W-31	SP	38°	6.5	860°	S/S	93	90	91	88	86	84	104	102	P
289	13-Jan 2024	08:08	W-34	CH	38°	5.5	860°	S/S	90	92	90	86	84	81	103	107	P
290	13-Jan 2024	12:40	G-5	SP	41°	-	280°	T/T	85	84	80	Extrusion Weld			101	106	P
291	17-Jan 2024	08:40	W-5	SS	25°	5.5	860°	S/S	93	90	84	86	88	91	104	108	P
292	17-Jan 2024	08:30	W-31	SP	25°	6.5	860°	S/S	90	90	94	89	91	88	106	107	P
293	17-Jan 2024	08:05	W-34	SS	25°	5.5	860°	S/S	91	86	93	88	90	91	106	107	P
294	17-Jan 2024	12:35	W-5	SS	42°	5.5	860°	S/S	91	99	95	86	81	85	106	108	P
295	17-Jan 2024	12:43	W-31	SP	42°	6.5	860°	S/S	100	91	85	88	86	89	107	103	P
296	18-Jan 2024	07:45	W-5	SS	42°	5.5	860°	S/S	79	81	84	88	81	86	106	103	P
297	18-Jan 2024	07:50	W-31	SP	42°	6.5	860°	S/S	89	84	83	93	90	91	105	109	P
298	18-Jan 2024	12:30	G-50	RP	49°	-	272°	T/T	88	81	84	Extrusion Weld			103	106	P
299	19-Jan 2024	07:45	W-31	SP	39°	6.5	860°	S/S	93	92	88	85	88	91	104	109	P

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Geomembrane Trial Seam Log

Test	Date	Time	Welding Machine Number	Welding Tech	Ambient Air Temp	Machine Speed	Temp Setting	Sample	Inside Peel Strength (psi)			Outside Peel Strength (psi)			Sheer Strength		Pass or Fail
									1	2	3	1	2	3	1	2	
300	19-Jan 2024	12:00	G-50	RP	44°	-	272°	T/T	82	86	88	Extrusion Weld			106	108	P
301	7-Feb 2024	12:30	W-31	SP	69°	6.5	860°	S/S	90	88	91	87	90	92	103	106	P
302	7-Feb 2024	12:45	G-50	RP	69°	-	272°	T/T	80	84	88	Extrusion Weld			105	103	P
303	8-Feb 2024	12:50	G-90	RP	58°	-	275°	T/T	93	91	95	Extrusion Weld			108	109	P
304	9-Feb 2024	09:42	W-5	MA	69°	5.5	860°	S/S	100	103	99	101	94	91	110	111	P
305	9-Feb 2024	09:44	W-31	SP	69°	6.5	860°	S/S	101	102	96	98	93	100	104	109	P
306	9-Feb 2024	12:30	W-5	MA	72°	5.5	860°	S/S	103	104	108	95	96	99	115	108	P
307	9-Feb 2024	12:35	W-31	SP	72°	6.5	860°	S/S	93	94	100	103	102	98	111	113	P
308	14-Feb 2024	07:48	G-50	RP	46°	-	272°	T/T	104	101	103	Extrusion Weld			108	111	P
309	14-Feb 2024	08:00	G-90	MV	46°	-	275°	T/T	106	108	101	Extrusion Weld			110	108	P
310	14-Feb 2024	12:45	W-31	SP	67°	6	860°	S/S	96	101	98	101	99	103	106	105	P
311	14-Feb 2024	12:50	G-50	RP	67°	-	272°	T/T	101	102	104	Extrusion Weld			110	111	P
312	14-Feb 2024	12:55	G-90	MV	67°	-	275°	T/T	99	93	89	Extrusion Weld			112	110	P
313	15-Feb 2024	07:55	W-31	SP	58°	6	860°	S/S	96	91	98	100	89	90	110	109	P
314	15-Feb 2024	08:00	W-5	MA	58°	5.5	860°	S/S	95	91	96	89	88	93	108	111	P
315	15-Feb 2024	12:30	W-31	SP	70°	6	860°	S/S	95	93	91	93	90	89	112	110	P
316	15-Feb 2024	12:28	W-5	MA	70°	5.5	860°	S/S	93	90	100	90	88	89	113	108	P
317	15-Feb 2024	12:30	G-50	RP	70°	-	272°	T/T	91	92	94	Extrusion Weld			110	106	P
318	15-Feb 2024	12:40	G-90	MV	70°	-	275°	T/T	95	89	91	Extrusion Weld			104	109	P
319	16-Feb 2024	12:30	G-50	RP	70°	-	272°	T/T	89	91	93	Extrusion Weld			106	108	P
320	16-Feb 2024	12:40	G-90	MV	70°	-	275°	T/T	92	90	94	Extrusion Weld			109	111	P
321	16-Feb 2024	12:30	G-50	RP	70°	-	272°	T/T	100	96	98	Extrusion Weld			110	108	P
322	16-Feb 2024	12:40	G-90	MV	70°	-	275°	T/T	96	103	89	Extrusion Weld			106	109	P

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
1	96	102	50	FTB	Pass	109	60	Pass
2	91	98	50	FTB	Pass	108	60	Pass
3	96	100	50	FTB	Pass	112	60	Pass
4	99	102	50	FTB	Pass	113	60	Pass
5	95	104	50	FTB	Pass	114	60	Pass
6	103	101	50	FTB	Pass	115	60	Pass
7	99	99	50	FTB	Pass	118	60	Pass
8	90	105	50	FTB	Pass	114	60	Pass
9	99	101	50	FTB	Pass	113	60	Pass
10	98	105	50	FTB	Pass	111	60	Pass
11	101	106	50	FTB	Pass	114	60	Pass
12	98	100	50	FTB	Pass	111	60	Pass
13	98	106	50	FTB	Pass	113	60	Pass
14	103	106	50	FTB	Pass	115	60	Pass
15	93	95	50	FTB	Pass	108	60	Pass
16	87	100	50	FTB	Pass	111	60	Pass
17	91	94	50	FTB	Pass	113	60	Pass
18	95	103	50	FTB	Pass	112	60	Pass
19	91	98	50	FTB	Pass	112	60	Pass
20	95	99	50	FTB	Pass	110	60	Pass
21	95	96	50	FTB	Pass	112	60	Pass
22	97	98	50	FTB	Pass	111	60	Pass
23	97	100	50	FTB	Pass	113	60	Pass
24	101	102	50	FTB	Pass	113	60	Pass
25	98	103	50	FTB	Pass	113	60	Pass
26	95	102	50	FTB	Pass	114	60	Pass
27	91	98	50	FTB	Pass	114	60	Pass
28	90	102	50	FTB	Pass	112	60	Pass
29	97	102	50	FTB	Pass	113	60	Pass
30	92	103	50	FTB	Pass	113	60	Pass
31	95	102	50	FTB	Pass	110	60	Pass
32	99	102	50	FTB	Pass	107	60	Pass
33	103	96	50	FTB	Pass	108	60	Pass
34	91	101	50	FTB	Pass	109	60	Pass
35	93	97	50	FTB	Pass	108	60	Pass
36	93	96	50	FTB	Pass	104	60	Pass
37	102	101	50	FTB	Pass	111	60	Pass
38	103	98	50	FTB	Pass	113	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
39	96	104	50	FTB	Pass	116	60	Pass
40	96	105	50	FTB	Pass	111	60	Pass
41	95	103	50	FTB	Pass	113	60	Pass
42	84	98	50	FTB	Pass	112	60	Pass
43	100	104	50	FTB	Pass	113	60	Pass
44	95	100	50	FTB	Pass	113	60	Pass
45	96	98	50	FTB	Pass	114	60	Pass
46	102	101	50	FTB	Pass	116	60	Pass
47	99	102	50	FTB	Pass	116	60	Pass
48	100	105	50	FTB	Pass	114	60	Pass
49	97	101	50	FTB	Pass	111	60	Pass
50	96	103	50	FTB	Pass	110	60	Pass
51	100	99	50	FTB	Pass	110	60	Pass
52	97	96	50	FTB	Pass	109	60	Pass
53	99	104	50	FTB	Pass	110	60	Pass
54	94	105	50	FTB	Pass	110	60	Pass
55	97	101	50	FTB	Pass	114	60	Pass
56	103	101	50	FTB	Pass	116	60	Pass
57	100	100	50	FTB	Pass	117	60	Pass
58	101	97	50	FTB	Pass	113	60	Pass
59	103	98	50	FTB	Pass	109	60	Pass
60	101	100	50	FTB	Pass	109	60	Pass
61	107	102	50	FTB	Pass	119	60	Pass
62	100	105	50	FTB	Pass	116	60	Pass
63	104	107	50	FTB	Pass	115	60	Pass
64	101	95	50	FTB	Pass	111	60	Pass
65	99	98	50	FTB	Pass	111	60	Pass
66	95	99	50	FTB	Pass	109	60	Pass
67	102	96	50	FTB	Pass	111	60	Pass
68	79	92	50	AD-BRK	Fail	110	60	Pass
69	82	82	50	AD-BRK	Fail	111	60	Pass
70	95	100	50	FTB	Pass	106	60	Pass
71	100	98	50	FTB	Pass	108	60	Pass
72	99	103	50	FTB	Pass	108	60	Pass
73	97	106	50	FTB	Pass	112	60	Pass
74	94	98	50	FTB	Pass	111	60	Pass
75	99	98	50	FTB	Pass	107	60	Pass
76	94	99	50	FTB	Pass	109	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
77	95	98	50	FTB	Pass	106	60	Pass
78	90	98	50	FTB	Pass	107	60	Pass
79	87	96	50	AD-BRK	Fail	109	60	Pass
80	99	95	50	FTB	Pass	110	60	Pass
81	99	91	50	FTB	Pass	108	60	Pass
82	101	106	50	FTB	Pass	114	60	Pass
83	94	105	50	FTB	Pass	115	60	Pass
84	96	101	50	FTB	Pass	111	60	Pass
85	93	95	50	FTB	Pass	107	60	Pass
86	91	98	50	FTB	Pass	109	60	Pass
87	89	84	50	FTB	Pass	103	60	Pass
88	91	99	50	FTB	Pass	106	60	Pass
89	95	103	50	FTB	Pass	108	60	Pass
90	91	100	50	FTB	Pass	110	60	Pass
91	100	102	50	FTB	Pass	111	60	Pass
92	96	103	50	FTB	Pass	113	60	Pass
93	96	97	50	FTB	Pass	110	60	Pass
94	94	98	50	FTB	Pass	115	60	Pass
95	102	104	50	FTB	Pass	110	60	Pass
96	87	99	50	AD-BRK	Fail	113	60	Pass
97	85	97	50	AD-BRK	Fail	109	60	Pass
98	94	96	50	FTB	Pass	109	60	Pass
99	92	99	50	FTB	Pass	108	60	Pass
100	94	102	50	FTB	Pass	113	60	Pass
101	92	96	50	FTB	Pass	110	60	Pass
102	92	88	50	AD-BRK	Fail	110	60	Pass
103	98	94	50	FTB	Pass	110	60	Pass
104	93	95	50	FTB	Pass	111	60	Pass
105	93	99	50	FTB	Pass	109	60	Pass
106	101	101	50	FTB	Pass	108	60	Pass
107	92	95	50	FTB	Pass	108	60	Pass
108	91	95	50	FTB	Pass	103	60	Pass
109	94	103	50	FTB	Pass	114	60	Pass
110	91	100	50	FTB	Pass	112	60	Pass
111	95	98	50	FTB	Pass	121	60	Pass
112	95	101	50	FTB	Pass	113	60	Pass
113	98	102	50	FTB	Pass	110	60	Pass
114	95	104	50	FTB	Pass	108	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
115	94	84	50	FTB	Pass	105	60	Pass
116	98	96	50	FTB	Pass	103	60	Pass
117	91	97	50	FTB	Pass	110	60	Pass
118	92	104	50	FTB	Pass	107	60	Pass
119	100	94	50	FTB	Pass	105	60	Pass
120	95	101	50	FTB	Pass	112	60	Pass
121	90	90	50	FTB	Pass	103	60	Pass
122	93	95	50	FTB	Pass	106	60	Pass
123	90	92	50	FTB	Pass	107	60	Pass
124	93	92	50	FTB	Pass	108	60	Pass
125	97	96	50	FTB	Pass	103	60	Pass
126	92	93	50	FTB	Pass	111	60	Pass
127	96	92	50	FTB	Pass	108	60	Pass
128	92	89	50	FTB	Pass	109	60	Pass
129	97	84	50	FTB	Pass	108	60	Pass
130	86	79	50	FTB	Pass	100	60	Pass
131	97	100	50	FTB	Pass	113	60	Pass
132	93	92	50	FTB	Pass	108	60	Pass
133	86	100	50	FTB	Pass	112	60	Pass
134	101	96	50	FTB	Pass	120	60	Pass
135	100	98	50	FTB	Pass	118	60	Pass
136	100	99	50	FTB	Pass	116	60	Pass
137	92	98	50	FTB	Pass	113	60	Pass
138	93	103	50	FTB	Pass	115	60	Pass
139	101	103	50	FTB	Pass	115	60	Pass
140	98	99	50	FTB	Pass	117	60	Pass
141	95	102	50	FTB	Pass	114	60	Pass
142	92	99	50	FTB	Pass	114	60	Pass
143	98	92	50	FTB	Pass	115	60	Pass
144	97	97	50	FTB	Pass	112	60	Pass
145	88	93	50	FTB	Pass	106	60	Pass
146	93	93	50	FTB	Pass	108	60	Pass
147	98	104	50	FTB	Pass	114	60	Pass
148	93	89	50	FTB	Pass	106	60	Pass
149	98	98	50	FTB	Pass	110	60	Pass
150	96	93	50	FTB	Pass	111	60	Pass
151	96	99	50	FTB	Pass	110	60	Pass
152	100	101	50	FTB	Pass	114	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
153	95	97	50	FTB	Pass	115	60	Pass
154	101	100	50	FTB	Pass	113	60	Pass
155	92	99	50	FTB	Pass	109	60	Pass
156	91	96	50	FTB	Pass	108	60	Pass
157	90	95	50	FTB	Pass	108	60	Pass
158	86	99	50	FTB	Pass	114	60	Pass
159	86	89	50	FTB	Pass	113	60	Pass
160	96	102	50	FTB	Pass	109	60	Pass
161	91	88	50	FTB	Pass	109	60	Pass
162	97	101	50	FTB	Pass	112	60	Pass
163	90	92	50	AD-BRK	Fail	109	60	Pass
164	92	89	50	FTB	Pass	104	60	Pass
165	91	94	50	FTB	Pass	105	60	Pass
166	94	100	50	FTB	Pass	111	60	Pass
167	83	91	50	FTB	Pass	109	60	Pass
168	94	95	50	FTB	Pass	109	60	Pass
169	98	100	50	FTB	Pass	114	60	Pass
170	98	101	50	FTB	Pass	112	60	Pass
171	88	101	50	FTB	Pass	109	60	Pass
172	93	96	50	FTB	Pass	112	60	Pass
173	95	96	50	FTB	Pass	109	60	Pass
174	91	96	50	FTB	Pass	111	60	Pass
175	91	94	50	FTB	Pass	107	60	Pass
176	98	89	50	FTB	Pass	108	60	Pass
177	99	99	50	FTB	Pass	102	60	Pass
178	91	89	50	FTB	Pass	106	60	Pass
179	90	93	50	FTB	Pass	106	60	Pass
180	104	103	50	FTB	Pass	107	60	Pass
181	93	92	50	FTB	Pass	109	60	Pass
182	90	89	50	FTB	Pass	109	60	Pass
183	97	104	50	FTB	Pass	110	60	Pass
184	94	94	50	FTB	Pass	111	60	Pass
185	92	99	50	FTB	Pass	107	60	Pass
186	90	98	50	FTB	Pass	106	60	Pass
187	102	99	50	FTB	Pass	108	60	Pass
188	96	96	50	FTB	Pass	109	60	Pass
189	100	90	50	FTB	Pass	111	60	Pass
190	96	97	50	FTB	Pass	112	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
191	94	97	50	FTB	Pass	111	60	Pass
192	95	91	50	FTB	Pass	108	60	Pass
193	91	96	50	FTB	Pass	108	60	Pass
194	94	89	50	FTB	Pass	108	60	Pass
195	94	103	50	FTB	Pass	109	60	Pass
196	97	97	50	FTB	Pass	110	60	Pass
197	99	92	50	FTB	Pass	111	60	Pass
198	93	95	50	FTB	Pass	111	60	Pass
199	95	95	50	FTB	Pass	112	60	Pass
200	94	96	50	FTB	Pass	110	60	Pass
201	95	94	50	FTB	Pass	110	60	Pass
202	95	95	50	FTB	Pass	104	60	Pass
203	97	100	50	FTB	Pass	109	60	Pass
204	95	97	50	FTB	Pass	113	60	Pass
205	96	98	50	FTB	Pass	113	60	Pass
206	88	100	50	FTB	Pass	108	60	Pass
207	94	96	50	FTB	Pass	107	60	Pass
208	96	95	50	FTB	Pass	107	60	Pass
209	95	93	50	FTB	Pass	108	60	Pass
210	94	102	50	FTB	Pass	115	60	Pass
211	99	101	50	FTB	Pass	114	60	Pass
212	96	99	50	FTB	Pass	109	60	Pass
213	94	96	50	FTB	Pass	109	60	Pass
214	96	96	50	FTB	Pass	106	60	Pass
215	86	92	50	FTB	Pass	106	60	Pass
216	95	96	50	FTB	Pass	109	60	Pass
217	93	91	50	FTB	Pass	107	60	Pass
218	96	98	50	FTB	Pass	108	60	Pass
219	91	92	50	FTB	Pass	106	60	Pass
220	100	102	50	FTB	Pass	115	60	Pass
221	91	99	50	FTB	Pass	113	60	Pass
222	89	95	50	FTB	Pass	112	60	Pass
223	92	98	50	FTB	Pass	113	60	Pass
224	99	102	50	FTB	Pass	107	60	Pass
225	93	101	50	FTB	Pass	114	60	Pass
226	90	97	50	FTB	Pass	110	60	Pass
227	92	92	50	FTB	Pass	114	60	Pass
228	97	95	50	FTB	Pass	114	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
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Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
229	89	96	50	FTB	Pass	108	60	Pass
230	97	96	50	FTB	Pass	103	60	Pass
231	98	100	50	FTB	Pass	109	60	Pass
232	90	93	50	FTB	Pass	107	60	Pass
233	88	92	50	FTB	Pass	108	60	Pass
234	94	92	50	FTB	Pass	107	60	Pass
235	90	91	50	FTB	Pass	105	60	Pass
236	94	94	50	FTB	Pass	105	60	Pass
237	92	97	50	FTB	Pass	103	60	Pass
238	90	101	50	FTB	Pass	107	60	Pass
239	99	102	50	FTB	Pass	108	60	Pass
240	103	101	50	FTB	Pass	115	60	Pass
241	93	105	50	FTB	Pass	110	60	Pass
242	79	95	50	FTB	Pass	106	60	Pass
243	91	96	50	FTB	Pass	105	60	Pass
244	92	100	50	FTB	Pass	106	60	Pass
245	100	100	50	FTB	Pass	113	60	Pass
246	98	96	50	FTB	Pass	114	60	Pass
247	93	97	50	FTB	Pass	113	60	Pass
248	95	99	50	FTB	Pass	111	60	Pass
249	95	99	50	FTB	Pass	111	60	Pass
250	93	99	50	FTB	Pass	106	60	Pass
251	89	93	50	FTB	Pass	108	60	Pass
252	93	93	50	FTB	Pass	109	60	Pass
253	89	94	50	FTB	Pass	109	60	Pass
254	83	88	50	FTB	Pass	108	60	Pass
255	90	92	50	FTB	Pass	107	60	Pass
256	88	93	50	FTB	Pass	108	60	Pass
257	95	96	50	FTB	Pass	105	60	Pass
258	89	92	50	FTB	Pass	107	60	Pass
259	96	96	50	FTB	Pass	111	60	Pass
260	104	99	50	FTB	Pass	110	60	Pass
261	87	89	50	FTB	Pass	109	60	Pass
262	87	90	50	FTB	Pass	109	60	Pass
263	93	93	50	FTB	Pass	110	60	Pass
264	89	91	50	AD-BRK	Fail	110	60	Pass
265	91	94	50	FTB	Pass	111	60	Pass
266	89	73	50	AD-BRK	Fail	107	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
267	95	100	50	FTB	Pass	106	60	Pass
268	88	95	50	AD-BRK	Fail	112	60	Pass
269	90	89	50	AD-BRK	Fail	106	60	Pass
270	89	88	50	FTB	Pass	97	60	Pass
271	95	95	50	FTB	Pass	112	60	Pass
272	73	74	50	AD-BRK	Fail	106	60	Pass
273	88	89	50	FTB	Pass	108	60	Pass
274	89	89	50	FTB	Pass	108	60	Pass
275	74	93	50	FTB	Pass	108	60	Pass
276	89	93	50	FTB	Pass	107	60	Pass
277	92	98	50	FTB	Pass	112	60	Pass
278	91	95	50	FTB	Pass	91	60	Pass
279	90	96	50	FTB	Pass	111	60	Pass
280	95	102	50	FTB	Pass	111	60	Pass
281	88	91	50	FTB	Pass	112	60	Pass
282	78	92	50	AD-BRK	Fail	112	60	Pass
283	95	100	50	FTB	Pass	108	60	Pass
284	90	90	50	FTB	Pass	110	60	Pass
285	91	99	50	FTB	Pass	106	60	Pass
286	72	72	50	AD-BRK	Fail	109	60	Pass
287	91	92	50	FTB	Pass	112	60	Pass
288	91	99	50	FTB	Pass	105	60	Pass
289	88	89	50	FTB	Pass	105	60	Pass
290	85	93	50	FTB	Pass	109	60	Pass
291	86	92	50	FTB	Pass	110	60	Pass
292	71	75	50	AD-BRK	Fail	110	60	Pass
293	95	97	50	FTB	Pass	112	60	Pass
294	91	96	50	FTB	Pass	111	60	Pass
295	90	96	50	FTB	Pass	105	60	Pass
296	78	88	50	AD-BRK	Fail	109	60	Pass
297	64	EXT	44	FTB	Pass	100	60	Pass
298	91	94	50	FTB	Pass	105	60	Pass
299	66	EXT	44	FTB	Pass	104	60	Pass
300	83	EXT	44	FTB	Pass	106	60	Pass
301	75	EXT	44	FTB	Pass	105	60	Pass
302	92	89	50	FTB	Pass	111	60	Pass
303	91	96	50	FTB	Pass	109	60	Pass
304	91	96	50	FTB	Pass	110	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
305	101	102	50	FTB	Pass	114	60	Pass
306	102	105	50	FTB	Pass	110	60	Pass
307	94	92	50	FTB	Pass	114	60	Pass
308	91	97	50	FTB	Pass	104	60	Pass
309	93	94	50	FTB	Pass	114	60	Pass
310	95	94	50	FTB	Pass	112	60	Pass
311	90	90	50	FTB	Pass	112	60	Pass
312	88	99	50	FTB	Pass	111	60	Pass
313	106	98	50	FTB	Pass	115	60	Pass
314	94	91	50	FTB	Pass	110	60	Pass
315	92	95	50	FTB	Pass	110	60	Pass
316	92	93	50	FTB	Pass	113	60	Pass
317	90	100	50	FTB	Pass	111	60	Pass
318	91	93	50	FTB	Pass	105	60	Pass
319	58	EXT	44	FTB	Pass	111	60	Pass
320	89	EXT	44	FTB	Pass	102	60	Pass
321	90	96	50	FTB	Pass	110	60	Pass
322	94	96	50	FTB	Pass	109	60	Pass
323	109	98	50	FTB	Pass	113	60	Pass
324	90	93	50	FTB	Pass	110	60	Pass
325	101	97	50	FTB	Pass	112	60	Pass
326	95	98	50	FTB	Pass	110	60	Pass
327	94	99	50	FTB	Pass	111	60	Pass
328	97	98	50	FTB	Pass	112	60	Pass
329	93	98	50	FTB	Pass	113	60	Pass
330	102	100	50	FTB	Pass	105	60	Pass
331	94	95	50	FTB	Pass	112	60	Pass
332	92	94	50	FTB	Pass	112	60	Pass
333	88	97	50	FTB	Pass	112	60	Pass
334	94	97	50	FTB	Pass	113	60	Pass
335	98	101	50	FTB	Pass	109	60	Pass
336	97	99	50	FTB	Pass	114	60	Pass
337	85	EXT	44	FTB	Pass	112	60	Pass
338	85	EXT	44	FTB	Pass	104	60	Pass
339	93	94	44	FTB	Pass	99	60	Pass
340	79	EXT	44	AD-BRK	Fail	108	60	Pass
340A	95	EXT	44	FTB	Pass	99	60	Pass
340B	95	EXT	44	FTB	Pass	109	60	Pass

GCERG - Site F Landfill
Solmax - 40-mil LLDPE Textured Black
By: David Vogt, P.E., CQA Officer

Destruct Test Summary

Destruct Number	Outside Peel Average (psi)	Inside Peel Average (psi)	Minimum Strength Requirement Peel (psi)	Break Code	Pass/Fail	Shear Average (psi)	Minimum Strength Requirement Shear (psi)	Pass/Fail
341	92	96	50	FTB	Pass	111	60	Pass
342	91	91	50	FTB	Pass	111	60	Pass
343	91	95	50	FTB	Pass	113	60	Pass
344	94	99	50	FTB	Pass	113	60	Pass
345	96	95	50	FTB	Pass	111	60	Pass
346	96	96	50	FTB	Pass	111	60	Pass
347	100	96	50	FTB	Pass	113	60	Pass
348	96	94	50	FTB	Pass	111	60	Pass
349	95	EXT	44	FTB	Pass	103	60	Pass
350	85	EXT	44	FTB	Pass	105	60	Pass
351	99	97	50	FTB	Pass	115	60	Pass
352	101	95	50	FTB	Pass	111	60	Pass
353	91	99	50	FTB	Pass	112	60	Pass
354	101	93	50	FTB	Pass	108	60	Pass
355	96	96	50	FTB	Pass	110	60	Pass
356	100	93	50	FTB	Pass	111	60	Pass
357	88	EXT	44	FTB	Pass	109	60	Pass
358	85	EXT	44	FTB	Pass	107	60	Pass
359	84	EXT	44	FTB	Pass	100	60	Pass
360	97	EXT	44	FTB	Pass	102	60	Pass

Date: 2022-07-12

Mail To:

David Vogt
HDR, Inc
17111 Preston Road, Suite 300
Dallas , TX , 75248

Bill To:
HDR, Inc
JBS Engineering and Envronmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802
10290148, PO 762339

e-mail:
david.vogt@hdrinc.com phil@jbs-bcs.com

Dear Mr. Vogt,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**73284**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jarrett A. Nelson

Jarret Nelson
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: HDR, Inc
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73284

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-1 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	99	94	94	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	102	105	100	102	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	108	110	110	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-2 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	91	91	87	94	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	102	86	101	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	109	109	109	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: HDR, Inc
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73284

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-3 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	102	96	94	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	100	94	103	99	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	113	114	111	113	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-4 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	98	100	98	103	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	96	106	100	104	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	111	114	113	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-07-13

Mail To:
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2129 E William J Bryan Pkwy
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Bill To:

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22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**73321**
Material(s) Tested:	(10) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jarrett A. Nelson

Jarret Nelson
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73321

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-5 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	96	99	96	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	109	106	100	103	103	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	113	114	117	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-6 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	103	104	104	107	99	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	108	95	100	103	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	114	113	116	119	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73321

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-7 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	100	97	99	97	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	107	106	90	100	91	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	116	117	117	120	121	**118**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-8 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	93	91	88	92	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	108	99	103	105	108	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	116	113	117	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73321

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-9 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	101	103	102	98	89	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	92	101	103	104	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	109	114	115	116	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-10 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	107	93	96	97	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	108	101	104	105	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	111	112	111	113	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73321

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-11 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	97	95	109	105	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	109	100	109	107	**106**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	116	112	111	115	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-12 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	98	103	95	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	101	96	102	98	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	114	110	109	113	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73321

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-13 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	96	99	101	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	106	108	107	104	**106**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	113	114	112	115	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-14 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	101	106	101	101	104	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	108	102	103	110	**106**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	116	114	116	114	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-07-14

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**73348**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jarrett A. Nelson

Jarret Nelson
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73348

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-15 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	92	92	91	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	100	89	97	93	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	107	108	108	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-16 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	86	86	87	87	**87**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	99	103	96	99	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	113	112	110	112	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73348

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-17 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	95	88	95	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	93	86	93	101	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	115	112	112	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-18 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	94	98	99	88	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	98	105	104	102	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	114	111	111	113	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-07-18

Mail To:
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**73413**
Material(s) Tested:	(6) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile

Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73413

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-19 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	90	93	88	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	100	92	96	100	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	112	115	110	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-20 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	99	95	90	97	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	100	102	93	97	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	109	109	107	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73413

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-21 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	91	94	96	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	87	96	95	105	99	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	112	111	113	109	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-22 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	99	97	96	93	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	96	97	98	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	113	111	111	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73413

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-23 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	99	97	96	102	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	97	102	99	99	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	115	114	111	114	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-24 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	100	102	104	99	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	99	107	98	104	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	114	113	112	112	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-07-20

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**73485**
Material(s) Tested:	(12) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile

Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73485

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-25 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	98	93	99	104	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	98	101	102	108	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	112	114	114	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-26 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	95	93	97	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	100	104	98	104	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	112	116	117	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73485

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-27 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	89	89	91	93	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	95	91	105	105	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	113	116	114	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-28 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	91	90	88	88	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	107	106	97	97	101	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	110	115	115	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73485

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-29 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	96	95	94	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	101	100	106	101	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	112	111	113	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-30 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	93	90	90	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	107	101	102	100	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	114	115	112	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73485

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-31 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	92	97	96	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	101	102	103	102	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	109	113	109	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-32 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	96	97	99	102	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	104	100	106	102	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	105	106	107	109	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73485

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-33 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	105	97	101	106	105	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	98	84	98	102	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	108	109	108	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-34 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	91	89	89	96	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	103	101	99	99	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	108	110	111	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 73485

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-35 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	89	91	97	95	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	97	98	95	95	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	104	112	111	107	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-36 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	92	92	94	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	96	94	101	94	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	103	104	103	106	103	**104**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-09-20

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75163**
Material(s) Tested:	(5) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Patricia Zabaleta
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75163

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-37 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	109	88	107	106	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	110	91	101	104	99	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	109	110	112	112	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-38 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	104	100	107	96	109	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	96	95	101	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	112	111	113	116	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75163

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-39 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	97	97	92	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	108	100	104	104	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	120	119	114	114	113	**116**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-40 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	96	98	96	92	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	110	107	101	102	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	109	112	110	114	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75163

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-41 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	95	97	97	92	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	99	103	107	100	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	113	112	114	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-09-21

Mail To:
Bill Cullen
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2129 E William J Bryan Pkwy
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Bill To:

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22011, PO 762339

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75185**
Material(s) Tested:	(10) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75185

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-42 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	71	86	100	75	**84**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	93	94	105	104	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	116	110	112	110	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-43 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	97	102	101	101	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	101	108	109	104	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	113	111	115	111	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75185

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-44 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	101	91	95	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	102	96	105	99	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	115	112	113	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-45 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	96	97	93	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	94	102	98	96	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	113	114	113	116	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75185

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-46 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	109	102	101	101	98	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	100	104	104	98	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	116	121	115	116	111	**116**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-47 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	101	106	93	95	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	107	101	104	96	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	118	118	116	117	**116**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75185

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-48 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	107	103	99	98	95	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	109	108	102	103	103	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	114	117	115	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-49 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	97	98	96	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	104	97	101	99	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	114	109	110	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75185

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-50 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	89	99	99	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	100	101	108	100	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	110	110	110	107	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-51 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	105	95	106	104	88	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	92	106	101	95	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	109	111	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-09-22

Mail To:
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Bill To:

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22011, PO 762339

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75232**
Material(s) Tested:	(9) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75232

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-52 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	97	95	99	96	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	97	95	96	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	107	111	107	112	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-53 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	96	102	105	96	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	105	104	106	103	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	111	113	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75232

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-54 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	94	95	96	92	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	107	104	107	102	107	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	112	111	110	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-55 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	94	100	94	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	101	100	102	101	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	113	115	116	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75232

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-56 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	108	109	100	101	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	100	98	103	106	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	117	119	115	114	115	**116**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-57 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	104	95	105	98	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	104	96	100	101	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	116	117	115	120	119	**117**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75232

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-58 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	101	103	103	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	93	104	101	99	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	116	117	109	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-59 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	106	103	105	102	97	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	98	92	104	97	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	110	110	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75232

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-60 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	103	92	106	101	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	107	99	94	95	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	111	108	106	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-09-23

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75256**
Material(s) Tested:	(3) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75256

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-61 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	105	113	105	111	102	**107**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	107	102	94	104	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	119	123	116	119	117	**119**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-62 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	97	99	100	103	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	102	106	113	105	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	120	114	115	118	**116**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75256

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-63 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	101	101	106	108	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	110	101	111	112	**107**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	118	113	116	115	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-09-29

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75414**
Material(s) Tested:	(6) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75414

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-64 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	99	99	106	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	93	92	97	101	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	117	109	107	111	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-65 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	109	98	92	97	100	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	101	99	92	102	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	109	111	111	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75414

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-66 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	93	92	95	98	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	97	99	96	98	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	110	110	109	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-67 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	100	103	104	99	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	100	89	101	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	112	113	110	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75414

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-68 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	58	77	73	96	**79**
Peel Incursion (%)	15	100	100	70	10	
Peel Locus Of Failure Code	AD-BRK	AD	AD	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	NON-FTB	NON-FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	84	103	82	83	**92**
Peel Incursion (%)	<5	<5	<5	30	30	
Peel Locus Of Failure Code	SE	SE	SE	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	114	110	110	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-69 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	80	84	88	78	80	**82**
Peel Incursion (%)	25	10	30	<5	30	
Peel Locus Of Failure Code	AD-BRK	AD-BRK	AD-BRK	SE	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	80	90	88	77	75	**82**
Peel Incursion (%)	10	<5	30	25	20	
Peel Locus Of Failure Code	AD-BRK	SE	AD-BRK	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	113	109	109	114	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

Date: 2022-09-30

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75429**
Material(s) Tested:	(6) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75429

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-70 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	92	96	92	98	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	102	100	95	101	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	105	106	103	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-71 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	98	98	103	101	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	97	97	92	103	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	111	106	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75429

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-72 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	103	96	98	101	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	104	99	101	110	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	105	105	108	112	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-73 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	98	99	95	96	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	108	105	105	105	105	**106**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	111	111	114	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75429

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-74 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	96	94	93	87	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	97	99	98	100	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	116	114	108	109	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-75 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	102	97	99	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	100	98	100	102	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	106	107	106	107	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-10-01

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**75459**
Material(s) Tested:	(5) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75459

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-76 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	94	90	96	97	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	101	99	99	98	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	102	109	115	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-77 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	97	93	94	97	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	99	95	100	94	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	105	107	104	109	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75459

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-78 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	87	91	92	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	89	101	102	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	107	108	107	107	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-79 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	87	80	88	85	**87**
Peel Incursion (%)	<5	<5	45	60	<5	
Peel Locus Of Failure Code	SE	SE	AD-BRK	AD-BRK	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	97	99	100	91	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	109	109	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 75459

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-80 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	87	98	106	104	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	76	99	104	91	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	108	110	110	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-12-05

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77001**
Material(s) Tested:	(3) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77001

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-81 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	90	100	100	103	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	78	93	90	100	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	106	104	115	110	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-82 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	106	106	101	88	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	109	107	104	103	108	**106**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	115	114	114	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77001

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-83 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	93	92	96	90	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	111	103	102	103	107	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	116	117	114	114	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-12-07

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Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77044**
Material(s) Tested:	(5) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77044

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-84 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	90	95	95	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	101	107	98	103	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	115	108	110	108	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-85 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	94	92	90	97	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	89	97	96	102	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	110	105	107	105	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77044

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-86 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	81	94	89	102	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	98	99	97	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	107	108	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-87 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	79	86	91	94	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	79	86	81	81	94	**84**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	103	103	98	104	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77044

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-88 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	86	88	94	93	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	98	98	100	101	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	107	104	103	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-12-08

Mail To:
Bill Cullen
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bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77073**
Material(s) Tested:	(2) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77073

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-89 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	92	97	97	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	105	97	102	110	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	107	113	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-90 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	93	93	92	88	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	100	102	100	98	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	113	109	109	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-12-13

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77144**
Material(s) Tested:	(2) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77144

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-91 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	101	104	99	96	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	107	101	99	102	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	109	110	112	113	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-92 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	103	96	95	90	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	107	100	102	101	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	112	112	115	115	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2022-12-20

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Dear Mr. Cullen,

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Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77238**
Material(s) Tested:	(8) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
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FTB	Film tearing bond (all non "AD" failures).
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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77238

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-93 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	96	97	100	93	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	101	95	94	96	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	113	109	109	113	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-94 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	94	96	92	94	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	101	108	86	97	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	118	113	114	118	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77238

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-95 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	107	98	102	101	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	107	107	101	101	103	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	112	104	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-96 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	101	78	84	74	96	**87**
Peel Incursion (%)	<5	35	<5	20	<5	
Peel Locus Of Failure Code	SE	AD-BRK	SE	AD-BRK	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	97	100	93	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	113	111	117	115	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77238

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-97 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	81	96	75	82	89	**85**
Peel Incursion (%)	20	<5	20	<5	<5	
Peel Locus Of Failure Code	AD-BRK	SE	AD-BRK	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	102	98	93	96	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	110	110	107	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-98 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	97	92	89	99	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	96	99	91	97	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	110	108	109	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77238

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-99 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	94	88	91	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	104	92	96	103	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	107	107	107	110	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-100 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	94	90	92	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	104	99	104	97	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	113	113	114	114	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-01-09

Mail To:
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JBS Engineering and Environmental
2129 E William J Bryan Pkwy
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Bill To:

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22011, PO 762339

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77361**
Material(s) Tested:	(6) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77361

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-101 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	91	89	93	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	95	98	95	93	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	109	112	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-102 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	93	91	91	92	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	69	81	102	95	**88**
Peel Incursion (%)	20	30	30	<5	<5	
Peel Locus Of Failure Code	AD-BRK	AD-BRK	AD-BRK	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	109	110	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77361

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-103 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	102	99	95	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	93	99	100	87	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	109	110	113	113	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-104 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	101	93	90	93	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	105	88	93	88	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	108	113	116	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77361

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-105 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	97	93	90	92	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	100	101	93	97	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	108	112	111	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-106 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	107	103	94	101	101	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	103	102	105	100	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	106	106	109	113	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-01-12

Mail To:
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77377**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77377

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-107 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	92	91	91	95	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	94	94	95	98	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	112	109	105	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-108 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	77	106	86	96	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	93	90	99	101	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	108	103	104	98	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77377

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-109 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	94	94	94	95	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	103	103	106	103	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	117	118	112	112	110	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-110 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	90	91	91	92	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	99	102	98	103	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	112	111	114	114	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-01-17

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77391**
Material(s) Tested:	(11) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77391

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-111 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	90	92	98	99	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	95	100	101	102	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	121	126	119	118	120	**121**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-112 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	94	92	98	98	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	99	98	105	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	117	110	111	112	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77391

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-113 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	98	96	98	100	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	100	100	101	104	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	113	107	111	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-114 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	86	101	99	98	90	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	104	102	104	104	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	102	110	109	107	111	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77391

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-115 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	92	96	89	95	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	79	81	87	92	79	**84**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	108	104	103	105	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-116 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	98	99	102	104	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	98	94	99	102	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	102	100	102	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77391

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-117 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	92	90	95	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	101	90	92	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	113	106	110	108	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-118 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	86	88	103	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	101	102	103	109	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	109	106	107	104	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77391

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-119 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	102	103	100	96	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	96	93	92	95	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	110	102	102	104	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-120 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	91	93	98	93	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	105	101	106	92	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	113	110	115	114	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77391

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-121 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	89	86	100	82	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	89	78	95	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	103	103	102	103	103	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-01-21

Mail To:
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77418**
Material(s) Tested:	(9) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,

Jennifer Tenney
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77418

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-122 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	96	91	94	89	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	101	91	93	92	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	105	105	105	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-123 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	94	80	91	91	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	92	92	94	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	111	105	106	103	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77418

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-124 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	92	90	92	97	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	91	90	91	92	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	111	106	108	107	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-125 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	101	99	96	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	93	103	105	77	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	104	102	102	105	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77418

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-126 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	87	91	97	86	**92**
Peel Incursion (%)	<5	<5	<5	<5	100	
Peel Locus Of Failure Code	SE	SE	SE	SE	AD	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	NON-FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	93	95	92	91	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	113	109	110	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-127 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	96	95	94	94	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	92	86	92	91	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	111	107	107	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77418

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-128 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	95	86	86	99	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	91	89	86	91	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	113	107	108	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-129 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	100	92	100	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	69	85	95	80	**84**
Peel Incursion (%)	<5	100	<5	<5	<5	
Peel Locus Of Failure Code	SE	AD	SE	SE	SE	
Peel NSF Failure Code	FTB	NON-FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	111	105	108	104	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77418

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-130 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	84	97	85	88	78	**86**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	83	75	78	88	71	**79**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	101	103	95	100	99	**100**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-01-24

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77431**
Material(s) Tested:	(3) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77431

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-131 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	106	88	105	94	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	97	101	100	102	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	112	111	115	118	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-132 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	94	90	95	91	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	94	92	86	91	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	106	106	110	110	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77431

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-133 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	88	86	84	87	**86**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	101	99	98	97	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	109	110	113	115	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

Date: 2023-02-13

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bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77479**
Material(s) Tested:	(3) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77479

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-134 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	106	102	103	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	97	93	91	97	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	122	121	119	121	118	**120**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-135 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	102	98	99	104	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	96	92	98	106	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	121	117	118	116	118	**118**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77479

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-136 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	98	98	107	100	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	97	93	98	108	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	116	116	115	119	**116**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-02-14

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77482**
Material(s) Tested:	(2) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77482

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-137 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	87	92	99	86	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	102	95	96	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	117	114	111	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-138 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	95	93	83	99	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	104	104	101	107	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	113	113	114	120	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-02-17

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

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22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77494**
Material(s) Tested:	(1) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77494

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-139 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	108	95	103	97	104	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	106	104	98	106	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	117	118	113	114	113	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-02-21

Mail To:
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77500**
Material(s) Tested:	(20) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-140 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	95	98	97	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	93	93	102	106	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	119	115	115	120	116	**117**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-141 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	94	93	95	99	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	104	105	102	100	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	113	113	113	117	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-142 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	89	91	93	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	94	97	97	106	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	113	113	112	118	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-143 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	104	90	104	99	95	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	94	90	92	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	118	114	114	113	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-144 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	96	94	100	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	93	93	99	101	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	116	111	110	114	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-145 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	86	84	86	88	96	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	89	98	93	90	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	104	105	108	107	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-146 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	91	95	95	93	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	92	92	90	97	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	107	106	112	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-147 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	95	93	96	105	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	99	104	105	104	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	115	115	117	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-148 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	82	98	87	103	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	82	103	86	83	89	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	107	101	109	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-149 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	98	97	103	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	96	98	101	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	109	109	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-150 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	91	96	94	99	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	89	93	93	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	111	110	110	113	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-151 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	98	94	89	103	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	100	98	98	101	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	109	108	110	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-152 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	99	99	98	106	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	99	94	99	108	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	114	112	117	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-153 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	96	94	93	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	97	96	95	100	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	113	114	114	120	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-154 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	95	102	103	107	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	97	97	99	104	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	113	112	111	117	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-155 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	89	89	92	98	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	96	97	101	103	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	107	108	109	113	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-156 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	91	88	96	88	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	93	95	101	97	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	106	109	112	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-157 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	92	90	87	89	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	95	89	97	99	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	107	107	112	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77500

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-158 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	82	81	94	91	81	**86**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	99	98	100	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	113	113	112	117	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-159 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	77	90	78	86	**86**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	86	94	90	95	81	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	112	111	117	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-02-28

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77530**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77530

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-160 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	95	101	95	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	104	104	104	98	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	110	106	110	113	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-161 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	92	88	94	88	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	88	98	75	95	84	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	112	105	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77530

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-162 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	102	101	92	94	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	101	102	104	97	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	111	113	112	110	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-163 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	87	73	92	95	**90**
Peel Incursion (%)	<5	85	50	<5	<5	
Peel Locus Of Failure Code	SE	AD-BRK	AD-BRK	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	83	82	104	90	**92**
Peel Incursion (%)	<5	<5	20	<5	<5	
Peel Locus Of Failure Code	SE	SE	AD-BRK	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	112	108	111	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-02-27

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2129 E William J Bryan Pkwy
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77524**
Material(s) Tested:	(3) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77524

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-164 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	94	95	96	87	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	92	85	88	87	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	105	104	103	105	**104**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-165 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	93	88	92	94	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	89	97	96	93	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	104	104	105	108	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77524

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-166 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	97	93	88	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	104	99	100	98	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	115	109	111	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-01

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77535**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77535

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-167 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	83	81	80	80	91	**83**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	86	94	90	93	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	112	107	110	107	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-168 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	88	98	91	92	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	97	95	92	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	110	111	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77535

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-169 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	94	101	95	105	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	103	96	97	108	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	113	113	116	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-170 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	98	102	90	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	105	102	93	110	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	111	111	115	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-03

Mail To:
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2129 E William J Bryan Pkwy
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Bill To:

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22011, PO 762339

e-mail:
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77550**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77550

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-171 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	89	87	76	90	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	100	102	102	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	107	108	110	107	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-172 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	95	93	93	91	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	96	98	96	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	111	112	113	110	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77550

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-173 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	97	93	97	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	98	92	102	90	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	108	107	110	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-174 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	90	95	94	87	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	94	99	96	93	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	110	110	113	111	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-10

Mail To:
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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77591**
Material(s) Tested:	(6) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77591

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-175 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	91	86	93	93	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	96	84	97	95	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	106	106	108	108	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-176 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	101	97	97	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	92	88	89	86	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	110	107	108	108	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77591

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-177 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	99	103	95	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	100	98	99	102	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	102	107	96	104	103	**102**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-178 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	91	90	93	90	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	87	94	86	91	88	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	107	105	105	108	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77591

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-179 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	92	84	91	92	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	89	97	92	97	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	106	107	105	108	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-180 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	104	104	109	105	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	98	102	103	104	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	108	106	107	107	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-13

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77595**
Material(s) Tested:	(8) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77595

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-181 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	93	92	92	95	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	87	90	94	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	107	108	112	111	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-182 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	75	87	90	103	95	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	86	85	88	93	91	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	111	108	111	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77595

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-183 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	103	98	86	97	103	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	106	103	99	108	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	109	110	110	110	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-184 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	97	93	94	96	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	100	92	95	92	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	111	112	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77595

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-185 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	90	92	94	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	96	99	104	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	110	105	108	108	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-186 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	88	89	91	89	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	97	93	97	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	102	106	106	110	107	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77595

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-187 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	104	100	102	103	100	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	101	93	99	98	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	106	108	108	112	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-188 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	98	97	95	97	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	93	96	88	101	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	108	112	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-14

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77605**
Material(s) Tested:	(20) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-189 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	105	98	95	105	97	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	93	83	91	91	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	108	114	113	108	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-190 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	101	96	91	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	92	98	96	96	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	111	111	114	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-191 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	93	91	97	93	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	97	97	100	92	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	115	108	110	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-192 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	92	97	97	100	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	88	96	86	87	96	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	107	107	109	111	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-193 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	96	82	92	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	97	90	100	100	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	109	108	108	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-194 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	96	94	90	94	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	90	90	86	87	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	106	109	108	108	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-195 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	91	93	97	98	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	104	105	103	102	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	110	109	109	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-196 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	100	94	93	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	96	94	94	101	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	114	108	111	107	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-197 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	97	95	101	102	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	83	90	99	96	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	110	113	112	112	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-198 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	96	91	93	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	99	93	98	90	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	109	110	113	111	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-199 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	94	92	96	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	92	94	94	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	112	112	114	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-200 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	92	96	96	90	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	97	94	95	91	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	111	111	109	107	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-201 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	101	95	94	93	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	88	94	96	97	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	109	109	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-202 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	96	92	95	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	99	96	94	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	107	90	110	**104**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
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Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-203 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	96	97	98	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	97	101	102	102	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	108	107	112	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-204 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	94	99	93	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	88	90	101	103	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	114	117	111	111	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
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Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-205 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	102	95	88	99	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	99	95	103	100	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	114	112	112	115	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-206 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	66	92	92	97	93	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	94	96	101	102	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	112	108	106	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77605

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-207 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	97	88	96	95	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	90	93	103	90	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	99	110	111	109	105	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-208 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	86	101	92	100	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	98	92	98	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	108	107	107	105	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-16

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77611**
Material(s) Tested:	(12) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77611

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-209 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	95	90	94	100	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	87	96	94	95	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	107	107	110	110	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-210 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	91	96	97	89	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	108	98	102	100	100	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	118	115	112	115	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77611

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-211 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	98	96	102	105	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	98	101	103	103	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	112	113	112	116	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-212 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	97	95	94	100	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	101	97	99	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	109	109	109	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77611

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-213 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	93	94	93	97	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	99	92	99	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	107	108	112	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-214 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	94	95	98	94	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	94	93	99	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	107	105	109	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77611

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-215 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	91	86	77	88	**86**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	93	91	92	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	107	108	106	105	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-216 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	97	98	85	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	97	92	98	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	111	108	108	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77611

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-217 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	101	96	90	88	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	84	92	93	90	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	105	106	111	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-218 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	94	98	97	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	96	101	97	98	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	107	111	107	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77611

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-219 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	86	91	91	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	82	96	95	96	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	103	105	105	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-220 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	99	100	101	100	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	107	104	98	99	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	118	114	117	113	113	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-23

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77640**
Material(s) Tested:	(9) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77640

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-221 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	101	91	84	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	101	99	95	100	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	112	111	113	112	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-222 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	90	86	89	89	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	97	99	95	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	112	112	111	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77640

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-223 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	86	91	94	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	99	98	94	97	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	115	111	111	114	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-224 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	94	97	108	96	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	103	107	103	101	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	105	103	108	110	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77640

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-225 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	94	95	88	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	103	99	102	104	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	114	114	114	113	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-226 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	92	92	86	95	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	103	100	90	99	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	109	113	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77640

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-227 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	92	94	87	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	89	95	92	90	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	114	113	113	116	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-228 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	100	96	96	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	94	101	91	93	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	115	116	114	109	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77640

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-229 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	86	93	87	88	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	92	98	91	101	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	108	108	108	110	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-24

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77649**
Material(s) Tested:	(7) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77649

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-230 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	96	97	97	101	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	97	98	92	90	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	103	101	104	103	106	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-231 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	99	96	103	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	107	99	99	96	97	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	108	111	111	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77649

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-232 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	87	91	89	93	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	91	91	90	99	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	107	108	108	106	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-233 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	82	92	86	90	91	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	89	87	93	95	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	106	107	109	108	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77649

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-234 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	99	93	91	96	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	89	91	90	96	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	105	108	108	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-235 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	92	89	87	91	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	95	86	95	88	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	105	105	105	104	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77649

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-236 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	97	95	94	90	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	96	91	100	91	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	100	106	106	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-29

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
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Bill To:

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22011, PO 762339

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77665**
Material(s) Tested:	(17) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-237 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	100	78	93	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	93	96	98	99	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	104	102	100	104	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-238 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	93	88	89	92	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	101	102	110	104	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	109	105	107	106	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-239 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	99	106	90	106	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	108	98	100	99	106	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	109	106	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-240 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	108	97	105	101	103	**103**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	105	91	104	98	108	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	119	113	116	113	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-241 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	94	91	97	89	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	111	101	102	106	104	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	110	112	112	110	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-242 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	86	86	73	82	66	**79**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	86	95	103	98	92	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	105	109	104	106	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-243 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	93	88	96	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	95	89	107	93	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	104	108	107	102	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-244 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	90	91	92	91	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	99	101	94	105	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	105	104	106	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-245 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	98	104	101	100	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	104	100	97	101	98	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	111	112	115	111	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-246 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	95	103	100	92	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	98	101	95	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	113	112	112	117	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-247 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	90	93	95	92	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	97	92	99	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	115	112	112	112	114	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-248 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	96	94	91	98	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	98	99	98	96	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	109	110	111	115	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-249 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	97	92	96	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	93	91	103	103	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	110	110	111	113	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-250 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	94	93	95	95	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	99	96	101	97	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	105	104	108	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-251 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	86	90	89	88	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	91	93	93	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	111	107	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-252 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	92	87	94	98	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	89	93	94	96	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	107	109	112	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77665

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-253 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	88	91	97	78	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	91	91	92	103	94	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	108	108	108	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-03-30

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

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22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**77672**
Material(s) Tested:	(6) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Nicole Saucedo

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77672

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-254 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	80	71	84	92	**83**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	80	88	92	93	87	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	109	107	107	108	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-255 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	91	90	90	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	92	91	92	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	106	107	108	111	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77672

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-256 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	87	87	89	92	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	91	98	88	91	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	108	106	107	112	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-257 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	98	91	96	93	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	93	97	95	99	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	103	105	108	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 77672

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-258 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	91	85	87	95	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	89	89	91	95	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	107	107	110	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-259 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	97	94	96	99	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	96	93	96	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	109	111	113	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-12-05

Mail To:
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Bill To:

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22011, PO 762339

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**79861**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79861

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-260 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	107	103	99	110	**104**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	102	106	97	90	98	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	110	108	109	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-261 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	94	71	78	95	**87**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	94	91	83	88	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	108	110	109	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79861

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-262 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	85	90	85	87	**87**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	89	87	96	87	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	110	109	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-263 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	93	91	92	93	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	89	98	85	98	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	110	109	111	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-12-12

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**79904**
Material(s) Tested:	(14) Heat Fusion Weld Seam(s) (1) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-264 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	53	100	97	97	**89**
Peel Incursion (%)	<5	40	<5	<5	<5	
Peel Locus Of Failure Code	SE	AD-BRK	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	92	93	89	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	111	111	108	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-265 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	89	90	92	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	95	95	95	93	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	109	111	111	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-266 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	89	93	92	85	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	82	83	72	67	62	**73**
Peel Incursion (%)	<5	<5	100	60	100	
Peel Locus Of Failure Code	SE	SE	AD	AD-BRK	AD	
Peel NSF Failure Code	FTB	FTB	NON-FTB	FTB	NON-FTB	
Shear						**Shear**
Shear Strength (ppi)	107	106	106	107	107	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-267 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	96	92	97	97	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	90	103	106	106	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	108	106	107	106	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-268 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	68	92	93	92	96	**88**
Peel Incursion (%)	40	<5	<5	<5	<5	
Peel Locus Of Failure Code	AD-BRK	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	87	97	95	102	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	112	110	111	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-269 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	88	90	90	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	86	99	72	99	**89**
Peel Incursion (%)	70	<5	<5	20	<5	
Peel Locus Of Failure Code	AD-BRK	SE	SE	AD-BRK	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	106	106	105	107	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-271 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	94	94	94	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	93	95	98	92	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	110	112	111	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-272 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	73	66	69	67	92	**73**
Peel Incursion (%)	100	100	40	100	100	
Peel Locus Of Failure Code	AD	AD	AD-BRK	AD	AD	
Peel NSF Failure Code	NON-FTB	NON-FTB	FTB	NON-FTB	NON-FTB	
Side: B						**Peel B**
Peel Strength (ppi)	74	76	89	72	60	**74**
Peel Incursion (%)	20	30	<5	40	70	
Peel Locus Of Failure Code	AD-BRK	AD-BRK	SE	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	102	107	110	106	104	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-273 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	86	91	88	86	89	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	85	93	84	92	91	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	108	108	108	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-274 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	87	92	90	87	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	89	88	88	89	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	107	109	109	107	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-275 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	85	84	47	78	75	**74**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	98	87	99	87	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	106	107	110	109	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-276 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	88	89	89	86	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	96	91	92	92	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	107	107	108	107	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-278 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	91	90	92	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	97	95	93	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	111	110	109	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-288 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	101	93	89	88	86	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	101	99	98	100	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	105	106	104	103	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79904

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-297 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	86	87	55	58	34	**64**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	100	100	98	102	101	**100**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2023-12-13

Mail To:
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JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

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22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**79924**
Material(s) Tested:	(19) Heat Fusion Weld Seam(s) (1) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-270 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	90	97	84	88	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	85	83	99	84	90	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	95	95	105	95	96	**97**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-277 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	90	99	90	89	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	102	93	105	89	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	111	121	108	110	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-279 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	85	89	100	88	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	98	103	90	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	111	110	110	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-280 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	94	102	92	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	102	115	98	101	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	111	109	111	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-281 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	78	99	93	85	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	78	89	103	93	93	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	113	111	113	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-282 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	78	82	85	77	70	**78**
Peel Incursion (%)	<5	<5	<5	90	80	
Peel Locus Of Failure Code	SE	SE	SE	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	85	92	101	87	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	114	112	112	110	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-283 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	98	102	93	89	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	99	109	97	100	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	109	107	110	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-284 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	79	92	101	92	86	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	92	101	86	83	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	112	109	111	107	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-285 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	87	93	96	86	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	100	99	101	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	105	108	109	106	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-286 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	64	71	85	70	71	**72**
Peel Incursion (%)	100	100	100	100	100	
Peel Locus Of Failure Code	AD	AD	AD	AD	AD	
Peel NSF Failure Code	NON-FTB	NON-FTB	NON-FTB	NON-FTB	NON-FTB	
Side: B						**Peel B**
Peel Strength (ppi)	61	65	82	78	76	**72**
Peel Incursion (%)	100	100	100	100	100	
Peel Locus Of Failure Code	AD	AD	AD	AD	AD	
Peel NSF Failure Code	NON-FTB	NON-FTB	NON-FTB	NON-FTB	NON-FTB	
Shear						**Shear**
Shear Strength (ppi)	106	109	108	112	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-287 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	91	89	90	92	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	90	91	95	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	111	112	111	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-289 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	93	86	93	79	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	84	84	93	89	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	106	104	106	105	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-290 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	80	85	81	91	90	**85**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	95	92	92	94	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	110	108	108	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-291 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	80	96	84	82	90	**86**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	88	94	95	92	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	111	108	110	110	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-292 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	68	79	70	71	67	**71**
Peel Incursion (%)	<5	<5	<5	100	100	
Peel Locus Of Failure Code	SE	SE	SE	AD	AD	
Peel NSF Failure Code	FTB	FTB	FTB	NON-FTB	NON-FTB	
Side: B						**Peel B**
Peel Strength (ppi)	88	81	72	66	67	**75**
Peel Incursion (%)	<5	<5	<5	60	70	
Peel Locus Of Failure Code	SE	SE	SE	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	113	108	110	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-293 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	96	97	95	95	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	96	95	96	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	112	111	112	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-294 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	91	88	91	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	97	95	93	97	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	111	111	113	112	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-295 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	89	88	88	92	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	95	99	83	103	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	106	105	102	105	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-296 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	74	78	84	67	88	**78**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	93	99	71	88	**88**
Peel Incursion (%)	<5	<5	<5	50	20	
Peel Locus Of Failure Code	SE	SE	SE	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	117	107	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79924

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-302 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	84	76	75	89	73	**79**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	97	99	100	100	104	**100**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2024-01-02

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Bill To:

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**79976**
Material(s) Tested:	(4) Heat Fusion Weld Seam(s) (3) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79976

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-298 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	89	90	94	95	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	97	95	92	88	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	105	106	106	105	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-302 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	93	90	92	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	88	87	86	91	95	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	111	112	110	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79976

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-303 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	94	89	91	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	90	100	99	98	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	110	110	110	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-306 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	104	103	102	91	109	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	103	106	107	104	106	**105**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	107	113	112	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79976

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-299 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	66	78	71	59	55	**66**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	104	105	101	104	**104**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-300 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	73	88	86	88	82	**83**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	107	107	105	**106**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-301 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	65	93	65	81	70	**75**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	101	107	103	105	108	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2024-01-05

Mail To:
Bill Cullen
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Bill To:

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**79981**
Material(s) Tested:	(14) Heat Fusion Weld Seam(s) (1) Single Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-304 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	90	93	88	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	100	94	97	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	108	110	110	110	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-305 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	100	102	102	107	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	89	106	102	105	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	116	113	116	112	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-307 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	92	95	93	94	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	92	91	94	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	116	114	113	115	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-308 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	86	86	91	95	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	97	98	99	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	103	107	104	102	104	**104**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
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Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-309 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	92	92	94	91	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	97	96	92	88	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	114	113	115	114	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-310 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	92	92	100	98	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	91	99	90	99	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	114	111	113	113	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-311 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	91	88	91	87	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	86	89	83	94	98	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	114	111	113	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-312 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	93	88	89	82	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	102	96	103	97	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	114	109	111	109	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
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Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-313 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	104	102	106	106	113	**106**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	104	101	94	92	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	114	114	115	116	118	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-314 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	96	94	97	89	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	88	91	95	91	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	110	109	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-315 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	92	92	92	93	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	94	99	92	95	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	109	110	112	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-316 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	92	93	89	94	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	92	99	94	89	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	114	112	113	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
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Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-317 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	91	88	90	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	102	98	101	97	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	109	112	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-318 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	92	91	87	92	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	92	91	92	95	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	106	105	104	106	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
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Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 79981

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-320 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	96	85	95	85	86	**89**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	103	105	101	101	101	**102**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2024-01-23

Mail To:
Bill Cullen
JBS Engineering and Environmental
2129 E William J Bryan Pkwy
Bryan , TX , 77802

Bill To:

JBS Engineering and Environmental
22011, PO 762339

e-mail:
bill@jbs-bcs.com phil@jbs-bcs.com david.vogt@hdrinc.com

Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**80017**
Material(s) Tested:	(16) Heat Fusion Weld Seam(s) (3) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-321 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	88	90	90	91	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	97	94	99	94	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	109	110	111	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-322 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	94	93	93	94	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	98	100	93	94	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	112	109	112	107	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-323 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	111	110	111	101	113	**109**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	96	100	96	100	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	113	113	115	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-324 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	89	87	92	90	**90**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	101	91	89	93	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	113	110	112	102	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-325 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	89	107	96	111	104	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	105	97	94	94	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	111	112	113	113	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-326 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	95	94	94	97	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	101	91	94	102	104	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	110	109	110	111	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-327 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	94	95	92	93	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	100	95	103	100	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	110	113	112	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-328 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	100	98	95	96	96	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	86	111	87	100	105	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	112	112	115	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-329 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	95	92	95	92	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	98	98	97	99	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	114	114	113	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-330 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	105	103	100	99	101	**102**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	98	107	102	92	101	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	108	95	107	107	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-331 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	98	95	91	93	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	96	96	92	96	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	112	110	112	114	113	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-332 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	91	91	91	97	90	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	96	88	100	98	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	112	122	112	108	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-333 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	85	88	89	89	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	100	95	98	96	97	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	112	122	110	107	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-334 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	94	102	90	91	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	97	109	93	94	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	112	123	110	111	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-335 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	102	102	90	100	**98**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	97	109	98	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	108	118	107	106	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-336 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	95	92	106	99	93	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	95	97	107	94	100	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	112	125	112	111	**114**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80017

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-319 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	58	62	50	53	67	**58**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	114	110	110	112	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-337 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	77	83	92	90	83	**85**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	107	123	110	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-338 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	78	88	91	92	76	**85**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	103	101	114	99	101	**104**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2024-02-14

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22011, PO 762339

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Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**80105**
Material(s) Tested:	(8) Heat Fusion Weld Seam(s) (3) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,
sigfile
geolab

Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80105

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-339 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	91	101	91	92	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	93	103	90	91	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	98	98	106	97	96	**99**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-341 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	91	97	90	87	**92**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	90	95	107	93	94	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	110	119	107	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80105

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-342 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	88	89	98	89	89	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	92	101	87	85	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	107	120	110	108	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-343 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	87	96	90	94	88	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	93	102	93	94	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	110	110	124	110	113	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80105

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-344 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	94	92	99	92	93	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	97	98	103	99	100	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	111	111	123	110	110	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-346 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	96	100	93	93	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	89	99	98	95	99	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	110	120	108	108	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80105

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-347 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	101	96	113	88	101	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	99	86	100	96	100	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	111	121	111	112	**113**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-348 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	92	95	104	91	97	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	89	103	91	96	**94**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	110	121	109	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80105

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-340 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	81	71	87	80	76	**79**
Peel Incursion (%)	<5	<5	<5	<5	100	
Peel Locus Of Failure Code	SE	SE	SE	SE	AD	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	NON-FTB	
Shear						**Shear**
Shear Strength (ppi)	104	108	115	108	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-349 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	97	78	111	93	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	100	102	113	102	99	**103**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-350 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	78	75	97	85	88	**85**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	102	102	113	103	103	**105**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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Date: 2024-02-20

Mail To:
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Bill To:

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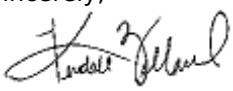
Dear Mr. Cullen,

Thank you for consulting with TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Gibbons Creek Steam Electric Station Site F LF Closure**
TRI Job Reference Number:	**80142**
Material(s) Tested:	(7) Heat Fusion Weld Seam(s) (6) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

Codes:	
AD	Adhesion Failure (100% Peel)
BRK	Break in sheeting away from Seam edge.
SE	Break in sheeting at edge of seam.
AD-BRK	Break in sheeting after some adhesion failure - partial peel.
SIP	Separation in the plane of the sheet (leaving the bond intact).
FTB	Film tearing bond (all non "AD" failures).
NON-FTB	100% peel.

If you have any questions or require any additional information, please call us at 1-800-880-8378.
Sincerely,



Kendall Villarreal
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80142

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-345 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	93	96	104	93	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	94	100	91	99	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	109	120	108	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-351 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	96	95	109	96	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	94	105	94	98	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	113	113	125	111	114	**115**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80142

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-352 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	98	96	114	92	105	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	86	89	112	88	99	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	107	108	123	107	110	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-353 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	86	92	100	89	86	**91**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	102	106	96	99	**99**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	106	123	110	112	**112**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80142

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-354 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	99	100	107	98	102	**101**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	92	94	96	90	91	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	105	117	105	106	**108**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-355 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	97	91	98	97	95	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	99	99	92	96	**96**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	108	105	121	107	109	**110**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80142

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-356 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	90	98	110	99	102	**100**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	93	93	104	82	93	**93**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	109	109	119	109	107	**111**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 mil. LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80142

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-340A | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	95	98	97	90	96	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	105	107	116	109	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-340B | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	101	96	105	89	83	**95**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	106	118	109	108	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-357 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	77	100	87	101	73	**88**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	106	106	119	107	109	**109**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: JBS Engineering and Environmental
Project: Gibbons Creek Steam Electric Station Site F LF Closure

Material: 40 LLDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 80142

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-358 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	91	94	87	71	80	**85**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	104	107	115	105	106	**107**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-359 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	92	78	94	78	78	**84**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	93	99	111	97	99	**100**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-360 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	94	97	106	94	95	**97**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	99	104	111	100	96	**102**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-9-22	**Report No.**: 1
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Mostly Sunny PM: 72 F, Mostly Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	10:00 am	13:30 pm	3.5
Bill Cullen	CQA Support	10:00 am	13:30 pm	3.5

Description of Work

10:00 to 12:00: Obtained soil samples from 4 pits excavated in borrow area north of SFL.

12:00 to 13:30: Obtained soil samples from floor of Scrubber Pond for constituent analysis.

13:00 Bill Cullen and Craig York review Site A Landfill borrow area.

13:30 Complete work at SFL and move to SAL for CQA activities.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/6/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/6/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 5-19-22	**Report No.**: 2
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 73 F, Mostly Sunny PM: 94 F, Mostly Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	06:30 am	16:30 pm	10.0

Description of Work

Safety:
06:30 – 07:00 MSI's safety meeting – Work hours are flexible, take breaks as needed.

MSI started stripping the SFL on the west side to ridge.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	5/19/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		5/19/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 6-2-22	**Report No.**: 3
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 74 F, Rain PM: 89 F, Overcast	**Rain:** 0.13 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	06:30 am	12:00 pm	5.5

Description of Work

Collected soil sample for clay liner testing.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/2/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/2/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 6-3-22	**Report No.**: 4
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 72 F, Cloudy PM: 89 F, Overcast	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	08:00 am	14:00 pm	6

Description of Work

Collected soil samples from five pits at inactive area and at three other areas as requested by Vernon.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/3/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/3/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 6-13-22	**Report No.**: 5
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 100 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	07:00 am	15:30 pm	8.5
Montreal Bailey	CQA Support	07:00 am	10:30 am	3.5
Bill Cullen	CQA Support	07:00 am	10:30 am	3.5

Description of Work

0700 – Phil and Montreal onsite at SFL.
0800 – Bill onsite with moisture density gauge to take tests. Now MSI personnel currently onsite at SFL. Four locations were checked for moisture. All testing lacks required moisture by 4% to 10% below optimum.
0830 – Montreal, Phill, and Bill move to Admin Building for H2S training by EnviroCon. Manny with MSI informed of base liner results. Clay needs to be ripped back open and massive infusion of water needed.
1030 – Montreal, Phill, and Bill leave site.
1430 – Phil returns to SFL, liner has been ripped open along northern edge and small water truck placing water. Only maintainer and water truck onsite.
1445 – Phil joined by Buster (Charah) and Manny (MSI). Phil goes over requirements and Manny orders a plow (disc) and other equipment to be brought to the site. Lab put on call for Thursday, June 16. Phil will stay in phone contact with Manny to check on liner progress this week. Montana (EnviroCon) informed that LLDPE installation will be delayed at least one week.
1530 – Phil leaves SFL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/13/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/13/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 6-15-22	**Report No.**: 6
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 81 F, Sunny PM: 99 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

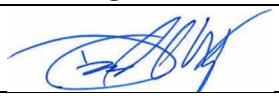
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	07:30 am	08:30 am	1
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0730 – Phil onsite at SFL to observe progress on processing of test strip.
0800 – Manny (MSI) meets with Phil to discuss options. Test area needs more work (water and process). Setup lab for Thursday morning at 0930 to take moisture density tests and to grab at least one permeability sample. Plow is on the way but still not on site. Set additional moisture density testing for Tuesday, June 21.
0830 – Phil leaves SFL to work at SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/15/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/15/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 6-16-22	**Report No.**: 7
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 100 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	09:00 am	10:00 am	1
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0900 – Phil onsite at SFL to meet Craig and check test strip.
0930 – Manny (MSI) meets with Phil and Craig to test two locations for moisture and density. Both tests were successful. Phil collects a shelby tube sample at grid point F.5-15 to send to TRI for hydraulic conductivity testing.
1000 – Craig, Phil, and Manny leave site to attend weekly meeting with Charah to discuss progress. Lab will return on Tuesday morning, June 21, for more extensive testing and permeability sample collections. A large disc (plow) is onsite and additional equipment (tractor and water trucks) will be arriving soon.
1100 – Meeting over, Phil to SAL.
1300 – Phil delivers permeability sample to FedEx for overnight delivery to TRI.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/16/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/16/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 6-21-22	**Report No.**: 8
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 100 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	10:00 am	11:15 am	1.25
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support	10:00 am	11:15 am	1.25

Description of Work

1000 – Phil and Bill onsite at SFL to meet Craig and take moisture/density tests on prepared section along northern edge of SFL.
1100 – A total of 9 moisture/density tests taken – 8 passed, 1 failed on moisture and density. A single permeability sample was collected from the passing area.
1115 – Bill and Craig leave site. Lab set for sample collection on 1000 Thursday, June 23. Phil returns to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/21/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/21/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 6-23-22	**Report No.**: 9
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 77 F, Sunny PM: 102 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:45 am	11:15 am	1.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0945 – Phil meets with Anthony (tech from CME) to begin moisture/density tests at SFL.
1000 – Only narrow strip ready on northern edge. CME takes and passes 10 moisture/density tests. No permeability samples were collected since area grid too narrow for permeability locations. North is going slow will minimal equipment but the sections processed look good.
1115 CME leaves site and Phil goes back to SAL. CME set to return on Monday, June 27.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/23/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/23/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 6-27-22	**Report No.**: 10
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 102 F, Sunny	**Rain:** 0.02 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:45 am	11:30 am	2.75
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0845 – Phil onsite to begin checking spots for moisture/density tests.
0915 – Craig (CME) onsite to begin testing.
1100 – 13 moisture/density tests and 2 permeability samples were collected. Samples sent to TRI Austin (samples SF-18 and SF-19).
1130 – Phil leaves SFL to work at SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	6/27/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		6/27/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-5-22	**Report No.**: 11
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 101 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	9:30 am	2.75
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0830 – Phil onsite to prepare for moisture/density tests scheduled at 0900. Phil notes that section to be tested had been left open over the long holiday weekend and was too dry to test. Phil discussed with Manny (MSI) and cancelled CME lab. Testing rescheduled for Thursday, July 7.
0930 - Phil leaves SFL to work at SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/5/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/5/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 7-7-22	**Report No.**: 12
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 102 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	8:00 am	11:00 am	3
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0800 – Phil onsite to prepare for moisture/density tests and discuss process with MSI operator. Representatives from EnviroCon visit the project site.
0900 – Craig (CME) onsite to begin testing.
1100 – A total of 17 moisture/density tests completed and passed. One permeability test was collected and will be shipped to TRI for testing.
1100 – CME and Phil finished. CME leaves site and Phil goes to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/7/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/7/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-11-22	**Report No**.: 13
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 81 F, Sunny PM: 104 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	16:30 pm	9.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0730 – Phil marks out passing area for EnviroCon to begin liner installation.
0800 – EnviroCon crew begins arriving with liner installation equipment from SAL.
0845 – EnviroCon begins placing liner along northern edge on east side at anchor trench.
0900 – CME onsite and begins moisture/density testing and sample collections. Nine passing moisture/density tests and one sample collected for permeability testing.
1100 – CME leaves site.
1200 – Liner installation begins along eastern end of anchor trench.
1400 – EnviroCon begins repairs on liner placed.
1500 – Phil leaves SFL to ship permeability samples.

Panels P1-P17 placed (approximately 20,020 sf)
Repairs 1-15 installed

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/11/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/11/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-12-22	**Report No.**: 14
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 107 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	13:00 pm	6
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0730 – EnviroCon (EC) tailgate safety meeting. EC plans to layout 8 full panels .
0800 – EC begins placement with Panel 18 at anchor trench.
1130 – EC takes a lunch break.
1215 – EC begins installing repairs.
1300 – EC begins placing composite along length of anchor trench.
1500 – Phil collects ten destruct samples (DS-5 through DS-14).
1600 – Phil leaves for FedEx to ship destruct samples to TRI.

Panels P18-P25 placed (approximately 124,960 sf)
Composite 11 rolls (approximately 42,185 sf)
Repairs R16-R20 installed

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/12/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/12/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 7-13-22	**Report No.**: 15
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 105 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0800 – EnviroCon (EC) tailgate safety meeting. EC plans to install two panel widths along south side of existing liner.
1130 – Five panels placed (P26-P30). Crew has finished welding, will repair and pull composite in the morning.
1145 – Montana informs Phil that the EC crew will pull off the site Friday (July 15) afternoon for another project.
1400 – Phil collects four destructs (DS-15 through DS-18).
1500 – Phil leaves for FedEx to ship destruct samples to TRI.

Panels P26-P30 placed (approximately 43,516 sf)
Composite 12 rolls (approximately 46,020 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/13/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/13/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-14-22	**Report No.**: 16
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 98 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support	7:00 am	11:15 am	4.25
Bill Cullen	CQA Support	10:00 am	11:15 am	1.25

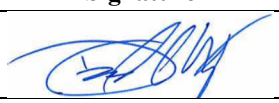
Description of Work

0700 – Phil and Montreal onsite to check conditions.
0800 – EnviroCon (EC) tailgate safety meeting. EC plans to install repairs and composite. Charah, MSI, and EC have a discussion about stating onsite.
0920 – CME onsite for moisture/density testing. Six tests taken and passed.
0950 – CME leaves site.
1000 – Bill onsite for weekly progress meeting.

- Safety – Be aware of equipment, grass fires and H2S.

1030 – Meeting ends.
1100 – Bill visits SFL to discuss progress with Phil and Montreal.
1115 – Montreal leaves site.
1230 – Work shuts down due to high winds and threatening weather.
1330 – Phil leaves SFL for SAL.
1400 – Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/14/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/14/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-15-22	**Report No.**: 17
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 76 F, Cloudy PM: 96 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0800 – EnviroCon (EC) tailgate safety meeting. EC plans to place liner towards the south of existing liner.
1100 – Panels P31 through P37 placed. EC begins installing repairs.
1230 – EC begins installing composite and vacuum box testing.
1500 – EC finished for the day. Phil and Montreal leave site.

Panels P31 through P37 placed (approximately 64,746 sf)
Composite 10 rolls (approximately 38,350 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/15/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/15/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 7-18-22	**Report No.**: 18
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 103 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

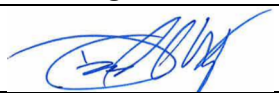
Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Montreal Bailey	CQA Support	7:00 am	15:30 pm	8.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0745 – EnviroCon (EC) tailgate safety meeting. EC plans to place composite and repairs.
1530 – EC finished for the day. Phil and Montreal leave site.

Panels P38 through P50 placed (approximately 97,152 sf)
Composite 5 rolls (approximately 19,175 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/18/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/18/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 7-19-22	**Report No.**: 19
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 104 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Montreal Bailey	CQA Support	7:00 am	14:30 pm	7.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0730 – EnviroCon (EC) tailgate safety meeting. EC plans to place liner to northwest at anchor trench.
1100 – EC has placed liner over all prepared and approved subgrade.
1200 – EC begins repairs and vacuum testing.
1430 – EC stops work for day due to heat.

Panels P51 through P65 placed (approximately 31,493 sf)
Composite 7 rolls (approximately 26,845 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/19/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/19/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-20-22	**Report No**.: 20
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 105 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support	7:00 am	14:00 pm	7
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal onsite to check conditions.
0740 – EnviroCon (EC) tailgate safety meeting. EC plans to continue repairs and install composite.
1400 – EC stops work for day due to heat.

Composite 17 rolls (approximately 65,195 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/20/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/20/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 7-21-22	**Report No.**: 21
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 104 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil onsite to check conditions.
0730 – EnviroCon (EC) tailgate safety meeting. EC plans to continue repairs and install composite over the last of the liner placed on the 19th. This will complete the prepared area on SFL. Montana expects to move to SAL on Friday with equipment and have crew fill sand bags all day.
0850 - CME arrives onsite to take moisture/density tests on test strip on intermediate cover.
0930 – All four moisture/density tests good and Manny was informed of the results. CME scheduled for 0900 on Monday, July 25, to check next planned processed area on the intermediate cover. CME technician leaves site.
1330 – Composite in place and EC continues to clean up the area.

Composite 18 rolls (approximately 69,030 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/21/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/21/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 7-22-22	**Report No.**: 22
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 101 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	8:00 am	1
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil onsite to check conditions.
0730 – EnviroCon (EC) moves equipment and trailers to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/22/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/22/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-25-22	**Report No.**: 23
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 103 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:00 am	10:30 am	2.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0800 – Phil onsite to check conditions.
0830 – Anthony (CME) arrives onsite to perform moisture/density tests on the intermediate cover and subgrade. One sample was collected for permeability testing.
1000 – CME leaves site.
1030 – Phil move over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/25/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/25/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-27-22	**Report No**.: 24
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 100 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	11:00 am	2.5
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer	09:30 am	13:00 pm	3.5

Description of Work

0830 – Phil onsite to check conditions. MSI continues stripping and processing clay.
0900 – Anthony (CME) arrives onsite to perform moisture/density tests on the intermediate cover and subgrade.
1040 – CME completes testing. There were 13 passing tests and one failed test at the anchor trench on the northwest side. It was too dry. MSI will process and a retest is scheduled for Friday, July 29. CME leaves site.
1100 – Phil moves over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/27/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/27/2022

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 7-29-22	**Report No.**: 25
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 101 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	10:45 am	2.25
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0830 – Phil onsite to check conditions.
0915 – Craig (CME) arrives onsite to perform moisture/density tests on the top tier.
1040 – CME completes testing. There were 12 passing tests and one sample was collected for a permeability test.
1045 – Phil moves over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	7/29/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		7/29/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 8-3-22	**Report No.**: 26
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 104 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:00 am	8:45 am	0.75
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0800 – Phil and CME arrive onsite. Subgrade was rutted where heavy tractor tried to seal clay. A smooth drum roller and 815 dozer are being used for repairs. Phil took one density test and it failed (density too low). Phil told MSI to re-roll and seal it properly. CME rescheduled for 0800 on Friday, August 5.
0845 – CME leave site. Phil moves over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	8/3/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		8/3/2022

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Dallas, TX 75248

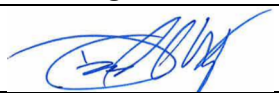
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 8-4-22	**Report No**.: 27
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 79 F, Sunny PM: 102 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	9:45 am	0.75
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0900 – Phil arrives onsite to check progress.
0945 – Phil moves over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	8/4/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		8/4/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 8-5-22	**Report No**.: 28
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Sunny PM: 101 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:15 am	10:30 am	2.25
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0900 – Phil and CME arrive onsite to take moisture/density tests on top tier.
1000 – CME completes 21 moisture/density tests. All tests passed. Two samples were collected for permeability testing (SF-25 and SF-26). Approximately 50% of top tier tested.
1030 - Phil moves over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	8/5/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		8/5/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 8-10-22	**Report No.**: 29
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 103 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:45 am	9:15 am	1.5
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0745 – Phil arrives onsite to prepare for soil testing.
0800 - CME arrive onsite to take moisture/density tests on top tier.
0900 – CME completes 12 moisture/density tests. All tests passed.
0915 - Phil moves over to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	8/10/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		8/10/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-7-22	**Report No.**: 30
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 73 F, Sunny PM: 94 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	11:00 am	2
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0900 – Phil arrives onsite to inspect the subgrade. MSI is using a blade to smooth the rain caused erosion rills.
1000 – EnviroCon (EC) arrives to peel back placed liner to allow smoothing and drying of subgrade.
1045 – EC has exposed the entire leading edge of liner along subgrade. MSI is repairing subgrade.
1100 - Phil moves over to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/7/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/7/2022

HDR, Inc.
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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 9-15-22	**Report No.**: 31
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 68 F, Sunny PM: 90 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	9:15 am	15:15 am	6
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – EnviroCon (EC) moving equipment from SAL to SFL.
0840 – EC informs Phil that they will deploy some liner at SFL.
0915 – Phil arrives at SFL. EC begins deployment of Panel P-66.
1015 – EC stops for meeting at Admin Building.
1300 – EC back onsite at SFL. Begins installing repairs.
1515 – EC stops for day.

Panel P66 placed (approximately 12,892 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/15/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/15/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 9-19-22	**Report No.**: 32
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 75 F, Sunny PM: 94 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	6:30 am	15:00 am	8.5
Montreal Bailey	CQA Support	6:30 am	15:00 am	8.5
Dave Vogt	CQA Officer			

Description of Work

0630 – Phil and Montreal arrive onsite.
0730 - EnviroCon (EC) tailgate meeting.
0750 – EC begins to deploy liner.
11:30 – EC breaks for lunch.
1230 – EC begins installing repairs.
1500 – EC stops for day. Phil ships 5 destruct samples to TRI.

Panels P-66 through P-74 placed (approximately 33,836 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/19/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/19/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-20-22	**Report No.**: 33
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 75 F, Sunny PM: 95 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	6:15 am	15:00 pm	8.75
Montreal Bailey	CQA Support	7:30 am	16:00 pm	8.5
Dave Vogt	CQA Officer			

Description of Work

0615 – Phil arrives onsite.
0730 – Montreal arrives onsite. EnviroCon (EC) tailgate meeting.
0750 – EC begins to deploy liner.
1130 – EC breaks for lunch.
1230 – EC begins cross seams, installing repairs, and air testing.
1500 – Phil ships 10 destruct samples to TRI for testing.

Panels P-75 through P-83 placed (approximately 97,713 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/20/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/20/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 9-21-22	**Report No.**: 34
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 73 F, Sunny PM: 95 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	6:45 am	14:00 pm	7.25
Montreal Bailey	CQA Support	8:00 am	13:00 pm	5
Dave Vogt	CQA Officer	9:30 am	14:00 pm	4.5

Description of Work

0645 – Phil arrives onsite. EnviroCon (EC) at MSI tailgate meeting.
0800 – Montreal arrives onsite.
0750 – EC begins to deploy liner.
1130 – EC breaks for lunch. EC deployed and welded six complete rolls of LLDPE.
1230 – EC begins repairs and testing.
1300 – Montreal leave site.
1400 – Phil ships 9 destruct samples to TRI for testing.

Panels P-84 through P-89 placed (approximately 92,004 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/21/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/21/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 9-22-22	**Report No.**: 35
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 73 F, Sunny PM: 97 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	6:30 am	14:00 pm	7.5
Montreal Bailey	CQA Support	7:00 am	11:15 pm	4.25
Dave Vogt	CQA Officer			

Description of Work

0645 – Phil arrives onsite.
0700 – Montreal arrives onsite. EnviroCon (EC) tailgate meeting. They intend to complete liner deployment on west end of cleared area on top tier than do repairs and geocomposite deployment.
1000 – Phil attends weekly construction progress meeting at Admin Building.
1115 – Phil onsite at SFL. Montreal leaves site. EC lunch break.
1215 – EC begins placing composite and installing repairs. Phil collects three destruct samples.
1400 – Phil ships destruct samples to TRI.
1500 – EC stops for day.

Panels P-90 and P-91 placed (approximately 30,668 sf)
Placed 10 rolls of geocomposite.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/22/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/22/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 9-23-22	**Report No.**: 36
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 73 F, Sunny PM: 97 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Work stoppage today due to some issue between Charah and MSI

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/23/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/23/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-26-22	**Report No.**: 37
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 74 F, Sunny PM: 92 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Dave Vogt	CQA Officer			

Description of Work

0700 – Montreal arrives onsite.
0730 – EC begins deployment of geocomposite.
1500 – EC stops for day.

Geocomposite – 22 rolls placed.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/26/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/26/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-27-22	**Report No.**: 38
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 78 F, Sunny PM: 91 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support	7:00 am	15:30 pm	8

Description of Work

0700 – Bill arrives onsite.
0715 – EC begins deployment of geocomposite.
1530 – EC stops for day.

Geocomposite – 33 rolls placed.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/27/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/27/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 9-28-22	**Report No.**: 39
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 70 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	11:30 pm	4.5
Bill Cullen	CQA Support	7:00 am	15:30 pm	8.5

Description of Work

0700 – Montreal and Bill arrive onsite.
0745 – EC begins deployment of liner panel P-92.
1130 – EC stops for lunch. They have deployed 4 rolls of geomembrane. Montreal leaves site.
1230 – EC begins installing repairs and air and vacuum tests.
1545 – EC stops for day.

Panels P-92 through P-95 placed (approximately 60,984 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/28/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/28/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-29-22	**Report No**.:40
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 63 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	12:30 pm	5.5
Bill Cullen	CQA Support	7:00 am	15:30 pm	8.5

Description of Work

0700 – Montreal and Bill arrive onsite.
0715 – EC begins deployment of liner panel P-96.
1000 – Bill leaves site to attend weekly construction progress meeting.

- EC says they will demobilize on October 7.
- TCEQ visit next Wednesday.

1045 – Meeting adjourns.
1130 – EC stops for lunch.
1230 - Montreal leaves site. Bill marks repairs as EC details liner area.
1245 – Bill informs EC (Bee) that DS-68 and DS-69 failed.
1300 – EC decides to bead entire 700-feet length of seam to address destruct failed tests.
1530 – EC stops for day. Bill collected and shipped DS-70 through DS-75 to TRI for testing.

Panels P-96 through P-104 placed (approximately 57,992 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/29/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/29/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-30-22	**Report No**.:41
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 59 F, Sunny PM: 85 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	11:00 am	4
Bill Cullen	CQA Support	7:00 am	11:00 am	4

Description of Work

0700 – Montreal and Bill arrive onsite.
0730 – EC begins liner deployment
0900 – Bill discusses EC deployment with Montana. EC to relocate geomembrane to allow MSI to resume earthwork on inactive area. EC to complete repairs and geocomposite deployment prior to demobilization on Friday, October 7.
1100 – EC stops for day.

Panels P-105 through P-112 placed (approximately 39,842 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/30/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/30/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 10-3-22	**Report No**.:42
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	13:30 am	6.5
Montreal Bailey	CQA Support	7:00 am	13:30 am	6.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal arrive onsite.
0730 – EC tailgate meeting – EC will continue repairs and vacuum testing on liner deployed.
0800 – EC repairs entire seam 105/108 where destruct sample DS-79 failed.
1100 – EC stops for lunch.
1200 – EC resumes repairs and vacuum testing. EC also moving some equipment to trailer to prepare for demobilization Friday.
1330 - EC stops for day.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/3/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/3/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 10-4-22	**Report No**.:43
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 66 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	13:30 am	6.5
Montreal Bailey	CQA Support	7:00 am	13:30 am	6.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal arrive onsite.
0715– EC tailgate meeting – EC will continue repairs and vacuum testing prior to placing geocomposite.
0835 – EC completes final repairs and begins deploying geocomposite over last lined section.
1100 – EC stops for lunch.
1200 – EC continues placing geocomposite.
1330 - EC stops for day.

Geocomposite placed 23 rolls.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/4/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/4/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 10-5-22	**Report No**.:44
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	13:45 am	6.75
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil arrives onsite.
0715– EC tailgate meeting – EC will finish placing geocomposite then cleanup and demobilize by end of week.
1045 – EC stops for lunch.
1145 – EC continues placing geocomposite.
1345 - EC finishes placing geocomposite and stops for day.

Geocomposite placed 27 rolls.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/5/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/5/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 10-6-22	**Report No**.:45
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

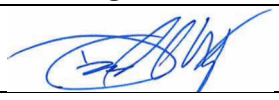
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	8:00 am	11:30 am	3.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0800 – Phil arrives onsite.
0715– EC tailgate meeting – EC will finish packing equipment and preparing to demobilize.
1130 – Phil goes to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/6/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/6/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 10-7-22	**Report No**.:46
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 63 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	11:00 am	2.5
Montreal Bailey	CQA Support	9:00 am	11:00 am	2
Bill Cullen	CQA Support			

Description of Work

0830 – Phil arrives onsite.
0900 – Anthony (CME) arrives onsite to begin moisture/density testing. Montreal arrives onsite.
1030 – CME completes 14 moisture/density tests on intermediate cover with 13 passing. The failed test had insufficient moisture.
1045 – CME leaves site and is rescheduled for Tuesday, October 11. Montreal leaves site.
1130 – Phil goes to SAL.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/7/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/7/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 10-12-22	**Report No**.:47
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 70 F, Sunny PM: 95 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	8:45 am	10:45 am	2
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0845 – Phil arrives onsite to inspect soil test locations.
0855 – Anthony (CME) arrives onsite to begin moisture/density testing.
1030 – CME completes 16 moisture/density tests on intermediate cover with 15 passing. The failed test had insufficient moisture. Phil directed MSI operators on how to process the failed section and will retest during CME's next visit.
1035 – CME leaves site. Phil met briefly with Buster (Charah). They observed the stripping operations on the top tier. Manny (MSI) requested another set of density testing on Monday, October 17 at 0900.
1045 – Phil goes to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/12/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/12/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 10-18-22	**Report No**.:48
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 52 F, Overcast PM: 70 F, Overcast	**Rain:** 0.04 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	10:45 am	1.75
Montreal Bailey	CQA Support	9:00 am	10:45 am	1.75
Bill Cullen	CQA Support			

Description of Work

0900 – Phil, Montreal, and Anthony (CME) arrive onsite to begin moisture/density testing.
1030 – CME completes 12 moisture/density tests on intermediate cover with 12 passing. Manny (MSI) requests next round of soil tests for Friday, October 21.
1045 – Phil and Montreal go to SAL. CME leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/18/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/18/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 10-21-22	**Report No**.:49
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Sunny PM: 89 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

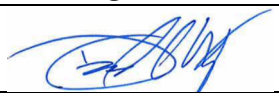
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	9:00 am	11:00 am	2
Montreal Bailey	CQA Support	9:00 am	11:00 am	2
Bill Cullen	CQA Support			

Description of Work

0900 – Phil, Montreal, and Anthony (CME) arrive onsite to begin moisture/density testing.
1030 – CME completes 15 moisture/density tests on intermediate cover with 15 passing.
1100 – Phil, Montreal and CME leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/21/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/21/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 10-24-22	**Report No**.:50
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Overcast PM: 82 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	13:00 pm	15:00 pm	2
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0300 – Philand Anthony (CME) arrive onsite to begin moisture/density testing.
1500 – CME completes 16 moisture/density tests on top tier subgrade. Two samples for permeability testing were collected. Samples were shipped to TRI.
1500 – Phil and CME leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	10/24/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		10/24/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-2-22	**Report No**.:51
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 54 F, Sunny PM: 79 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	11:00 am	2
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0900 – Phil and Craig (CME) arrive onsite to begin moisture/density testing on top tier subgrade and a portion of top tier interior slope.
1100 – CME completes 15 moisture/density tests on top tier subgrade and all tests passed. Two samples for permeability testing were collected. Samples were shipped to TRI.
1100 – Phil and CME leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/2/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/2/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-8-22	**Report No**.:52
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 68 F, Cloudy PM: 85 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	9:30 am	1
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0830 – Phil onsite to inspect area for testing.
0915 – CME notifies Phil that due to a schedule mix-up they can't provide a test technician today. Phil discusses with Manny (MSI) and they reschedule the tests for 0830 on Thursday, November 10.
1100 – Phil moves to SAL.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/8/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/8/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-10-22	**Report No**.:53
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 66 F, Cloudy PM: 82 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	13:00 pm	4.5
Montreal Bailey	CQA Support	8:30 am	13:00 pm	4.5
Bill Cullen	CQA Support			

Description of Work

0830 – Phil and Montreal arrive onsite to inspect area for testing.
0915 – Craig (CME) arrives onsite.
1300 – CME completes 51 moisture/density tests and all tests passed. Tests occurred on final subgrade area, intermediate area, and 1st lift above intermediate area.
1300 – Phil, Montreal, and CME leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/10/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/10/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-17-22	**Report No**.:54
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 42 F, Cloudy PM: 60 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	11:30 pm	3
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0830 – Phil arrives onsite to inspect area for testing. Testing will be over 1st lift of clay on intermediate cover near active area.
0910 – Craig (CME) arrives onsite.
1100 – CME completes 31 moisture/density tests and all tests passed. Phil collected 4 samples for permeability testing.
1130 – Phil and CME leave site. Phil ships samples to TRI for testing.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/17/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/17/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-28-22	**Report No**.:55
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 44 F, Sunny PM: 75 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	12:00 pm	13:00 pm	1
Montreal Bailey	CQA Support	7:30 am	13:00 pm	5.5
Bill Cullen	CQA Support			

Description of Work

0730 – Montreal, Manny (MSI), and EC onsite to inspect progress.
0800 – Manny calls Phil to inform him that they have an area ready for testing tomorrow (November 29). Phil schedules the testing with CME.
1200 - Phil arrives onsite to meet with Montana (EC) and Manny to discuss schedule.

- Earliest possible liner deployment is Wednesday but more likely Thursday (December 31).
- Area is still too wet to process clay. MSI expects conditions to be better tomorrow.

1300 – Phil and Montreal leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/28/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/28/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-29-22	**Report No**.:56
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 64 F, Cloudy PM: 83 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	10:30 am	2
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0830 – Phil arrives onsite and meets with Bobby (CME).
0850 – Phil and Manny discuss site conditions. Phil tries a few locations for moisture/density tests and determines the conditions are still too wet.
0930 – Phil reschedules moisture/density tests for Thursday, December 1 at 0900.
0945 – CME leaves the site. Phil meets with EC.
1030 – Phil leaves site. EC begins moving material and equipment around SFL to be ready to deploy material.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/29/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/29/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-1-22	**Report No**.:57
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 39 F, Cloudy PM: 58 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	14:45 am	7.25
Montreal Bailey	CQA Support	7:30 am	15:00 am	7.5
Bill Cullen	CQA Support			

Description of Work

0730 – Phil and Montreal arrive onsite. EC preparing to deploy liner along western edge of top tier.
0800 – Liner deployment begins.
0900 – Bobby (CME) arrives onsite to take moisture/density tests along the subgrade slope (below top tier).
1100 – EC stops for lunch.
1200 – EC resumes liner placement. Phil and CME continue moisture/density testing.
1400 – Phil and CME complete moisture/density testing and all tests passed. Phil collected 3 samples for permeability testing. CME leaves the site.
1415 – EC places last geomembrane panel for the day and fill finish repairs and testing as needed.
1445 – Phil leaves site to deliver samples to TRI for permeability testing.
1500 – EC finishes for the day. Montreal leaves site.

Panels P-113 through P-122 placed (approximately 40,568 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/1/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/1/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-2-22	**Report No**.:58
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 54 F, Light Mist PM: 72 F, Cloudy	**Rain:** 0.03 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	10:00 am	3
Montreal Bailey	CQA Support	7:00 am	10:00 am	3
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal arrive onsite. Misty rain starting.
0900 – EC cut three marked destructs and placed repair patches. Misty rain continues.
1000 – EC stops for the day due to rain and will try again tomorrow.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/2/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/2/2022

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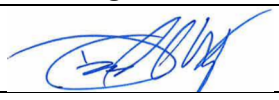
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-3-22	**Report No**.:59
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Light Mist PM: 70 F, Cloudy	**Rain:** 0.14 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	8:30 am	1.5
Montreal Bailey	CQA Support	7:00 am	8:30 am	1.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal arrive onsite. Rain has stopped but too muddy to deploy or repair. EC will clean up and try again Sunday.
0830 – Phil and Montreal leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/3/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/3/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-4-22	**Report No**.:60
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 56 F, Cloudy PM: 62 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil arrives onsite.
0800 – EC beings deploying geomembrane.
1130 – EC stops for lunch. Panels P-123 through P-132 placed and seamed.
1230 – EC begins repairs and details to geomembrane.
1530 – EC stops for day. Phil leaves site.

Panels P-123 through P-132 placed (approximately 31,614 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/4/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/4/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-5-22	**Report No**.:61
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Cloudy PM: 80 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	10:30 am	15:30 pm	5
Montreal Bailey	CQA Support	7:00 am	12:45 pm	5.75
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal arrives onsite.
0730 – EC beings deploying geomembrane to "square" odd-shaped area on top tier.
1030 – Phil arrives onsite. EC has deployed geomembrane panels P-133 through P-138 and completed welding of seams. Phil marks repairs and two destruct samples.
1145 – EC stops for lunch. Panels P-123 through P-132 placed and seamed.
1245 – Montreal leaves site. EC will spend remainder of day installing repairs and vacuum testing. EC will also test down chute to see if mechanical attachment of liner is possible.
1300 – CME arrives for moisture/density testing.
1530 – Phil and CME finishe moisture/density testing and all 34 tests passed. Phil collected 2 samples of subgrade for permeability testing.
1530 – EC stops for day. Phil leaves site.

Panels P-133 through P-138 placed (approximately 19,294 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/5/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/5/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-6-22	**Report No**.:62
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 71 F, Cloudy PM: 80 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Montreal Bailey	CQA Support	7:00 am	8:00 AM	1
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal arrive onsite. EC will work on mechanical connection to top tier down chute. Attachment expected to take all day with 5-person crew. No deployment elsewhere expected.
0800 – Montreal leaves site.
0830 – EC begins drilling lockdown bolts on down chute.
1030 – Phil leaves site to deliver destruct samples to FedEx for shipment to TRI.
1200 – Phil returns to site. EC stops for lunch.
1300 – MSI begins cleaning liner near down chute.
1500 – EC finished for the day and will continue on the down chute tomorrow morning. MSI cleaning liner near down cute for deployment in the near future.
1530 – EC stops for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/6/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/6/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-7-22	**Report No**.:63
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 66 F, Cloudy PM: 81 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:30 am	15:00 pm	5.5
Montreal Bailey	CQA Support	7:00 am	15:30 pm	7.5
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal arrives onsite. Down chute subgrade not ready so EC will begin placing liner near west end on slope from top tier to middle tier.
0930 – Phil arrives onsite and begins marking repairs and destructs.
1130 – EC stops for lunch.
1230 – EC resumes seaming, repairs, and testing.
1500 – Phil leaves site to deliver 2 destruct samples to FedEx for shipment to TRI.
1530 – EC stops for day. Montreal leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/7/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/7/2022

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 12-8-22	**Report No**.:64
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 67 F, Cloudy PM: 82 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	12:15 pm	5.25
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will work on connecting liner to down chute mechanically.
0830 – EC places neoprene gasket and liner on down chute.
1030 – CME technician arrives onsite to begin moisture/density testing on subgrade on lowest tier.
1100 – Second EC crew arrives onsite.
1200 – Moisture/density testing complete and one sample was collected for permeability testing. CME leaves site.
1215 – EC stops for lunch and Montreal leave site.
1300 – EC deploys four panels on east end by down chute.
1430 – Phil and Craig York review borrow sources.
1530 – EC stops for day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/8/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/8/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-9-22	**Report No**.:65
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 64 F, Cloudy PM: 81 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Montreal Bailey	CQA Support	7:00 am	15:30 pm	8.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will continue detail work at east end adjacent to down chute.
0900 – Detail work complete. EC begins installing geocomposite. MSI begins excavation at down chute to install drainpipes.
1100 – Phil leaves site.
1130 – EC stops for lunch.
1230 – EC continues placing geocomposite. MSI continues pipe installation at down chute.
1530 – EC stops for day. Montreal leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/9/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/9/2022

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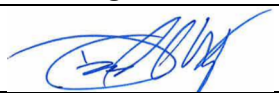
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-12-22	**Report No**.:66
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Cloudy PM: 70 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	9:30 am	2.5
Montreal Bailey	CQA Support	7:00 am	7:30 am	0.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. Site received 2.69 inches of rain on December 10 and the area is still very muddy. EC will work on repairs and vacuum testing over accessible areas.
0730 – Montreal leaves site.
0930 – EC stops for day. Phil leaves site. EC completed 19 repairs.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/12/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/12/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-15-22	**Report No**.:67
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 37 F, Cloudy PM: 61 F, Sunny	**Rain:** 0.04 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 am	7.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will place geocomposite over western edge of top tier and top tier slope. MSI will begin dressing wet subgrade in preparation for possible liner deployment tomorrow.
1130 – EC stops for lunch.
1230 – EC resumes placing geocomposite over geomembrane.
1430 – EC stops for day. Phil leaves site. EC placed 22 rolls of geocomposite.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/15/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/15/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-16-22	**Report No**.:68
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 43 F, Cloudy PM: 55 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	13:00 pm	6
Montreal Bailey	CQA Support	7:00 am	13:00 pm	6
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place liner finishing top tier.
0915 – Anthony (CME) arrives onsite to take moisture/density tests on lowest tier backfill.
1115 – Moisture/density tests pass. Three samples were taken for permeability testing.
1115 – EC stops for day. MSI hosting lunch at warehouse then EC will leave for Houston EC Christmas party. Work will resume on Saturday, December 17.
1300 – Phil, Montreal, and EC leave site.

Panels P-166 through P-171 placed (approximately 43,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/16/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/16/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-17-22	**Report No**.:69
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 39 F, Sunny PM: 58 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	13:00 pm	6
Montreal Bailey	CQA Support	7:00 am	15:15 pm	8.25
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place liner after MSI smooth rolls subgrade.
0830 – EC begins placing geomembrane.
1100 – EC stops for lunch. EC placed geomembrane panels P-172 through P-178.
1200 – EC begins repairs, testing, and geocomposite placement.
1300 – Phil leaves site to deliver destruct samples to FedEx for delivery to TRI.
1515 – EC stops for day. Montreal leaves site.

Panels P-172 through P-178 placed (approximately 43,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/17/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/17/2022

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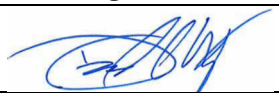
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-18-22	**Report No**.:70
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Cloudy PM: 57 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will finish details started yesterday and finish mechanical connection at east top tier down chute.
0730 – EC begins mechanical attachment.
0900 – EC finishes mechanical attachment and begins detail work.
1030 – EC finished with details and testing. EC begins cleaning up for holiday break.
1100 – EC stops for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/18/2022
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/18/2022

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-4-23	**Report No**.:71
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 47 F, Sunny PM: 70 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support	9:00 am	11:30 am	2.5

Description of Work

0900 – Bill arrives onsite. EC will repair on failed seams 167/90 and 173/171.
1100 – EC finished extrusion welding and vacuum testing seams. EC begins placing geocomposite.
1300 – EC stops for day. Bill leaves site. EC placed two rolls of geocomposite.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/4/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/4/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-7-23	**Report No**.:72
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Cloudy PM: 67 F, Rain	**Rain:** 0.18 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	9:30 am	2.5
Montreal Bailey	CQA Support	7:00 am	9:30 am	2.5
Bill Cullen	CQA Support			

Description of Work

0900 – Phil, Montreal, and EC arrive onsite. Phil met with Montana (EC) to discuss the wet conditions onsite. EC will straighten wind induced wrinkles on geomembrane panels, cut destructs, and leister patches.
0930 – EC stops for day due to expected rain. Phil, Montreal, and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/7/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/7/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-9-23	**Report No**.:73
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 47 F, Sunny PM: 71 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	13:30 pm	6.5
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal and EC arrive onsite. EC will work on repairs and composite installation. Site is still too wet for geomembrane deployment.
1330 – Montreal leaves site.
1600 – EC stops for day.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/9/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/9/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-10-23	**Report No**.:74
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 47 F, Misting PM: 71 F, Sunny	**Rain:** 0.02 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	13:00 pm	6
Montreal Bailey	CQA Support	7:00 am	10:00 am	3
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC wants to place geomembrane today, but heavy mist is postponing placement.
0800 – EC begins placing geocomposite.
1000 – Montreal leaves site.
1100 – EC stops for lunch. Subgrade still too wet for geomembrane installation.
1200 – EC resumes placing geocomposite.
1300 – EC stops for day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/10/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/10/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-11-23	**Report No**.:75
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Cloudy PM: 79 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place geomembrane.
1145 – EC stops for lunch. Placed geomembrane panels P-189 through P-201 along upper tier slope.
1245 – EC resumes seaming, repairs, and testing.
1400 – Phil leaves site with four destruct samples for shipment to TRI.
1500 – EC stops for day. Montreal leaves site.

Installed geomembrane panels P-189 through P-201 (approximately 41,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/11/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/11/2023

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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-12-23	**Report No**.:76
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 47 F, Sunny PM: 67 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	12:00 pm	5
Montreal Bailey	CQA Support	7:00 am	12:00 pm	5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place geocomposite.
1200 – EC stops for day. Conditions are too windy to continue geocomposite placement. Phil and Montreal leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/12/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/12/2023

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Daily Field Report

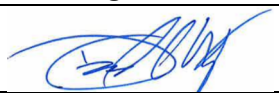
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-13-23	**Report No**.:77
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Sunny PM: 62 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	10:30 am	3.5
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place geomembrane on upper tier slope.
1030 – Phil leaves site.
1130 – EC stops for lunch.
1230 – EC continues seaming, installing repairs, and testing.
1500 – EC stops for day. Montreal leaves site.

Installed geomembrane panels P-202 through P-225 (approximately 66,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/13/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/13/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-14-23	**Report No**.:78
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Sunny PM: 64 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal, and EC arrive onsite. EC will place geomembrane on upper tier slope.
1100 – EC stops for lunch.
1200 – EC continues seaming, installing repairs, and testing.
1500 – EC stops for day. Montreal leaves site.

Installed geomembrane panels P-226 through P-236 (approximately 63,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/14/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/14/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-16-23	**Report No**.:79
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 59 F, Sunny PM: 72 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support	10:45 am	11:45 am	1

Description of Work

0700 – Phil and EC arrive onsite. EC will do repairs and testing of geomembrane.
1045 – Bill arrives onsite.
1130 – EC stops for lunch.
1145 – Bill collects 4 destruct samples and leaves site to deliver them to FedEx for overnight shipment to TRI.
1230 – EC continues repairs and testing of geomembrane.
1500 – EC stops for day. Montreal leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/16/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/16/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-17-23	**Report No**.:80
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 53 F, Sunny PM: 76 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	17:00 pm	10
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal and EC arrive onsite. EC will install geomembrane on upper tier slope.
1100 – EC stops for lunch.
1200 – EC continues geomembrane installation, seaming, repairs and testing.
1700 – EC stops for day. Montreal leaves site.

Installed geomembrane panels P-237 through P-260 (approximately 79,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/17/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/17/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-18-23	**Report No**.:81
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 50 F, Rain PM: 75 F, Rain	**Rain:** 0.37 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	12:00 pm	5
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal and EC arrive onsite. EC will work on repairs and testing. Intermittent rain slows any work.
1200 – EC stops for day. Montreal leaves site. Vernon (MSI) calls off work for rest of day and tomorrow.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/18/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/18/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-19-23	**Report No**.:82
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 46 F, Cloudy PM: 67 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:30 am	11:00 am	2.5
Montreal Bailey	CQA Support	8:30 am	11:00 am	2.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and Montreal arrive onsite. MSI and EC are not working because site is too wet. Phil and Montreal spend morning marking repairs and destruts.
1100 – Phil and Montreal stop for day and leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/19/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/19/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-20-23	**Report No**.:83
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 49 F, Light Rain PM: 53 F, Cloudy	**Rain:** 0.13 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

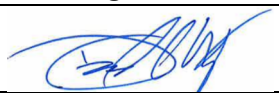
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	8:30 am	13:30 pm	5
Montreal Bailey	CQA Support	8:30 am	12:00 pm	3.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will work on installing geomembrane repairs and testing.
1100 – EC takes an early lunch due to light rain.
1200 – EC resumes repairs and testing. Light rain persists. Montreal leaves site.
1330 – Lightning stoppage. Phil and EC leave site. Phil delivers 9 destruct samples to FedEx for overnight delivery to TRI.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/20/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/20/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-27-23	**Report No**.:88
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 34 F, Cloudy PM: 56 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will work on installing geocomposite.
1000 – Montana and Phil meet with Manny to discuss preparing subgrade of possible liner deployment on Saturday.
1300 – MSI begins subgrade preparation.
1430 – EC stops work for the day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/27/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/27/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-21-23	**Report No**.:84
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 49 F, Rain PM: 54 F, Cloudy	**Rain:** 0.18 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Montreal Bailey	CQA Support	7:30 am	9:00 am	1.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. Site conditions are very wet. EC will work on installing geocomposite.
0730 – Montreal arrives onsite.
0900 – Montreal leaves site.
1030 – Intermittent rain stops work.
1100 – Phil and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/21/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/21/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-22-23	**Report No**.:85
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 41 F, Cloudy PM: 55 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

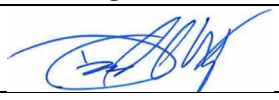
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:30 am	14:00 pm	6.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0730 – Phil arrives onsite. EC will work on installing geocomposite.
1100 – EC stops for lunch.
1200 – EC resumes geocomposite installation.
1400 – EC stops work for day. Phil and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/22/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/22/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-23-23	**Report No**.:86
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Sunny PM: 59 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support	7:00 am	15:30 pm	8.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will work on installing geomembrane on east side of the top tier slope. MSI smooth rolls subgrade.
0830 – Anthony (CME) arrives onsite for moisture/density testing.
1100 – EC stops for lunch.
1130 – CME completes moisture/density testing. Four samples were collected for permeability testing.
1200 – EC resumes working on seams, repairs, and testing of geomembrane. Wind too high for liner deployment.
1400 – Phil leaves site to deliver destruct and samples for permeability testing to FedEx for shipment to TRI.
1530 – EC stops work for the day. Montreal leaves site.

Installed geomembrane panels P-261 through P-271 (approximately 37,000 sf).

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/23/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/23/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-26-23	**Report No.**:87
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 32 F, Sunny PM: 57 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

Work canceled on January 24 and 25 due to rain.
0700 – Phil and EC arrive onsite. EC will work on installing geocomposite.
1500 – EC stops work for the day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/26/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/26/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-27-23	**Report No**.:88
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 34 F, Cloudy PM: 56 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will work on installing geocomposite.
1000 – Montana and Phil meet with Manny to discuss preparing subgrade of possible liner deployment on Saturday.
1300 – MSI begins subgrade preparation.
1430 – EC stops work for the day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/27/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/27/2023

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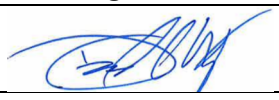
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-6-23	**Report No**.:89
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 55 F, Cloudy PM: 76 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	8:30 am	1.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

Work canceled January 28 through February 5 due to rain.
0700 – Phil and EC arrive onsite. EC has a 3-person crew onsite. Rest of EC crew in Houston for training. EC will make sandbags and move geocomposite rolls. Manny (MSI) says the site is still too wet to work.
0830 – Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/6/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/6/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-10-23	**Report No**.:90
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 39 F, Cloudy PM: 54 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	8:00 am	14:00 am	6
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

Work canceled February 7 through February 9 due to rain.
0800 – Phil and EC arrive onsite. EC has a 5-person crew onsite. EC will repair and test geomembrane.
1400 – Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/10/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/10/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-11-23	**Report No**.:91
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 35 F, Cloudy PM: 54 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 am	7
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will install geomembrane.
1400 – Phil leaves site.

Installed geomembrane panels P-272 through P-286 (approximately 43,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/11/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/11/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-13-23	**Report No**.:92
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 44 F, Sunny PM: 71 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 am	8
Montreal Bailey	CQA Support	7:00 am	16:00 am	9
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install geomembrane.
0800 – MSI begins excavating anchor trench on east side of top tier.
1105 – EC stops for lunch
1200 – EC continues seams, repairs, and extrusion seam along old tie-in near east down chute.
1400 – MSI brings additional crew to excavate south edge of east down chute for tie-in exposure.
1500 – Phil leaves site and delivers two destruct samples to FedEx for overnight delivery to TRI.
1600 – EC stops work for day. Montreal leaves site.

Installed geomembrane panels P-287 through P-292 (approximately 20,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/13/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/13/2023

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Daily Field Report

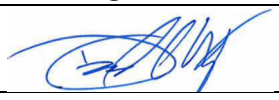
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-14-23	**Report No**.:93
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 58 F, Rain PM: 81 F, Rain	**Rain:** 0.12 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	8:30 am	1.5
Montreal Bailey	CQA Support	7:00 am	8:30 am	1.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. Light rain hindering access.
0730 – Forecast is poor for remainder of morning. EC foreman (Sam) crew begins leaving site.
0745 – Montreal discovers the wind last night had pulled up a section of geomembrane. EC places composite rolls along crumpled edge to anchor liner. It is too wet to fix and EC will attempt to repair or replace section tomorrow.
0830 – Phil, Montreal, and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/14/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/14/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-15-23	**Report No**.:94
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 58 F, Cloudy PM: 81 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will try to straighten crumples section of geomembrane.
0930 – Had to remove Panels P-290, P-291, and P-292. EC and MSI were able to straighten the other crumpled panels P-287 through P-289. EC will replace panels P-290 through P-292 and do repairs.
1100 – EC stops for lunch.
1200 – EC continues installing repairs.
1445 – EC places one roll of geocomposite along anchor trench. MSI begins backfilling anchor trench.
1500 – EC stops for day due to high winds.
1500 – Phil, Montreal, and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/15/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/15/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-17-23	**Report No**.:95
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 34 F, Sunny PM: 54 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Montreal Bailey	CQA Support	7:00 am	14:00 pm	7
Bill Cullen	CQA Support			

Description of Work

No work yesterday (February 16) due to weather.
0700 – Montreal and EC arrive onsite. EC will place geocomposite today.
1400 – EC stops work for day. Montreal and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/17/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/17/2023

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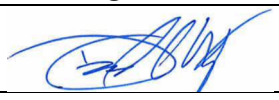
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-18-23	**Report No**.:96
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Sunny PM: 55 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place geomembrane today.
1100 – EC stops for lunch
1200 – EC continues to deploy liner around east end of top and middle tier.
1600 – EC stops work for day. Montreal and EC leave site.

Installed geomembrane panels P-292 through P-323 (approximately 96,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/18/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/18/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-19-23	**Report No**.:97
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 44 F, Sunny PM: 74 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Montreal Bailey	CQA Support	7:00 am	15:30 pm	8.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will place geomembrane today.
1100 – EC stops for lunch
1200 – EC continues to deploy liner.
1400 – EC stops deploying liner for the day. EC continues to seam, repair, and test geomembrane.
1600 – EC stops work for day. Phil, Montreal, and EC leave site.

Installed geomembrane panels P-324 through P-348 (approximately 102,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/19/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/19/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-20-23	**Report No**.:98
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 59 F, Light Rain PM: 84 F, Cloudy	**Rain:** 0.02 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	12:15 pm	5.25
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. There is a very light misty rain. EC will work on repairs until dry enough to begin placing geomembrane.
0900 – EC begins installing geomembrane.
0910 – CME arrives onsite to take moisture/density tests on small section along east boundary near active area.
1030 – EC stops geomembrane deployment because of strong wind gusts.
1100 – EC stops for lunch
1200 – Still too windy for geomembrane placement. EC continues to repair and test placed geomembrane..
1215 – EC places extra geocomposite rolls along edges of panels to protect against wind. Montreal leaves site.
1500 – Phil leaves site and delivers 11 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-349 through P-351 (approximately 13,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/20/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/20/2023

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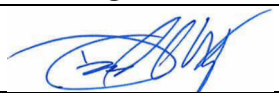
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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-21-23	**Report No**.:99
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 59 F, Cloudy PM: 83 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	13:00 pm	6
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. Due to expected heavy winds, EC will continue repairs and testing along eastern top and middle tiers.
1300 – Montreal leaves site. EC begins placing geocomposite along eastern side.
1600 – EC stops for day after placing geocomposite rolls along geomembrane perimeter to act as wind protection anchors. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/21/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/21/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-22-23	**Report No**.:100
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 70 F, Rain PM: 86 F, Cloudy	**Rain:** 0.16 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	9:00 am	2
Montreal Bailey	CQA Support	7:00 am	7:00 am	0
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. Due to expected heavy winds, EC will continue repairs and testing along eastern top and middle tiers. Montreal leaves site.
0825 – EC halts work after light rain starts.
0900 – Heavy rain begins. EC stops work for the day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/22/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/22/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-28-23	**Report No**.:105
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 52 F, Cloudy PM: 85 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	14:30 pm	7.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install geomembrane to close middle tier.
1100 – EC stops for lunch.
1200 – EC continues installing geomembrane.
1400 – EC stops geomembrane deployment and continues seams, destructs, repairs, and testing.
1430 – Montreal leaves site.
1500 – EC stops for day. Phil leaves site and takes 4 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-379 through P-393 (approximately 47,000 sf).

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/28/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/28/2023

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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-23-23	**Report No**.:101
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Cloudy PM: 81 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will finish installing geocomposite on top and middle tier of geomembrane on the east side. Once complete, EC will continue placing geomembrane on middle tier.
1100 – EC has completed installing geocomposite and stops for lunch.
1200 – EC begins installing geomembrane.
1500 – EC stops installing geomembrane and continues seams, repair patches, and testing.
1600 – EC stops work for the day. Phil leaves site.

Installed geomembrane panels P-352 through P-358 (approximately 22,000 sf).

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/23/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/23/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-24-23	**Report No**.:102
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Cloudy PM: 79 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Montreal Bailey	CQA Support	7:00 am	16:30 pm	9.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will continue to install geomembrane on middle tier while MSI smooth rolls subgrade.
1000 – EC begins moving equipment over to eastern side of SFL.
1100 – EC stops for lunch.
1200 – EC begins installing geomembrane on eastern side of SFL.
1600 – EC stops work and begins to clean up site.
1630 – Phil, Montreal, and EC leave site.

Installed geomembrane panels P-359 through P-377 (approximately 56,000 sf).

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/24/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/24/2023

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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-25-23	**Report No**.:103
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 58 F, Cloudy PM: 73 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	12:00 pm	5
Montreal Bailey	CQA Support	7:00 am	12:00 pm	5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will finish geomembrane installation on east side and seam, install patches, and test geomembrane.
1000 – EC begins moving equipment over to eastern side of SFL.
1100 – All repairs and testing complete on east point. EC begins cleaning work area.
1200 – EC stops for day.

Installed geomembrane panel P-378 (approximately 5,000 sf).

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/25/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/25/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-27-23	**Report No**.:104
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Cloudy PM: 81 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	12:30 pm	5.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install geocomposite on east side of SFL.
1100 – EC stops for lunch.
1200 – EC continues work on seams, repairs, and testing.
1230 – Montreal leaves site. Wind gusting to 18 mph.
1500 – EC stops for day. Phil leaves site and takes 4 destruct samples to FedEx for overnight delivery to TRI.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/27/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/27/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-28-23	**Report No**.:105
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 52 F, Cloudy PM: 85 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	14:30 pm	7.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install geomembrane to close middle tier.
1100 – EC stops for lunch.
1200 – EC continues installing geomembrane.
1400 – EC stops geomembrane deployment and continues seams, destructs, repairs, and testing.
1430 – Montreal leaves site.
1500 – EC stops for day. Phil leaves site and takes 4 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-379 through P-393 (approximately 47,000 sf).

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/28/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/28/2023

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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-1-23	**Report No**.:106
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 70 F, Cloudy PM: 82 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. Due to high winds and rain threat, EC will continue repairs today.
0800 – MSI preparing subgrade.
1100 – EC stops for lunch.
1200 – EC continues repairs and vacuum testing.
1400 – EC stops for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/1/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/1/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-2-23	**Report No**.:107
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 80 F, Cloudy PM: 59 F, Light Rain	**Rain:** 0.04 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:30 am	14:30 pm	5
Montreal Bailey	CQA Support	7:00 am	13:00 pm	6
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal and EC arrive onsite. EC will deploy geomembrane on middle tier moving westerly.
0930 – Phil arrives onsite.
1100 – EC stops for lunch after installing nine geomembrane panels.
1200 – EC continues seam welds, repairs, vacuum testing.
1300 – Montreal leaves site.
1400 – EC stops for day due to light rain.
1430 – Phil leaves site and takes 4 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-394 to P-402 (approximately 34,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/2/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/2/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-6-23	**Report No**.:108
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Cloudy PM: 82 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support	10:00 am	11:00 am	1

Description of Work

Work canceled February 3 to February 5 due to weather.

0700 – Phil and EC arrive onsite. Due to muddy site conditions, EC will deploy geocomposite on middle tier.
0845 – Bobby (CME) arrives onsite to take moisture/density tests on western side of top and middle tier.
0930 – CME leaves site. Six moisture/density tests passed. One sample was collected for permeability testing.
1000 – Bill onsite for weekly construction project review.
1100 – EC stops for lunch. Bill leaves site.
1200 – EC continues installing geocomposite.
1400 – EC stops for day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/6/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/6/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-7-23	**Report No**.:109
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 67 F, Cloudy PM: 81 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	12:00 pm	14:00 pm	2
Montreal Bailey	CQA Support	7:00 am	12:00 pm	5
Bill Cullen	CQA Support			

Description of Work

0700 – Montreal and EC arrive onsite. EC will continue deploying geocomposite on middle tier.
1100 – EC stops for lunch.
1200 – EC continues installing geocomposite. Phil arrives onsite. Montreal leaves site.
1400 – EC stops for day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/7/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/7/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-8-23	**Report No**.:110
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 67 F, Cloudy PM: 84 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support	7:00 am	8:00 am	1
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will continue deploying geocomposite on middle tier. MSI says they will start anchor trench excavation today.
0800 – Montreal leaves site.
1100 – EC stops for lunch.
1200 – EC finishes installing geocomposite. EC begins staging material and equipment to the south flat for deployment tomorrow.
1400 – EC stops for day. Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/8/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/8/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-9-23	**Report No**.:111
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 67 F, Cloudy PM: 84 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	14:15 pm	7.25
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install geomembrane today.
0830 – EC begins installing geomembrane on east side into anchor trench.
0900 – CME onsite for moisture/density testing.
0930 – Testing fails, subgrade isn't compact enough. CME leaves site.
1130 – EC stops for lunch.
1230 – EC continues installing geomembrane.
1400 – EC finishes installing geomembrane for the day and continues seam welding, repairs, and testing.
1500 – Phil leaves site and takes six destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-403 to P-415 (approximately 79,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/9/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/9/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-10-23	**Report No**.:112
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Cloudy PM: 71 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install geocomposite today because there is a threat of rain.
1100 – EC stops for lunch.
1200 – EC stops installing geocomposite and begins installing geomembrane.
1400 – EC finishes installing geomembrane for the day and continues seam welding, repairs, and testing.
1600 – EC stops work for day. Phil leaves site and takes eight destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-416 to P-425 (approximately 80,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/10/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/10/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-11-23	**Report No**.:113
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Cloudy PM: 86 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	11:30 am	4.5
Montreal Bailey	CQA Support	7:00 am	11:00 am	4
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will install repairs and geocomposite today because there are high winds in the forecast.
1100 – Winds gusting 16-20 mph. EC starts shutting down for the day. Montreal leaves site.
1130 - EC stops work for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/11/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/11/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-13-23	**Report No**.:114
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 51 F, Sunny PM: 69 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC has a second crew onsite bringing a total of 24 people to install geosynthetic materials. EC will install geomembrane today.
0900 – CME arrives onsite to take moisture/density tests.
1100 – EC stops for lunch.
1200 – EC continues to deploy geomembrane.
1400 – CME completes moisture/density testing. All tests passed. CME leaves site.
1600 – EC stops work for day. Phil leaves site and takes 20 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-426 to P-443 (approximately 192,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/13/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/13/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-15-23	**Report No**.:115
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 49 F, Sunny PM: 73 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			

Description of Work

Onsite work stoppage March 14.

0700 – Phil, Montreal, and EC arrive onsite. EC has a second crew onsite bringing a total of 23 people to install geosynthetic materials. EC will install geomembrane today.
1100 – EC stops for lunch.
1200 – EC continues to deploy geomembrane.
1300 – EC finished installing geomembrane on southern flat. Phil has marked 12 destruct samples. EC doing repairs and installing geocomposite along anchor trench.
1500 – Phil leaves site and takes 12 destruct samples to FedEx for overnight delivery to TRI.
1600 – EC stops work for day. Montreal leaves site.

Installed geomembrane panels P-444 to P-462 (approximately 141,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/15/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/15/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-16-23	**Report No**.:116
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 55 F, Sunny PM: 74 F, Rain	**Rain:** 0.05 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support	7:00 am	8:30 am	1.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. Poor weather forecast for this afternoon. EC will install geocomposite and continue with geomembrane repairs and testing.
0830 – Montreal leaves site.
1100 – EC stops for lunch.
1200 – EC continues to deploy geocomposite.
1400 – Lightning stand-down ordered onsite.
1500 – EC and Phil leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/16/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/16/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-20-23	**Report No**.:117
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 39 F, Cloudy PM: 57 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Montreal Bailey	CQA Support	7:00 am	11:00 am	4
Bill Cullen	CQA Support			

Description of Work

Project site received over 2-inches of rainfall from March 17 through 19. All work suspended.

0700 – Phil, Montreal, and EC arrive onsite. EC will continue to install geocomposite on southern flat. MSI is reworking the subgrade damaged by the rain.
1100 – EC stops for lunch. Montreal leaves site.
1200 – EC continues to deploy geocomposite.
1430 – Phil leaves site.
1500 – EC stops for day and leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/20/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/20/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-21-23	**Report No**.:118
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 52 F, Cloudy PM: 71 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will install geomembrane along western anchor trench.
1230 – EC stops for lunch.
1330 – EC begins cleaning. Wind is starting to become a problem for liner installation.
1400 – Wind speeds increasing. EC placing rolls along edge of liner to secure and making sandbags.
1500 – EC continues to make sandbags. Phil leaves site.

Installed geomembrane panels P-463 through P-490 (approximately 86,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/21/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/21/2023

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Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-22-23	**Report No**.:119
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 68 F, Cloudy PM: 82 F, Cloudy	**Rain:** 0.05 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	13:30 pm	6.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will not be able to install geomembrane today due to the overnight light rain at the site. EC will deploy geocomposite on remainder of southern flat area.
1130 – EC stops for lunch.
1330 – Phil leaves site and takes nine destruct samples to FedEx for overnight delivery to TRI.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/22/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/22/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-23-23	**Report No**.:120
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 72 F, Cloudy PM: 84 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Montreal Bailey	CQA Support	7:00 am	15:00 pm	8
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal and EC arrive onsite. EC will deploy geomembrane today.
1115 – EC stops for lunch. Wind strength is picking up.
1210 – Too windy to continue deploying liner. EC continues repairs and testing of geomembrane.
1430 – Phil leaves site.
1500 – EC stops for day. Montreal leaves site.

Installed geomembrane panels P-491 through P-500 (approximately 66,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/23/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/23/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-24-23	**Report No**.:121
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 62 F, Cloudy PM: 84 F, Light Rain	**Rain:** 0.04 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	10:30 am	3.5
Montreal Bailey	CQA Support	7:00 am	10:30 am	3.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal and EC arrive onsite. Due to high winds and threatening weather, EC will deploy geocomposite in anchor trench and finish south flat. Rain is expected around noon.
1030 – Light rain starts. EC stops work. Phil and Montreal leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/24/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/24/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-27-23	**Report No**.:122
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 58 F, Cloudy PM: 79 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Montreal Bailey	CQA Support	7:00 am	8:30 am	1.5
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal and EC arrive onsite. Site received 0.15-in. rain yesterday afternoon. Subgrade to soft to install geomembrane. EC will continue installing geocomposite on southern flat while the subgrade dries.
0830 – Montreal leaves site.
0845 – EC finishes geocomposite installation on southern flat.
0910 – EC begins deploying geomembrane along old tie-in.
1115 – EC stops work for lunch.
1215 – EC continues installing geomembrane.
1500 – EC stops geomembrane installation and continues seaming, repairs, and testing.
1600 – Phil leaves site.

Installed geomembrane panels P-463 to P-517 (approximately 103,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/27/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/27/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-28-23	**Report No**.:123
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 59 F, Cloudy PM: 75 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will install geomembrane.
1115 – EC stops work for lunch.
1215 – Winds getting too strong to continue with geomembrane installation. EC will continue with repairs and testing of geomembrane.
1500 – Phil leaves site and takes 17 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-418 to P-538 (approximately 93,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/28/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/28/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-29-23	**Report No**.:124
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 56 F, Cloudy PM: 70 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will install geomembrane over remainder of prepared area.
1115 – EC stops work for lunch.
1215 – EC continues with geomembrane installation.
1300 – Final geomembrane panel placed. EC continues with repairs and testing.
1400 – Phil leaves site and takes 6 destruct samples to FedEx for overnight delivery to TRI.

Installed geomembrane panels P-539 to P-560 (approximately 99,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/29/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/29/2023

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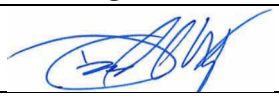
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 3-30-23	**Report No**.:125
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 62 F, Cloudy PM: 78 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will complete repairs and continue installiang geocomposite.
1000 – Phil collects soil samples of cover soil (4 from SFL and 6 from SAL).
1115 – EC stops work for lunch.
1215 – EC continues with geocomposite installation.
1400 – Phil leaves site and takes soil samples to Thomas Turf Lab for fertility sampling.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/30/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/30/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 3-31-23	**Report No**.:126
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 70 F, Cloudy PM: 87 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

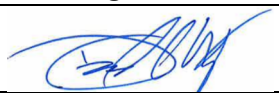
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:15 am	16:30 pm	9.25
Montreal Bailey	CQA Support	7:15 am	15:00 pm	7.75
Bill Cullen	CQA Support			

Description of Work

0700 – Phil, Montreal, and EC arrive onsite. EC will continue installing geocomposite.
1130 – EC stops work for lunch.
1230 – EC continues with geocomposite installation.
1500 – Montreal leaves site.
1630 – EC stops work for the day. Phil leaves the site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	3/31/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		3/31/2023

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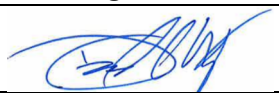
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 4-1-23	**Report No**.:127
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Mine Service, Inc.	**GC Superintendent:** Vernon Lang	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 55 F, Cloudy PM: 82 F, Cloudy	**Rain:** 0.06 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer MSI: Eddie Noak, Vernon Lang, Scott Mendoza		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0700 – Phil and EC arrive onsite. EC will continue installing geocomposite.
1100 – EC stops work for lunch.
1200 – EC continues with geocomposite installation.
1430 – EC completes geocomposite installation and begins demobilization from site.
1500 – EC demobilizes from site. Phil leaves the site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	4/1/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		4/1/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 9-7-23	**Report No**.:128
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 82 F, Sunny PM: 102 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	13:30 pm	15:00 pm	1.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

1330 – Phil arrives onsite to collect soil samples from new borrow area to be used for SFL clay cap. Phil met with Buster Felon (Charah) to locate the new borrow area.
1400 – CME arrives onsite to collect soil samples at the direction of Phil. The borrow area is located just east of the SFL active area along the flat leading to the lake.
1500 – Four "pits" were samples (approximately 6-feet deep) and designated as Pit 1 through Pit 4. Phil requested CME run Atterburg, -40, -200, standard proctor and hydraulic conductivity.
1500 – Phil and CME leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	9/7/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		9/7/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-8-23	**Report No**.:129
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 71 F, Cloudy PM: 87 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	13:30 pm	14:30 pm	1
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

1330 – Phil arrives onsite to inspect progress on active area clay cover installation. Met with Alfred Acuna, general superintendent for Burnside Infrastructure, LLC (Burnside). Burnside has taken over as general contractor from MSI, who are no longer on the project. Scheduled CME to test first liner lift of clay cover tomorrow.
1430 – Phil leaves site. collect soil samples from new borrow area to be used for SFL clay cap. Phil met with Buster Felon

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/8/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/8/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-9-23	**Report No**.:130
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 60 F, Cloudy PM: 80 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	15:00 pm	6
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support			

Description of Work

0900 – Phil arrives onsite to inspect progress on active area clay cover installation.
0930 – CME arrives to perform moisture/density tests of compacted clay cover. CME begins testing at grid point 1.5-12.5, sample barely passes on moisture. Four other locations were tested and all averaged 4% below optimum moisture. Phil explains requirement to Alfred (Burnside). Burnside will rework moisture of compacted clay. Since rain is expected, CME will be on standby for week of Nov. 13 to retest soils.
1000 – Phil attends weekly construction progress meeting at Administration Building.
1100 – Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/9/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/9/2023

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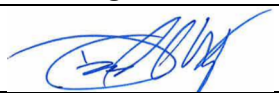
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-15-23	**Report No**.:131
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 52 F, Sunny PM: 77 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	13:00 pm	15:30 pm	2.5
Montreal Bailey	CQA Support			
Bill Cullen	CQA Support	13:00 pm	15:30 pm	2.5

Description of Work

0900 – Phil, Bill, and CME arrive onsite to inspect progress on active area clay cover installation and prepare for soil testing.
1500 – CME performs 19 moisture/density tests on first lift. Eight (8) tests failed due to lack of moisture and possible material change. Proctor sample taken at grid point S-17. Phil and Bill describe problem to Burnside and will schedule a retest for tomorrow at 0800.
1530 – Phil, Bill, and CME leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/15/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/15/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-16-23	**Report No**.:132
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Cloudy PM: 63 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:00 am	11:30 am	3.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer	9:00 am	13:00 pm	4

Description of Work

0730 – Phil arrives onsite to prepare for moisture/density testing.
0800 – CME arrives onsite and prepares to take moisture/density tests.
0900 – Dave arrives onsite. CME leaves site. Testing indicates change of material is forcing failures in moisture content. CME collects another Proctor sample at grid U-14.
1000 – Dave and Phil attend weekly construction progress meeting.
1130 – Phil leaves site.
1300 – Dave leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/16/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/16/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-18-23	**Report No**.:133
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Cloudy PM: 63 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

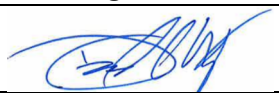
HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	10:30 am	3.5
Bill Cullen	CQA Support	7:30 am	10:30 am	3
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil arrives onsite to prepare for moisture/density testing.
0730 – Bill arrives onsite.
0800 – CME arrives onsite and prepares to take moisture/density tests. Tests passed.
1030 – Bill and Phil leave site. Phil goes to SAL to collect Pond 4 soil sample.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/18/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/18/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 11-20-23	**Report No**.:134
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Light Rain PM: 79 F, Cloudy	**Rain:** 0.05 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:30 am	9:00 am	1.5
Bill Cullen	CQA Support	7:30 am	9:00 am	1.5
Dave Vogt	CQA Officer			

Description of Work

0730 – Phil and Bill arrive onsite to prepare for moisture/density testing. Light rain in area.
0800 – Rain has started. CME arrives onsite but can't take moisture/density tests because area is too wet.
0900 – Bill and Phil leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/20/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/20/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 11-22-23	**Report No**.:135
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Sunny PM: 62 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Bill Cullen	CQA Support	7:00 am	11:00 am	4
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and Bill arrive onsite to prepare for moisture/density testing.
0815 – CME arrives onsite and begins taking moisture/density tests on second compacted clay lift.
1100 – CME completes 49 moisture/density tests and all tests passed. A sample was collected for permeability testing.
1100 – Bill, Phil, and CME leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/22/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/22/2023

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Daily Field Report

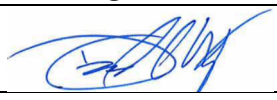
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-27-23	**Report No**.:136
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 37 F, Sunny PM: 57 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	12:30 pm	14:30 pm	2
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

1230 – Phil arrives onsite to inspect progress on placing the final life over the active area. Burnside clearing leading edge of the previously placed liner at the tie-in location on the south side. Phil notes that a lot of work still needs to be completed prior to geomembrane installation. Burnside using a smooth drum roller to prepare for geomembrane installation.
1300 – Phil meets with Craig York and Michael (Burnside) to discuss progress. Phil also contacts May (EC) to check scheduling. Everyone will meet tomorrow morning to inspect subgrade.
1430 – Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/27/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/27/2023

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-28-23	**Report No**.:137
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 46 F, Cloudy PM: 63 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	16:45 pm	9.25
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0730 – Phil, May, Craig York, and Burnside meet at southside liner tie-in to discuss subgrade. Burnside directed to fill in some spots with soil and smooth roll. EC will start cleaning old tie-in and try to lay a new panel today. Phil notes that they will re-start with geomembrane panel 561, repair R-1077, and destruct DS-260.
0905 – EC begins to deploy geomembrane panel P-561. EC will apply an extrusion weld to panel to tie-in with existing geomembrane.
1130 – EC stops for lunch.
1230 – EC continues with geomembrane installation.
1640 – EC stops for day after installation of geomembrane panel P-566 along southern tie-in. Phil and EC leave site.

Installed geomembrane panels P-561 through P-566 (approximately 19,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/28/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/28/2023

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 11-29-23	**Report No**.:138
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 41 F, Cloudy PM: 64 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:15 am	16:30 pm	9.25
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0715 – Phil and EC arrive onsite. EC has a 7-person crew with 5 to 6 more crew members expected to arrive next week. EC will continue with geomembrane tie-in on south area.
0730 – EC begins placing geomembrane.
1045 – EC stops for an early lunch. Burnside just finishing the anchor trench for the area to be lined.
1630 – EC has installed geomembrane on the "pie" area along the southeast end of the old tie-in. The anchor trench has been excavated at the active area to allow rainwater dispersal.
1630 – EC and Phil leave site.

Installed geomembrane panels P-567 through P-575 (approximately 29,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	11/29/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		11/29/2023

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Daily Field Report

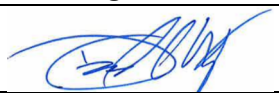
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-4-23	**Report No**.:139
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 48 F, Sunny PM: 69 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Rain and weather shut down progress at site November 30 through December 3.

0700 – Phil arrives onsite and notes the subgrade is still too wet to proceed with geomembrane installation. EC will complete repairs and testing on placed geomembrane. Burnside scarifies subgrade to facility drying.
1100 – Phil leaves site and takes four destruct samples to FedEx for overnight delivery to TRI.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/4/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/4/2023

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-5-23	**Report No**.:140
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Sunny PM: 72 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil arrives onsite and met with May (EC) and Craig York to discuss schedule and layout.
0800 – CME arrives onsite to take moisture/density tests on first lift at east end of active area.
0930 – CME leaves the site. They took seven moisture/density tests and had 6 passing results. Test at grid S-22 failed. One sample was collected for permeability testing.
0930 – EC Burnside is smooth rolling subgrade and cleaning northern tie-in area.
1100 – EC stops for lunch.
1200 – EC continues installing geomembrane.
1630 – EC stops for day. Phil leaves site.

Installed geomembrane panels P-576 through P-586 (approximately 107,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/5/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/5/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-6-23	**Report No**.:141
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 48 F, Sunny PM: 68 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Tim Cook	CQA Support	7:00 am	16:30 pm	9.5
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil, Tim, and EC arrive onsite.
0815 – EC begins installing geomembrane.
1230 – EC stops for lunch.
1330 – EC continues installing geomembrane.
1630 – EC stops for day. Phil and Tim leave site.

Installed geomembrane panels P-587 through P-597 (approximately 105,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/6/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/6/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-7-23	**Report No**.:142
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 44 F, Cloudy PM: 71 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Tim Cook	CQA Support	7:00 am	16:30 pm	9.5
Dave Vogt	CQA Officer	9:30 am	14:00 pm	4.5

Description of Work

0700 – Phil, Tim, and EC arrive onsite.
0930 – Dave arrives onsite.
1200 – EC stops for lunch.
1300 – EC continues installing geomembrane.
1630 – EC stops for day. Phil and Tim leave site.

Installed geomembrane panels P-598 through P-609 (approximately 91,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/7/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/7/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-8-23	**Report No**.:143
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 64 F, Cloudy PM: 78 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Tim Cook	CQA Support	7:00 am	15:30 pm	8.5
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil, Tim, and EC arrive onsite.
0745 – CME arrives onsite to take moisture/density tests on first lift, area C.
0830 – CME finishes testing. They took five moisture/density tests and two tests failed. The material is inconsistent and poorly processed. Phil discussed with Michael (Burnside) and Craig York. The moisture content was also uneven. CME leaves site and will return this afternoon after the area has been reprocessed.
0940 – Phil, May (EC), Michael, Luis, and Craig York meet to discuss the anchor trench alignment. A phone conference was initiated with Dave Vogt and he concurred with the proposed excavation.
1200 – EC stops for lunch.
1300 – Project site is becoming very windy. EC continues carefully placing small sections of geomembrane.
1530 – EC stops for day due to the high winds. EMCinstalling geomembrane.
1630 – EC stops for day. Phil and Tim leave site. CME rescheduled for Monday.

Installed geomembrane panels P-610 through P-615 (approximately 64,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/8/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/8/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-9-23	**Report No**.:144
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 64 F, Cloudy PM: 78 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Tim Cook	CQA Support	7:00 am	15:30 pm	8.5
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil, Tim, and EC arrive onsite. EC will spend day tying new geomembrane to the existing geomembrane on the north side.
1100 – EC stops for lunch.
1200 – Project site is becoming very windy. EC continues carefully placing small sections of geomembrane.
1530 – EC stops for day. Phil and Tim leave site.

Installed geomembrane panels P-616 through P-618 (approximately 45,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/9/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/9/2023

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-11-23	**Report No**.:145
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 34 F, Sunny PM: 65 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Tim Cook	CQA Support	7:00 am	17:15 pm	10.25
Dave Vogt	CQA Officer	10:00 am	14:00 pm	4

Description of Work

0700 – Phil, Tim, and EC arrive onsite. EC will spend day tying new geomembrane to the existing geomembrane on the north side.
0815 – CME arrives onsite to take moisture/density tests. Phil meets with Craig York and Mike Dunn to review new borrow source (Utah Pond).
1000 – Dave arrives onsite.
1045 – CME completes moisture/density testing and all tests passed. Three samples were collected from the first lift for permeability testing.
1140 – EC stops for lunch.
1240 – EC continues repairs and testing of geomembrane.
1400 – Dave leaves site.
1500 – Phil leaves site and takes 15 destruct samples to FedEx for overnight delivery to TRI.
1630 – EC stops for day and begins cleanup.
1715 – Tim and EC leave site.

Installed geomembrane panels P-616 through P-618 (approximately 45,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/11/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/11/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-12-23	**Report No**.:146
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 43 F, Sunny PM: 68 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	8
Tim Cook	CQA Support	7:00 am	17:15 pm	10.25
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil, Tim, and EC arrive onsite. EC will spend day detailing newly deployed geomembrane.
1100 – EC stops for lunch.
1200 – EC continues repairs and testing of geomembrane.
1300 – Results for destruct tests are received and 5 of 15 destructs failed (Ad-Brk). All from wedge #33.
1400 – Test A and B on all failures still Ad-Brk. EC decides to cap all failed seams in total length.
1500 – Phil leaves site and takes 20 destruct samples to FedEx for overnight delivery to TRI.
1715 – EC stops for day. Tim and EC leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/12/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/12/2023

HDR, Inc.
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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-13-23	**Report No**.:147
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 43 F, Sunny PM: 68 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Tim Cook	CQA Support	7:00 am	17:00 pm	10
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil, Tim, and EC arrive onsite. EC will spend day detailing newly deployed geomembrane and repair/cap the failed destruct seams. Phil met with Luis and Michael to discuss timeline for having Section C ready for testing the second lift and anchor trench.
1130 – EC stops for lunch.
1230 – EC continues repairs/cap failed seams.
1430 – Phil leaves site. GPS still down for Burnside.
1500 – Results for yesterday's batch of 20 destruct tests received and 4 of 20 destructs failed (Ad-Brk). EC will cap seam tomorrow.
1700 – EC stops for day. Tim and EC leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/13/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/13/2023

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 12-14-23	**Report No**.:148
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 50 F, Sunny PM: 71 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Tim Cook	CQA Support	7:00 am	17:00 pm	10
Dave Vogt	CQA Officer	9:30 am	15:00 pm	5.5

Description of Work

0700 – Phil, Tim, and EC arrive onsite. EC will spend day placing geocomposite over geomembrane. Three EC crew members out sick.
0730 – Luis and Michael inform Phil and May that GPS is working again on the Burnside equipment. Burnside starts grading and processing final lift at Area C.
0930 – Dave arrives onsite.
1000 – Phil and Dave go to weekly construction progress meeting.
1100 – Dave asks Phil to grab soil samples at SAL for testing.
1130 – EC stops for lunch.
1230 – EC continues installing geocomposite. Phil reschedules CME for density testing tomorrow since Area C is not ready.
1600 – EC stops for day. Phil, Tim and EC leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/14/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/14/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-15-23	**Report No**.:149
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 56 F, Cloudy PM: 69 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Tim Cook	CQA Support	7:00 am	16:00 pm	9
Dave Vogt	CQA Officer			

Description of Work

0645 – Phil, Tim, and EC arrive onsite. EC will spend day placing geocomposite over geomembrane.
0800 – CME arrives onsite and will test second lift across Area C.
1100 – CME completes testing. Twenty eight tests taken and all passed. Three samples were collected for permeability testing. CME leaves site with samples.
1200 – EC stops for lunch.
1300 – EC continues installing geocomposite.
1430 – Phil leaves site.
1600 – EC stops for day. Tim and EC leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/15/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/15/2023

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-18-23	**Report No**.:150
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 42 F, Sunny PM: 71 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:00 pm	7
Tim Cook	CQA Support	7:00 am	16:45 pm	9.75
Dave Vogt	CQA Officer	10:00 am	14:00 pm	4

Description of Work

0700 – Phil, Tim, and EC arrive onsite. EC will spend day making repairs and placing geocomposite over geomembrane. Burnside will prepare C Area.
1000 – Dave arrives onsite.
1200 – EC stops for lunch.
1300 – EC continues installing geocomposite.
1400 – Dave and Phil leave site.
1645 – EC stops for day. Tim and EC leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/18/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/18/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-19-23	**Report No**.:151
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 42 F, Sunny PM: 66 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Tim Cook	CQA Support	7:00 am	16:45 pm	9.75
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and Tim arrive onsite. EC crew was in an accident this morning. No EC crew today. Burnside begins placing soil cover over geomembrane and geocomposite.
0730 – Burnside using a box blade to repair subgrade.
0830 – Phil meets with Michael to discuss Area C subgrade.
1100 – Phil leaves site.
1645 – Burnside stops for day. Tim leaves site.

Installed geomembrane panels P-616 through P-618 (approximately 45,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/19/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/19/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-20-23	**Report No**.:152
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 51 F, Sunny PM: 72 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	10:00 am	3
Tim Cook	CQA Support	7:00 am	16:45 pm	9.75
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and Tim arrive onsite.
0730 – May informs Phil that EC only has a 3-person crew today (5 recovering from accident in hotel). EC will bring more people to the site today. EC will place composite today. Craig York onsite to discuss progress. Burnside finishes cover soil they can place, will begin in the ramp area.
1000 – Phil leaves site.
1645 – EC stops for day. Tim leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/20/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/20/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-21-23	**Report No**.:153
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 58 F, Cloudy PM: 66 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Tim Cook	CQA Support	7:00 am	16:30 pm	9.5
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and Tim arrive onsite. EC has people arriving from Virginia and Odessa to today to help with liner deployment.
0730 – EC starts insalling geomembrane along southern and eastern anchor trench area.
1200 – EC stops work for Christmas catered meal at Administration Building.
1330 – EC resumes placing and seaming geomembrane.
1630 – EC stops placing geomembrane and begins shutting down for the day.
1630 – Phil leaves site and takes 7 destruct samples to FedEx for overnight delivery to TRI. Tim leaves site for Christmas holiday.

Installed geomembrane panels P-618 through P-642 (approximately 71,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/21/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/21/2023

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Daily Field Report

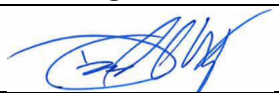
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-22-23	**Report No**.:154
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 58 F, Rain PM: 67 F, Cloudy	**Rain:** 0.06 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	10:00 pm	2
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite. EC will place geocomposite along yesterday's anchor trench. B&C will place soil over to protect liner tie-in at anchor trench (Burnside off today).
0930 – EC begins installing geomembrane.
1000 – Rain starts. EC puts sandbags on liner. B&C covered anchor trench. Work stops for day.

Installed geomembrane panels P-643 through P-644 (approximately 20,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/22/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/22/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-26-23	**Report No**.:155
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 57 F, Sunny PM: 68 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	7:30 am	.5
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil attends meeting at Administration Building. Site received 1.41-inches of rain over the holiday weekend and has postponed any liner work this morning. Burnside and GCERG will attempt to pump storm water from C Area then next few days. EC may be able to install geocomposite later this week.
0730 – Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/26/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/26/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-27-23	**Report No**.:156
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Sunny PM: 57 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	11:00 am	2
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0900 – Phil and EC arrive onsite. EC will install geocomposite today. The subgrade is too wet to rework.
1100 – Phil leaves site. EC continues to install geocomposite. Burnside repairing access roads.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/27/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/27/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-28-23	**Report No**.:157
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Sunny PM: 57 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	12:30 pm	5
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0900 – Phil and EC arrive onsite. EC will install geocomposite today. Burnside will clean up the old tie-in area alonag northern margin. Burnside will use a box blade later today to repair subgrade.
1000 – Phil attends weekly contruction progress meeting with GCERG and contractors.
1145 – Burnside starts putting cover soil over geomembrane and geocomposite.
1200 – EC stops for lunch.
1230 – Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/28/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/28/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-29-23	**Report No**.:158
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 33 F, Sunny PM: 57 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite.
0730 – EC cuts and pulls back geomembrane panels P-643 and P-644 to help dry subgrade. Panels will be re-welded later today. Burnside placing soil cover over geomembrane and geocomposite.
0830 – EC installs geomembrane.
1200 – EC stops for lunch.
1300 – EC repairs 310-ft. seam section at P-643 and P-644.
1500 – Mike Dunn called a site wide meeting. Work stops.
1600 – Phil leaves site.

Installed geomembrane panels P-645 through P-659 (approximately 47,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/29/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/29/2023

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 12-30-23	**Report No**.:159
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 30 F, Sunny PM: 65 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:30 pm	8.5
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite. EC will install geomembrane and Burnside will place more cover soil over geomembrane and geocomposite.
1240 – EC stops for lunch. Burnside stops for day.
1315 – EC continues repairs and testing of geomembrane. May leaves site, Caesar is supervising EC.
1500 – EC begins cleaning up site.
1530 – Phil and EC leave site. Phil closes and locks front gate.

Installed geomembrane panels P-660 through P-672 (approximately 65,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	12/30/2023
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		12/30/2023

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-2-24	**Report No**.:160
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Sunny PM: 58 F, Rain	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:00 am	16:00 pm	8
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0800 – Phil and EC arrive onsite. Rain forecast for this afternoon so EC will be working on repairs and testing of geomembrane installed during final week of December. EC has a 12-person crew onsite. Burnside will be placing soil cover over geocomposite.
1200 – EC stops for lunch.
1300 – EC continues repairs and testing of geomembrane.
1600 – EC stops for day. Light rain starting onsite. Phil and EC leave site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/2/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/2/2024

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Dallas, TX 75248

Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-8-24	**Report No**.:161
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 52 F, Cloudy PM: 58 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	8:30 am	1.5
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Bad weather and rain stopped work January 3 through 7.

0700 – Phil arrives for daily planning meeting. Approximately 0.5 in. rain expected through day. EC will perform equipment maintenance. Too wet to work at SFL.
0830 – Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/8/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/8/2024

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Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-13-24	**Report No**.:162
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 31 F, Cloudy PM: 63 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	8:30 am	1.5
Tim Cook	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Jan 9, Jan 10, and Jan 11 EC just installed geocomposite, still too wet to work on subgrade. Burnside placed cover soil over geocomposite.
Jan 12 site was too windy to work on liner installation.

Jan 13:
0700 – Phil and EC arrive onsite. May and Phil inspect subgrade. EC will deploy geomembrane today. Burnside is placing topsoil over soil cover.
1200 – EC stops for lunch.
1300 – Too much wind for geomembrane installation. EC works to finish seams, repairs, and testing.
1500 – EC stops for day. Phil leaves site.

Installed geomembrane panels P-673 through P-681 (approximately 41,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/13/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/13/2024

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 1-17-24	**Report No**.:163
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 16 F, Cloudy PM: 46 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Snow and ice on Jan 15 and 16 stopped work on SFL.

Jan 17:
0700 – Phil and EC arrive onsite. May and Phil inspect subgrade and agree that it is suitable for liner deployment.
0830 – EC begins installing geomembrane.
1000 – Phil goes to weekly construction progress meeting. EC says they will have Area C covered in geomembrane by end of day Thursday, January 18, if Burnside can get anchor trench completed and expose remaining northern tie-in.
1200 – EC stops for lunch.
1300 – EC continues installing geomembrane. Burnside exposing old tie-in using vacuum truck and steam cleaner to clear mud from liner and expand anchor trench. Mini excavator is starting a new anchor trench. May lets B&C use skid steer to help clean subgrade.
1600 – EC extrusion welding old tie-in to protect from wind.
1630 – Phil leaves site. Burnside still working on tie-in and anchor trench.

Installed geomembrane panels P-682 through P-694 (approximately 71,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/17/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/17/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-18-24	**Report No**.:164
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 42 F, Cloudy PM: 72 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite. EC says their priority is to enclose Area C with geomembrane.
0800 – EC begins installing geomembrane. Burnside is excavating anchor trench and removing soil from old tie-in near east ramp.
1100 – EC stops for lunch. Burnside still excavating anchor trench.
1200 – EC continues repairs and testing of geomembrane. EC loans their skid steer to Burnside to help with cleanup at tie-in location.
1600 – Phil leaves site. Burnside still working on tie-in. B&C spent day attempting to clean soil off liner from storm using sprayers and pump truck.

Installed geomembrane panels P-695 through P-702 (approximately 44,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/18/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/18/2024

HDR, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-19-24	**Report No**.:165
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 31 F, Cloudy PM: 48 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite.
0800 – EC begins installing geomembrane. Burnside still excavating anchor trench. Phil asks Michael (Burnside) to brin mini excavator back over to dig trench. B&C still cleaning liner of cover soil runoff.
1130 – EC stops for lunch. Burnside still excavating anchor trench.
1230 – EC continues repairs and testing of geomembrane. EC seaming old tie-in using an extrusion weld.
1600 – EC stops for day. Phil leaves site.

Installed geomembrane panels P-703 through P-706 (approximately 11,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/19/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/19/2024

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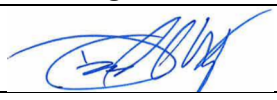
Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-20-24	**Report No**.:166
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 26 F, Sunny PM: 45 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	15:30 pm	8
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite. EC will continue installing repairs and testing geomembrane as well as install geocomposite. B&C will continue cleaning soil from liner so geocomposite can be placed.
1130 – EC stops for lunch.
1230 – EC continues repairs and testing of geomembrane as well as geocomposite installation.
1530 – EC stops for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/20/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/20/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-21-24	**Report No**.:167
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Sunny PM: 43 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	16:00 pm	8.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0730 – Phil and EC arrive onsite. EC will continue installing geocomposite. B&C will continue cleaning soil from liner so geocomposite can be placed. Rain forecast for next few days starting this evening.
1000 – Surveyor (Lacy) onsite to verify elevations on remainder of C Area liner.
1120 – EC stops for lunch.
1230 – EC continues geocomposite installation. B&C continues cleaning liner. Surveyor fly drone for survey after walking and marking liner.
1330 – Surveyor finished and leaves site.
1415 – B&C finished clearing heavy silt from liner at east side. EC will place geocomposite over cleaned area.
1600 – EC stops for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/21/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/21/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 1-31-24	**Report No**.:168
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 45 F, Sunny PM: 76 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	10:00 am	3
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Monday, January 22 through Monday, January 29 – Rain days. No work.
Tuesday, January 30 – EC places geocomposite. Burnside places soil cover over geocomposite.

January 31:
0700 – Phil and EC arrive onsite. EC will continue installing geocomposite. B&C will continue cleaning soil from liner at inactive area tie-in ramp. Michael (Burnside) is preparing inactive area for geomembrane installation. Vacuum truck expected this afternoon to clean debris off liner.
1000 – Phil leaves site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	1/31/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		1/31/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-1-24	**Report No.**:169
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 45 F, Cloudy PM: 57 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	14:45 pm	7.75
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer	9:00 am	14:00 pm	5

Description of Work

0700 – Phil and EC arrive onsite. EC will continue installing geocomposite. B&C will continue cleaning soil from liner using vacuum truck at inactive area tie-in ramp. Burnside is placing soil cover over geocomposite at Area C. Burnside also preparing inactive area for geomembrane installation.
0900 – Dave arrives onsite.
1000 – Phil and Dave attend weekly construction progress meeting at Administration Building.
1130 – EC stops for lunch.
1230 – EC resumes installing geocomposite.
1300 – CME arrives onsite for moisture/density testing on inactive area.
1400 – Dave leaves site.
1415 – CME completes testing and had 17 passing tests. They also took two samples for permeability testing. CME leaves site.
1445 – Phil leaves site. B&C and Burnside continue cleaning liner at low end of Area C.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/1/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/1/2024

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-2-24	**Report No**.:170
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 38 F, Cloudy PM: 58 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:30 am	17:00 pm	9.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite. EC, B&C, and Burnside work together to install geocomposite over Area C.
1700 – Geocomposite installed over Area C. Crews leave site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/2/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/2/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-5-24	**Report No**.:171
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 49 F, Cloudy PM: 64 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:30 pm	9.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

No work on February 3 and 4 because of rain.

February 5:
0700 – Phil and EC arrive onsite. EC will clean liner tie-in as part of a T&M change. Burnside will try to place soil cover over geocomposite.
0830 – Phil contacts Mike Dunn and Craig York and recommends that Burnside stop using trucks on soil cover. The site is still too wet and the trucks are damaging the soil cover. Craig and Mike agree and shut Burnside down. Burnside will use a dozer to muck out subgrade of inactive area while EC cleans liner edge.
1200 – EC stops for lunch.
1300 – EC and Burnside continue clearing old liner tie-in at inactive area. Dozer continues back dragging wet clay oin subgrade section.
1615 – EC stops for day.
1630 – Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/5/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/5/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-6-24	**Report No**.:172
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 42 F, Sunny PM: 71 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil and EC arrive onsite. EC will clean liner tie-in. Burnside will use a dozer to try and dry out subgrade in the inactive area.
0800 – Vacuum pump truck arrives onsite.
0900 – Burnside digs two shallow sumps in subgrade to facilitate water removal by vacuum truck. EC and B&C trying to clean mud off old tie-in.
1000 – Dozer fixing access road above drop structure.
1130 – EC stops for lunch.
1300 – EC resumes cleaning liner. Vacuum truck continues removing water.
1530 – EC stops work for day.
1600 – Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/6/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/6/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-7-24	**Report No**.:173
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 48 F, Sunny PM: 70 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:00 am	15:00 pm	7
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0800 – Phil and EC arrive onsite. EC will attempt to place geomembrane today and plan to install it at the "gully" through the drop structure. Burnside will use a dozer to try and dry out subgrade in the inactive area and working with B&C to clean liner edge. Rain forecast for tomorrow.
1100 – EC stops for lunch.
1200 – EC begins installing geomembrane along old tie-in. Burnside and B&C working on subgrade. Wet area still not ready so EC does washes two panels at tie-in to older liner.
1500 – Phil leaves site.

Installed geomembrane panels P-707 through P-710 (approximately 12,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/7/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/7/2024

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Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-8-24	**Report No**.:174
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Cloudy PM: 73 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	16:00 pm	9
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer	9:00 am	14:00 pm	5

Description of Work

0700 – Phil and EC arrive onsite. EC will concentrate on getting the old culvert area ready for liner.
0800 – B&C and Burnside preparing subgrade in the inactive area. Burnside also placing soil cover over placed geocomposite.
0900 – Dave arrives onsite.
1000 – Phil and Dave attend weekly construction progress meeting.
1100 – EC working on seams, repairs, and testing of three geomembrane panels placed this morning. Vacuum truck still removing water out of the low area.
1130 – EC stops for lunch.
1230 – EC begins extrusion welding seaming of new panels to old tie-in through drainage swale. Vacuum truck helping to keep geomembrane panel edges clen and dry.
1400 – Dave leaves site.
1600 – Phil leaves site.

Installed geomembrane panels P-711 through P-714 (approximately 16,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/8/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/8/2024

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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-9-24	**Report No**.:175
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 63 F, Cloudy PM: 73 F, Cloudy	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	18:00 pm	10.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0730 – Phil and EC arrive onsite. Rain forecast for tomorrow so EC will place geocomposite along edge of drainage swale to protect from soil wash down. B&C and Burnside preparing subgrade in the inactive area. Burnside also placing soil cover over placed geocomposite.
1130 – EC stops for lunch.
1230 – EC begins installing geomembrane.
1800 – EC stops for day. Geomembrane installed to just short of "Barney" drop structure. Phil leaves site.

Installed geomembrane panels P-715 through P-734 (approximately 89,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/9/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/9/2024

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Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-13-24	**Report No**.:176
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 36 F, Sunny PM: 65 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:30 am	17:00 pm	9.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

Monday, February 12 – Rain Day, no work.

February 13:
0730 – Phil and EC arrive onsite. EC will do repairs and testing of geomembrane. Burnside preparing subgrade at down chute.
0800 – EC uses two extrusion welders to seam new liner to old liner at tie-in. Phil meets with Craig York, Michael, and May to discuss down chute connection.
1130 – EC stops for lunch.
1230 – EC resumes extrusion welding of tie-in seam.
1330 – Phil meets with Michael to discuss tie-in requirements for subgrade at down chute. Burnside starts excavating anchor trench by down chute.
1700 – EC stops for day. Phil takes 11 destruct samples to FedEx for overnight delivery to TRI.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/13/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/13/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-14-24	**Report No**.:177
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 43 F, Sunny PM: 68 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	9:00 am	17:00 pm	8
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0900 – Phil arrives onsite. Phil met with Luis, Michael, and Mai to discuss corrections to subgrade and approach to down chute. Burnside will clear area. B&C will pressure clean down chute. EC will finish repairs and testing of geomembrane and start installing geomembrane and geocomposite.
1700 – EC spent day getting repairs and testing complete. Burnside and B&C worked on getting area at down chute prepared and excavating anchor trench.

Installed geomembrane panels P-735 through P-737 (approximately 9,000 sf)

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/14/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/14/2024

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Daily Field Report

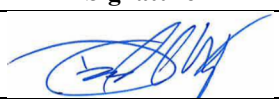
Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-15-24	**Report No**.:178
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 51 F, Sunny PM: 72 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	17:00 pm	10
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer	9:00 am	14:00 pm	5

Description of Work

0700 – Phil arrives onsite. EC plans to install geomembrane and mechanical attachment to down chute. Burnside will continue excavating anchor trench and cleaning old tie-in.
clear area. B&C will pressure clean down chute. EC will finish repairs and testing of geomembrane and start installing geomembrane and geocomposite.
0900 – Dave arrives onsite.
1000 – Dave and Phil attend weekly construction progress meeting.
1200 – EC stops for lunch.
1300 – EC continues installing geomembrane.
1400 – Dave leaves site.
1700 – EC stops for day. All geomembrane panels deployed and seamed with exception at tie-in.

Installed geomembrane panels P-738 through P-757 (approximately 57,000 sf)

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/15/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/15/2024

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Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-16-24	**Report No**.:179
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 54 F, Sunny PM: 70 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	8:00 am	16:00 pm	8
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0800 – Phil arrives onsite. EC plans to repair and test installed geomembrane and install geocomposite. EC will also clean old tie-in for extrusion welding. Burnside will backfill anchor trench.
1030 – Surveyor arrives onsite.
1130 – EC stops for lunch.
1230 – EC continues repairs, testing, and tie-in seaming with an extrusion seam.
1545 – All geomembrane welded. EC cleaning up area. EC also placing a geocomposite wrap over the down chute riprap.
1600 – EC stops for day. Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/16/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/16/2024

HDR, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248

Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-19-24	**Report No**.:180
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 32 F, Sunny PM: 55 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager	7:00 am	14:30 pm	7.5
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil arrives onsite. EC plans to install geocomposite over inactive area. Burnside will place cover soil and topsoil over active area.
1130 – EC stops for lunch.
1230 – EC continues placing geocomposite.
1430 – Phil leaves the site.
1500 – EC stops for day.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/19/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/19/2024

HDR, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-20-24	**Report No**.:181
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 32 F, Sunny PM: 55 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	15:00 pm	10
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil arrives onsite. EC plans to install geocomposite over inactive area. Burnside will place cover soil and topsoil over active area.
1130 – EC stops for lunch.
1230 – EC continues placing geocomposite.
1300 – All destruct test results passed.
1500 – EC stops for day.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/20/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/20/2024

HDR, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248

Daily Field Report

Project and Site Information		
Project: GCERG Site F Landfill Closure	**Date:** 2-21-24	**Report No**.:182
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 61 F, Sunny PM: 78 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel				
Name	**Position**	**Arrival**	**Departure**	**Hours**
Philip Cadarette	Onsite CQA Manager	7:00 am	11:00 am	4
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

0700 – Phil arrives onsite. EC plans to install last of geocomposite. Burnside will place cover soil and topsoil.
1100 – EC installs last geocomposite panel and stops for lunch. EC will spend the next day or two cleaning site and demobilizing.
1100 – Phil leaves site.

Review and Approval		
Report Prepared By	**Signature**	**Date**
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/21/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/21/2024

HDR, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248

Daily Field Report

Project and Site Information

Project: GCERG Site F Landfill Closure	**Date:** 2-23-24	**Report No**.:183
	Project No.: 10290148	**Task No.**: 003
Client: Charah	**Location:** Iola, TX	
General Contractor (GC): Burnside Infrastructure, LLC	**GC Superintendent:** Micheal Ambriz	
Onsite Specialty Contractors: Envirocon Systems, Inc.		
CQA Officer: Dave Vogt, HDR	**Onsite CQA Manager:** Philip Cadarette	
Weather: AM: 53 F, Sunny PM: 76 F, Sunny	**Rain:** 0 in.	
Distribution List: GCERG: Buster Felan, Mike Dunn, Craig York, Norman Divers HDR: Dave Vogt, Philip Cadarette, Mike Plummer Burnside: Jake Burnside, Alfred Acuna, Micheal Ambriz		

HDR Onsite Personnel

Name	Position	Arrival	Departure	Hours
Philip Cadarette	Onsite CQA Manager			
Bill Cullen	CQA Support			
Dave Vogt	CQA Officer			

Description of Work

EC completes site cleanup and demobilizes off the site.

Review and Approval

Report Prepared By	Signature	Date
Philip Cadarette, Onsite CQA Manager	*Philip Cadarette*	2/23/2024
Report Approved By	**Signature**	**Date**
Dave Vogt, P.E., CQA Officer		2/23/2024

CONSTRUCTION PROGRESS PICTURES

SITE F LANDFILL

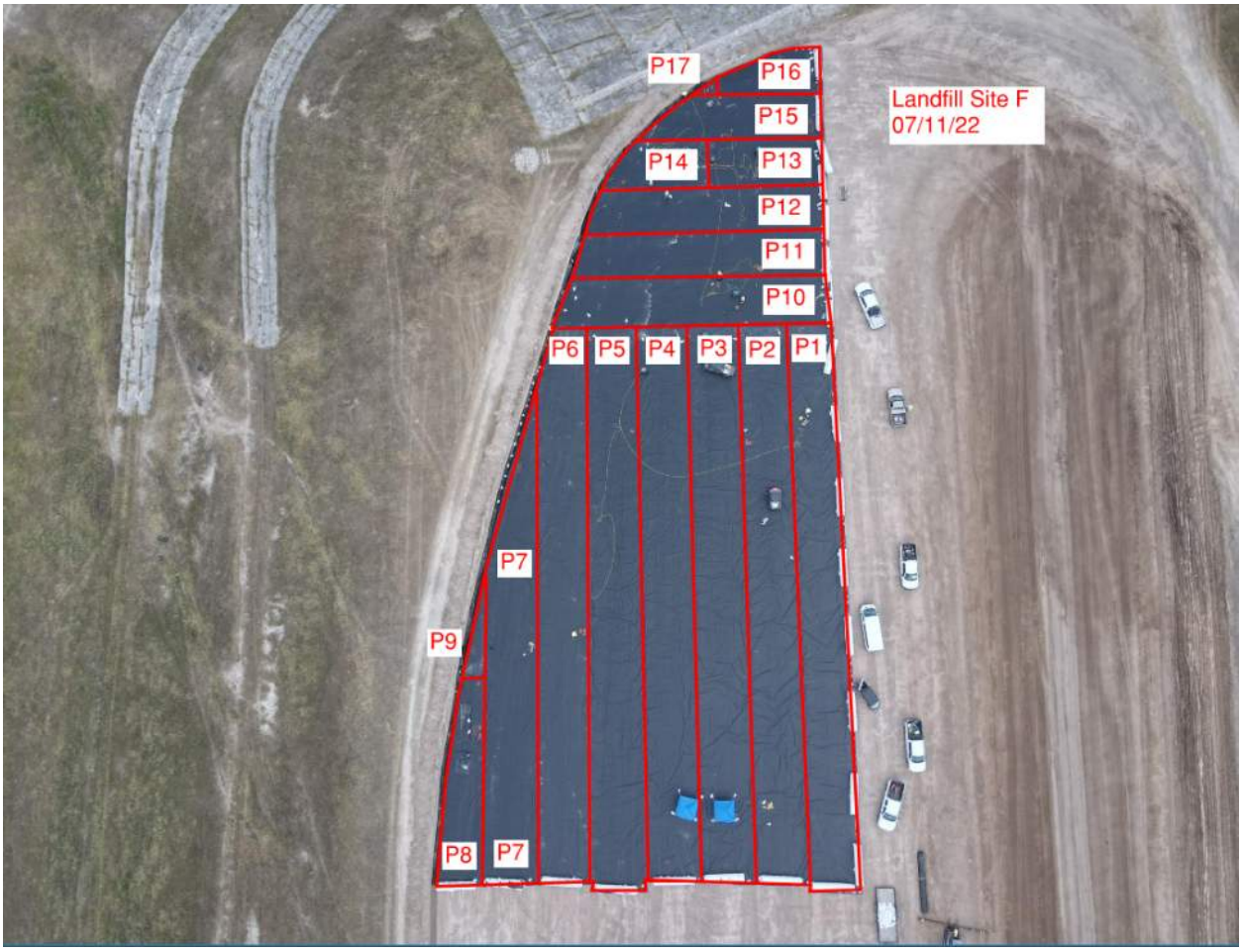


Figure 1: July 11, 2022



Figure 2: July 12, 2022



Figure 3: July 13, 2022

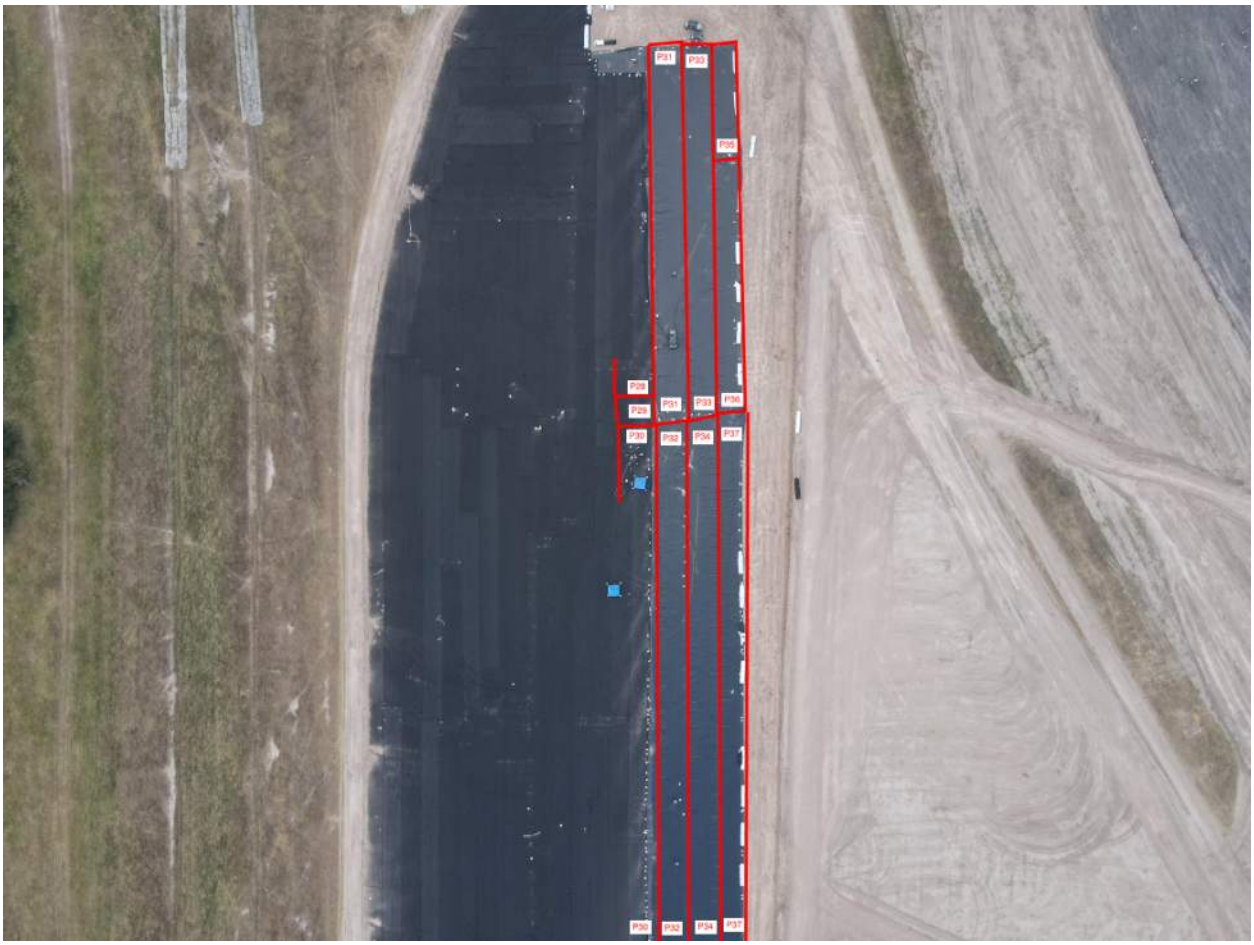


Figure 4: July 15, 2022



Figure 5: July 15, 2024



Figure 6: July 18, 2022



Figure 7: July 19, 2022



Figure 8: September 19, 2022

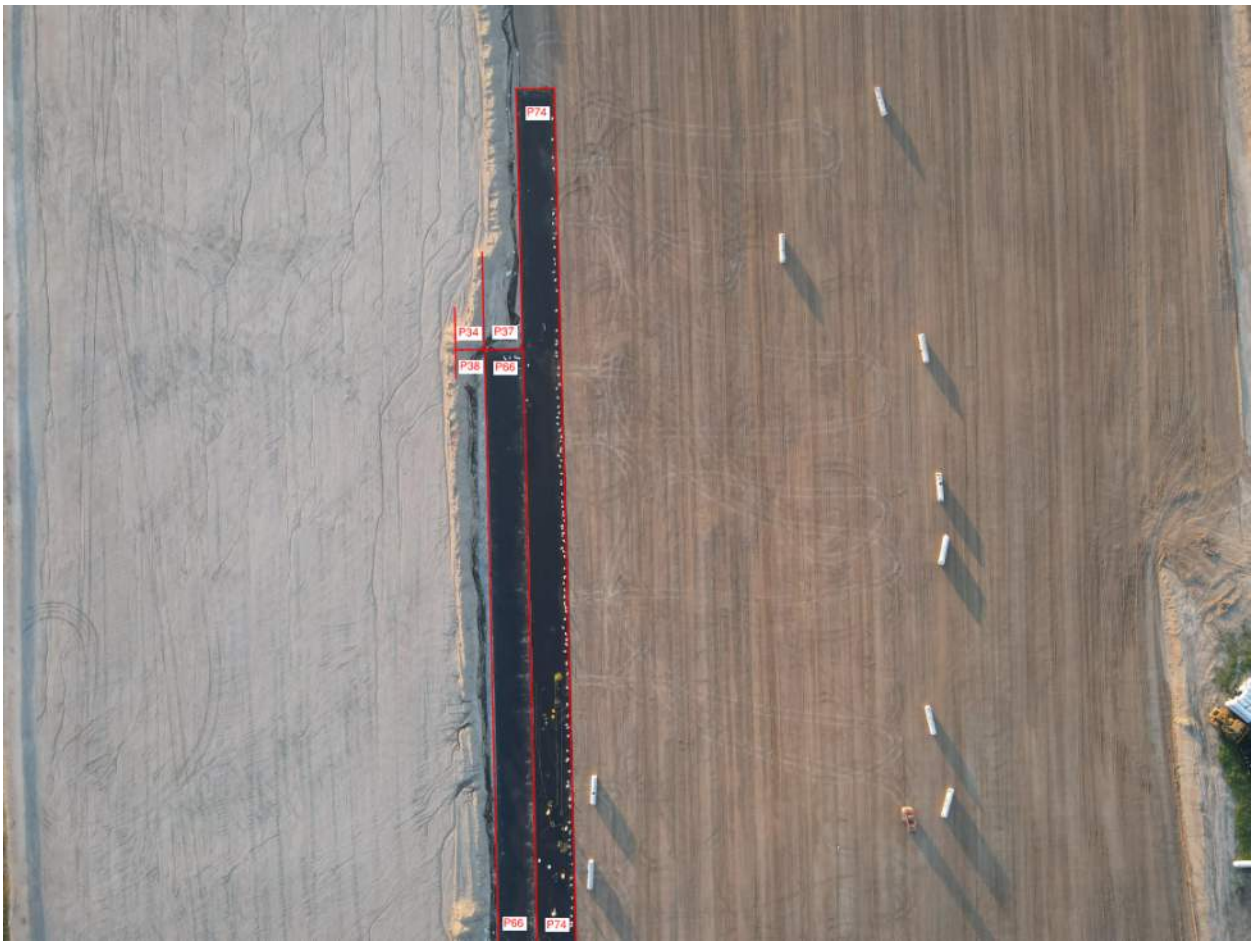


Figure 9: September 19, 2022



Figure 10: September 20, 2022



Figure 11: September 20, 2022



Figure 12: September 22, 2022

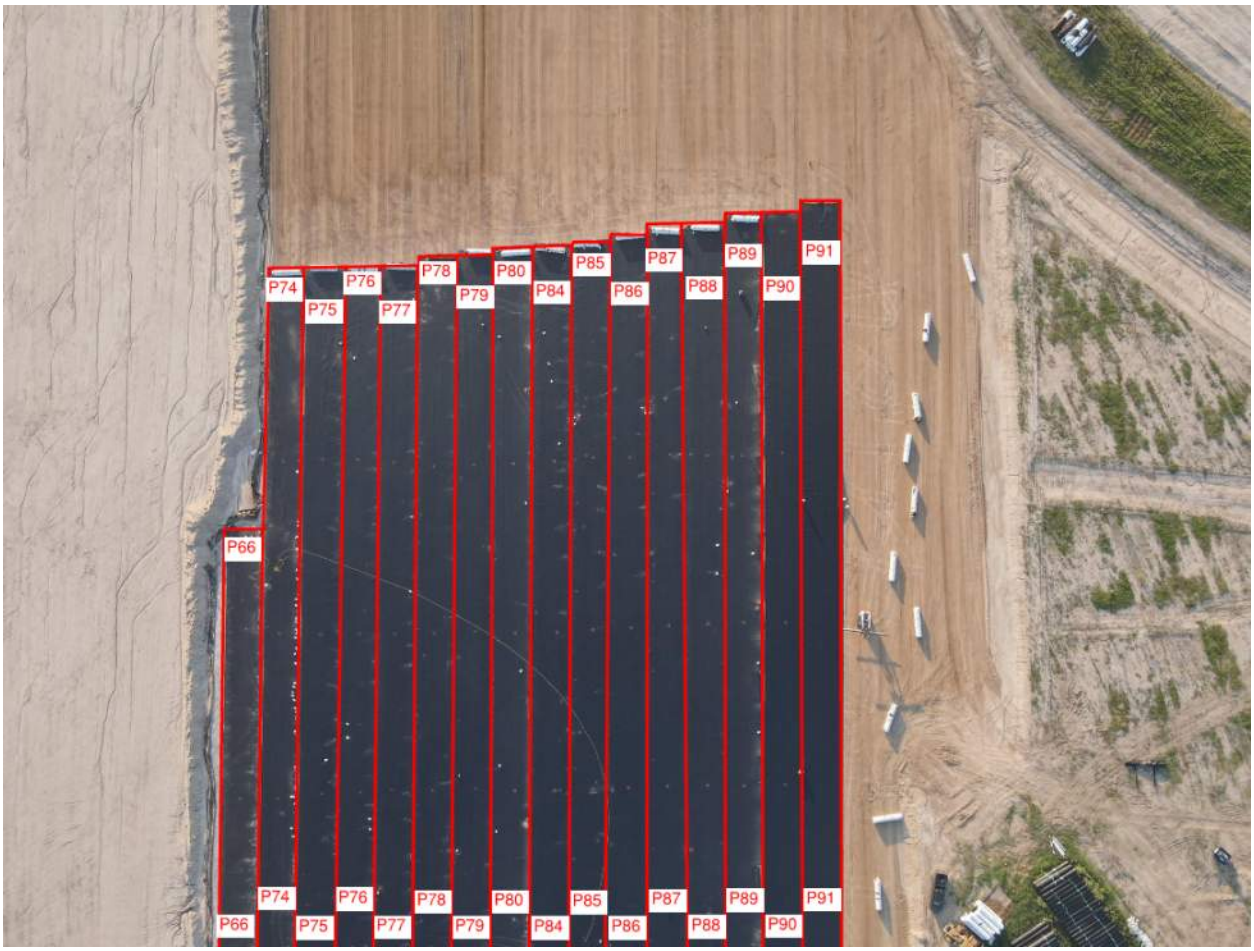


Figure 13: September 22, 2022



Figure 14: September 28, 2022

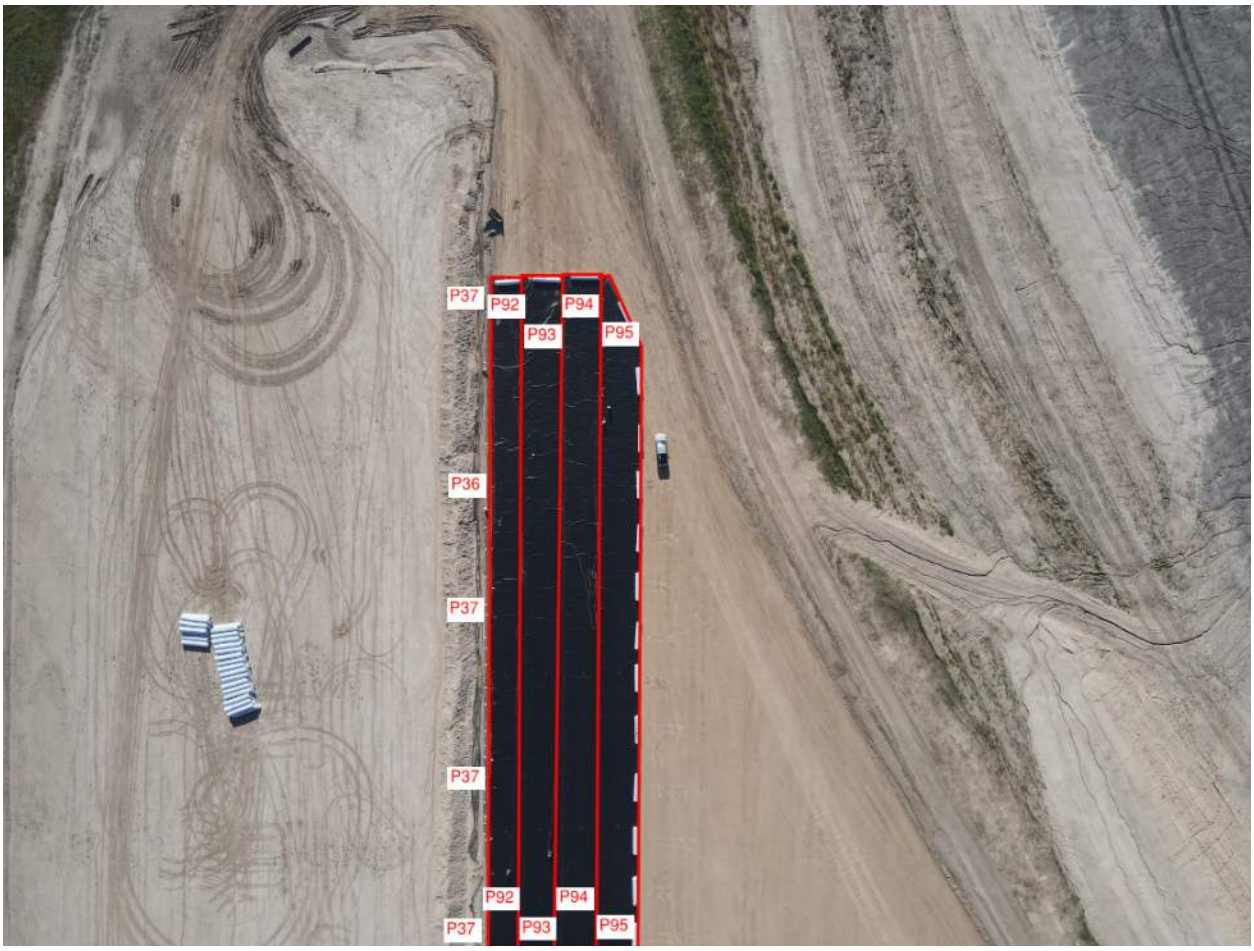


Figure 15: September 28, 2022

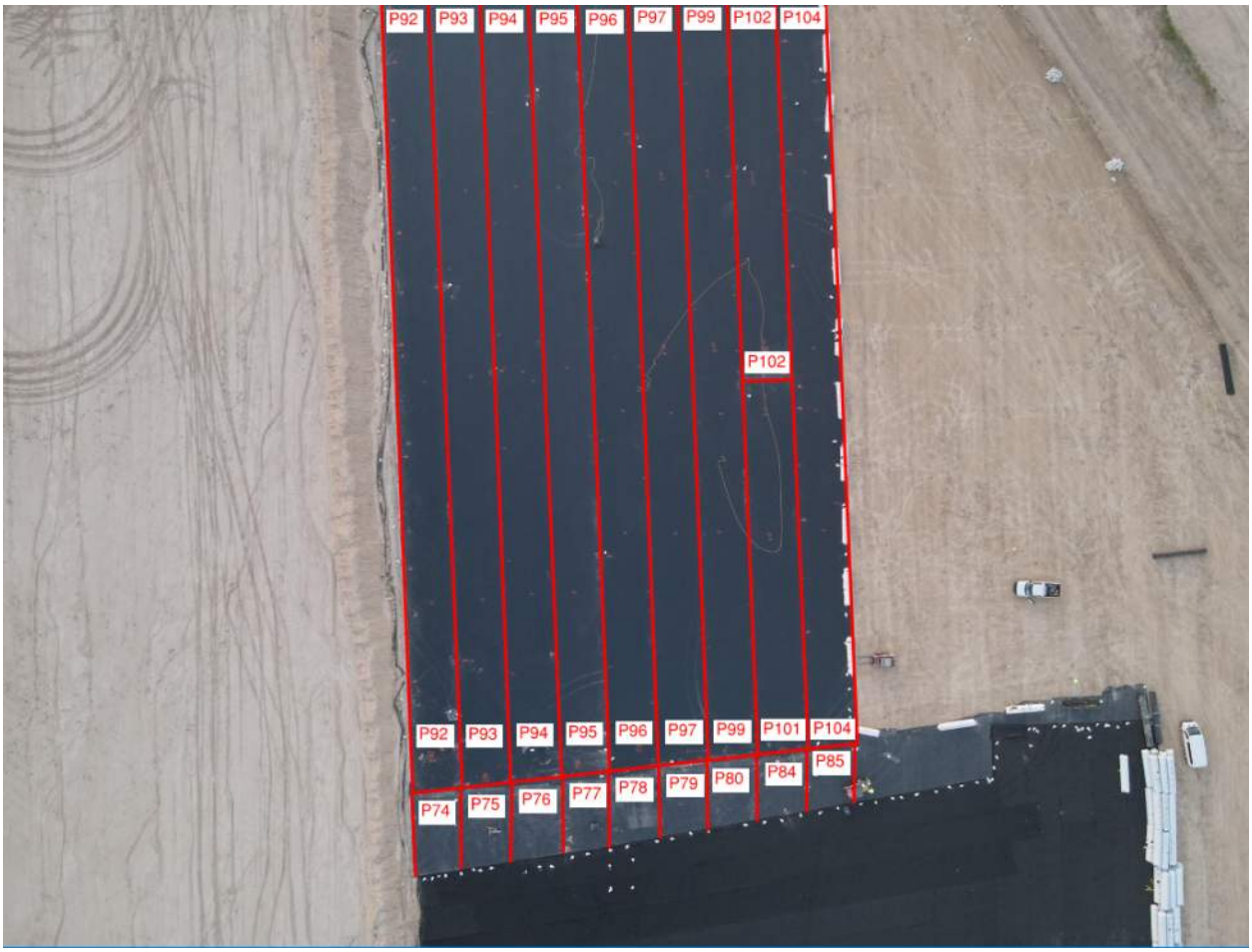


Figure 16: September 29, 2022



Figure 17: September 29, 2022



Figure 18: September 30, 2022

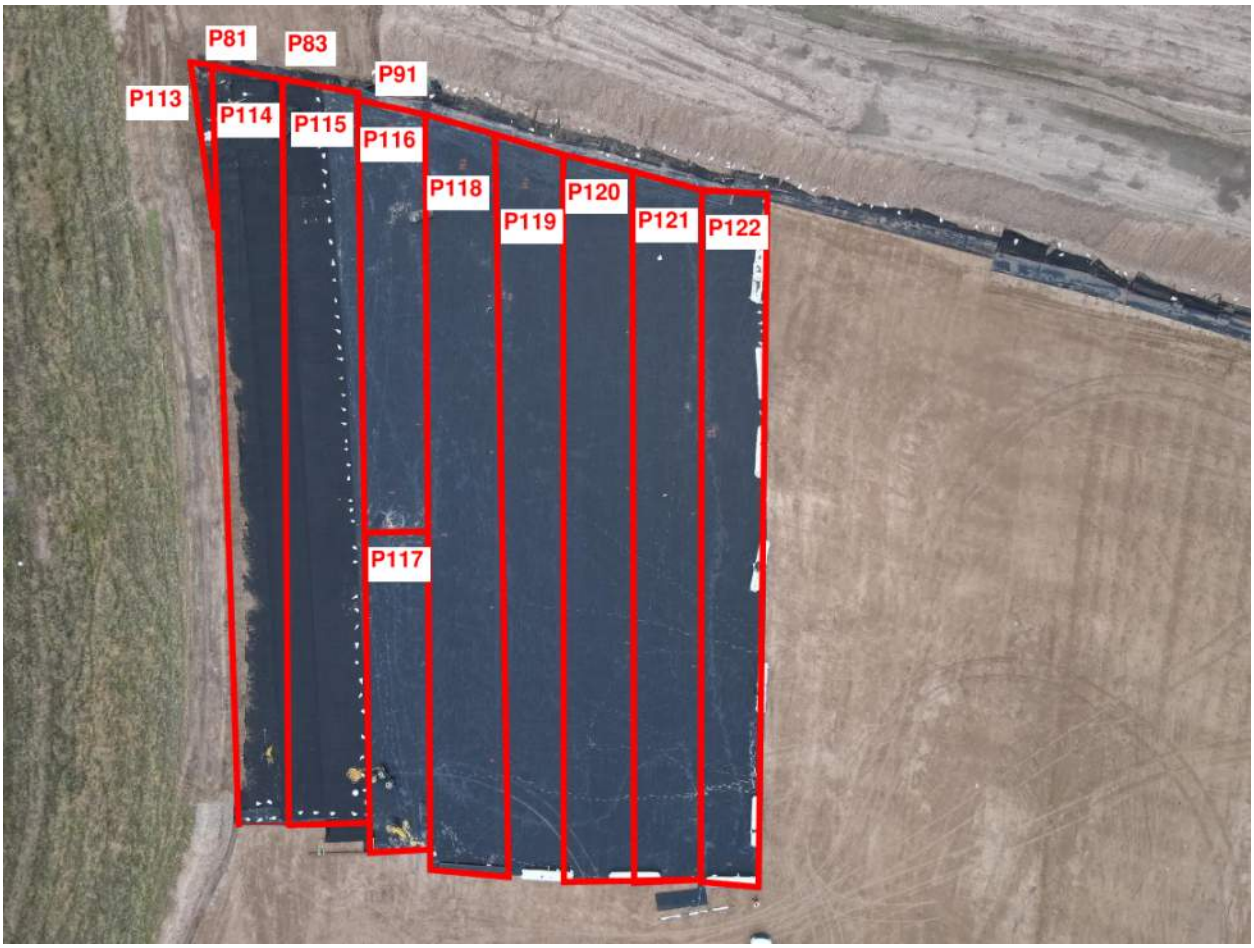


Figure 19: December 1, 2022



Figure 20: December 4, 2022



Figure 21: December 5, 2022



Figure 22: December 5, 2022

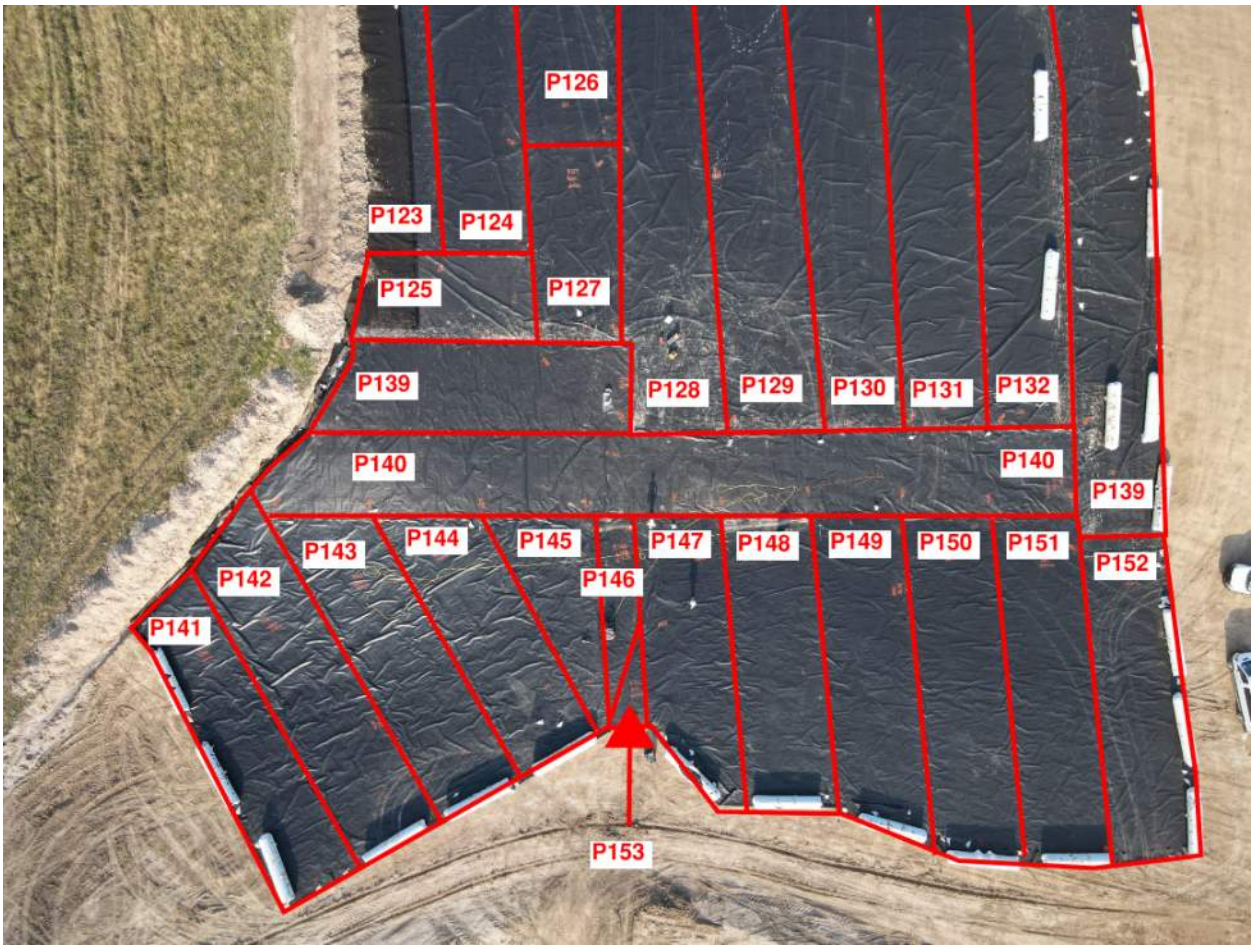


Figure 23: December 7, 2022



Figure 24: December 16, 2022



Figure 25: December 17, 2022



Figure 26: January 5, 2023



Figure 27: January 5, 2023



Figure 28: January 5, 2023



Figure 29: January 6, 2023



Figure 30: January 6, 2023



Figure 31: January 6, 2023



Figure 32: January 7, 2023



Figure 33: January 7, 2023



Figure 34: January 7, 2023



Figure 35: January 7, 2023



Figure 36: January 10, 2023



Figure 37: January 11, 2023



Figure 38: January 13, 2023



Figure 39: January 14, 2023



Figure 40: January 13, 2023



Figure 41: January 14, 2023



Figure 42: January 17, 2023



Figure 43: January 17, 2023



Figure 44: February 14, 2023



Figure 45: February 15, 2023

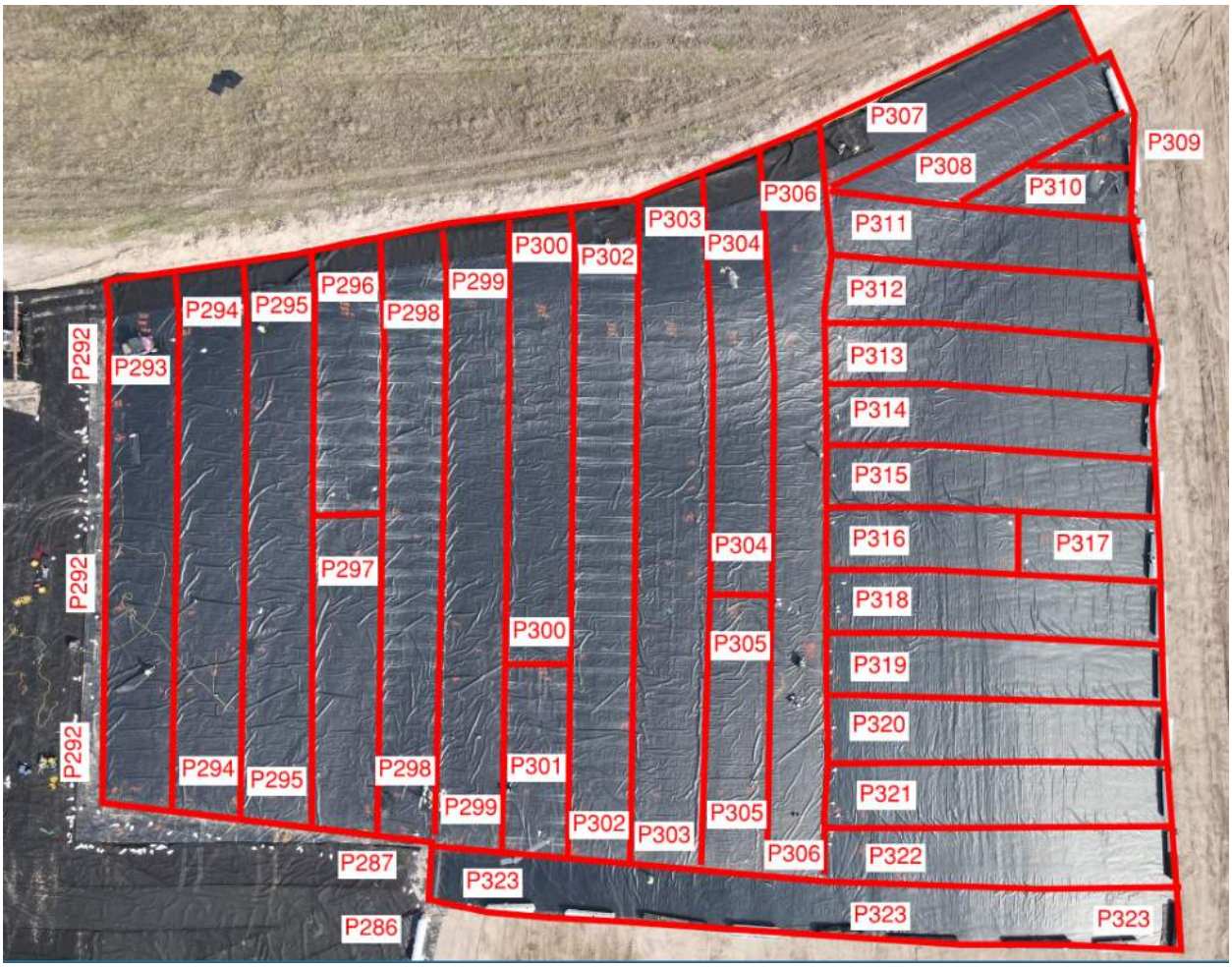


Figure 46: February 18, 2023

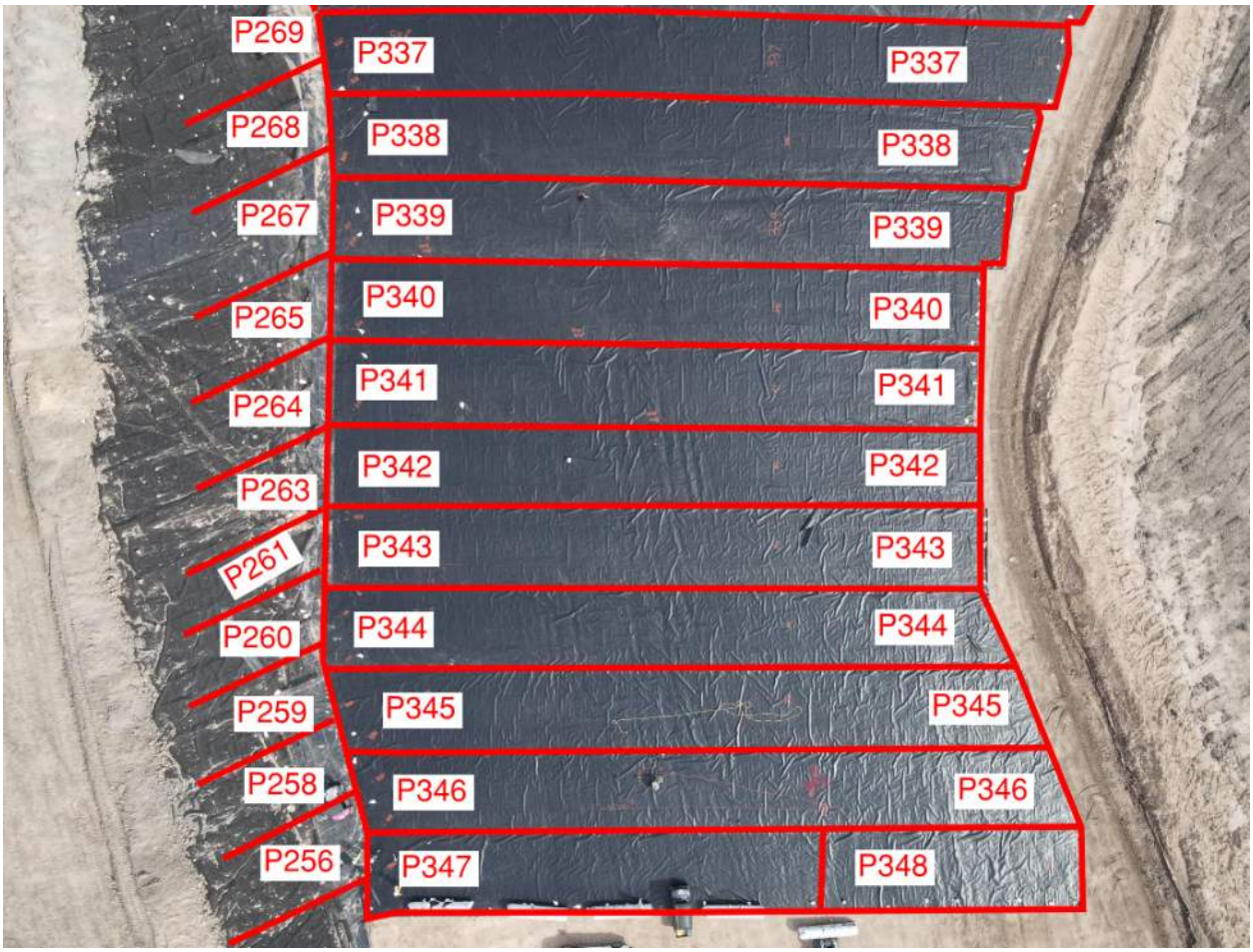


Figure 47: February 19, 2023

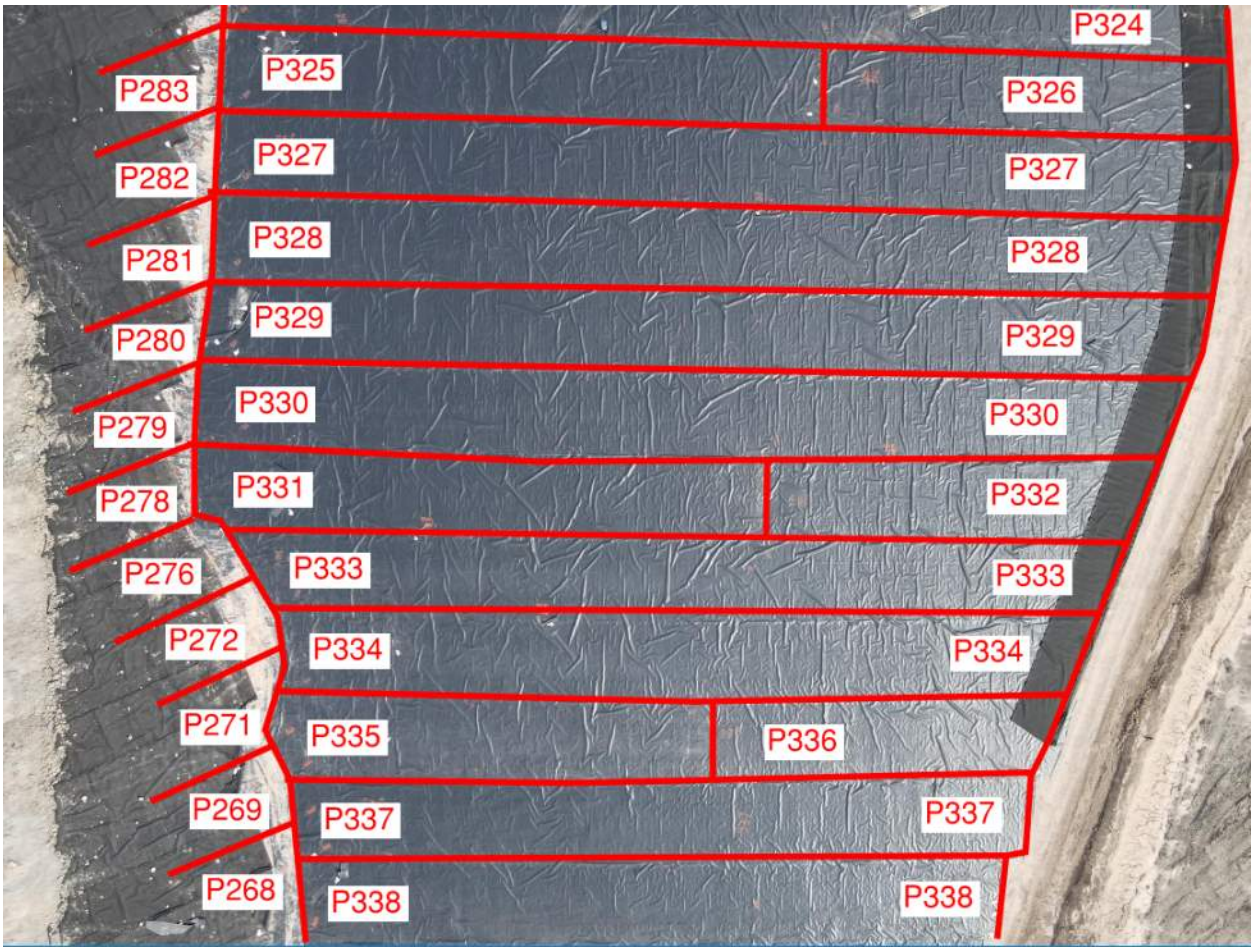


Figure 48: February 19, 2023



Figure 49: February 23, 2023



Figure 50: February 24, 2023



Figure 51: February 24, 2023

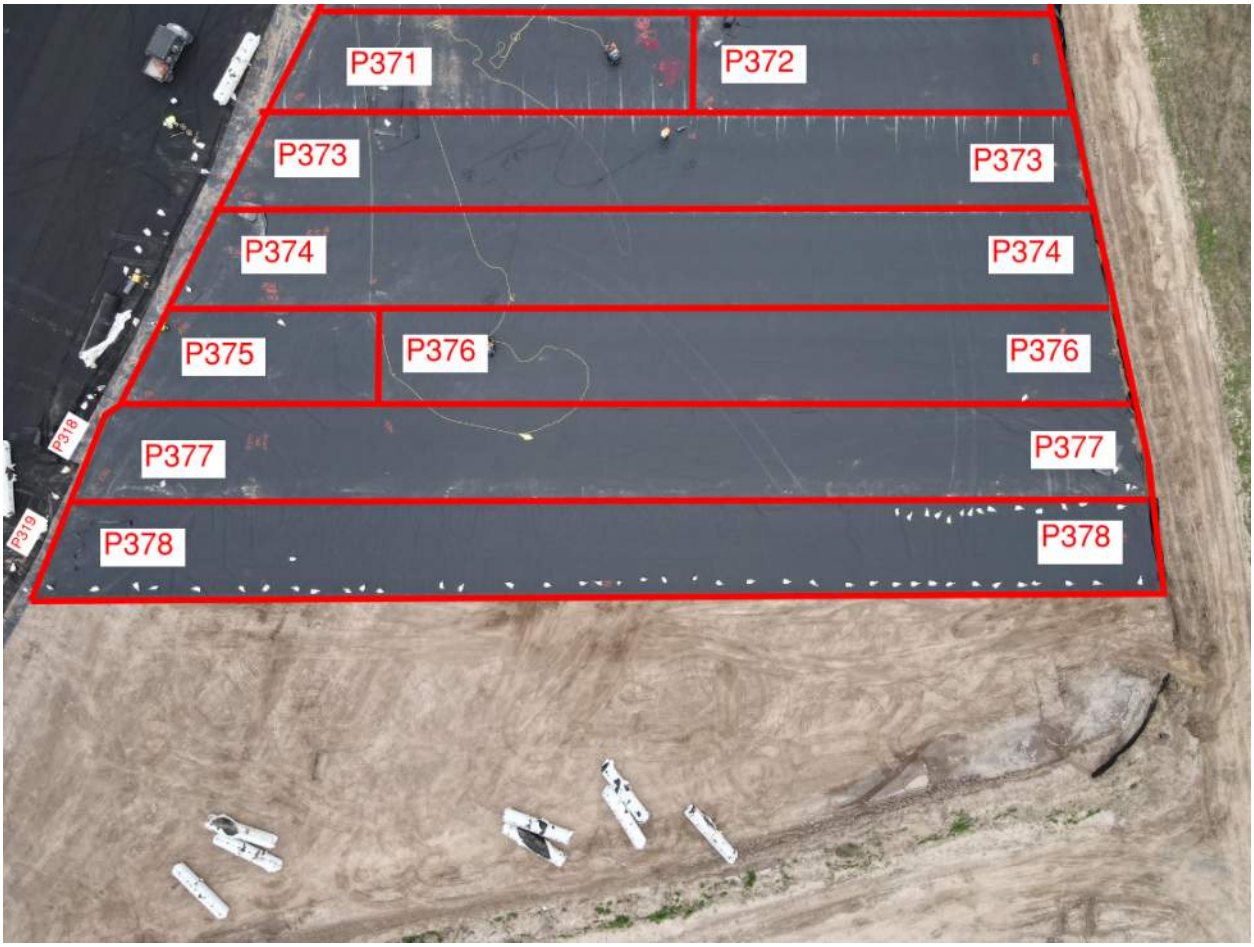


Figure 52: February 25, 2023



Figure 53: February 28, 2023



Figure 54: March 2, 2023

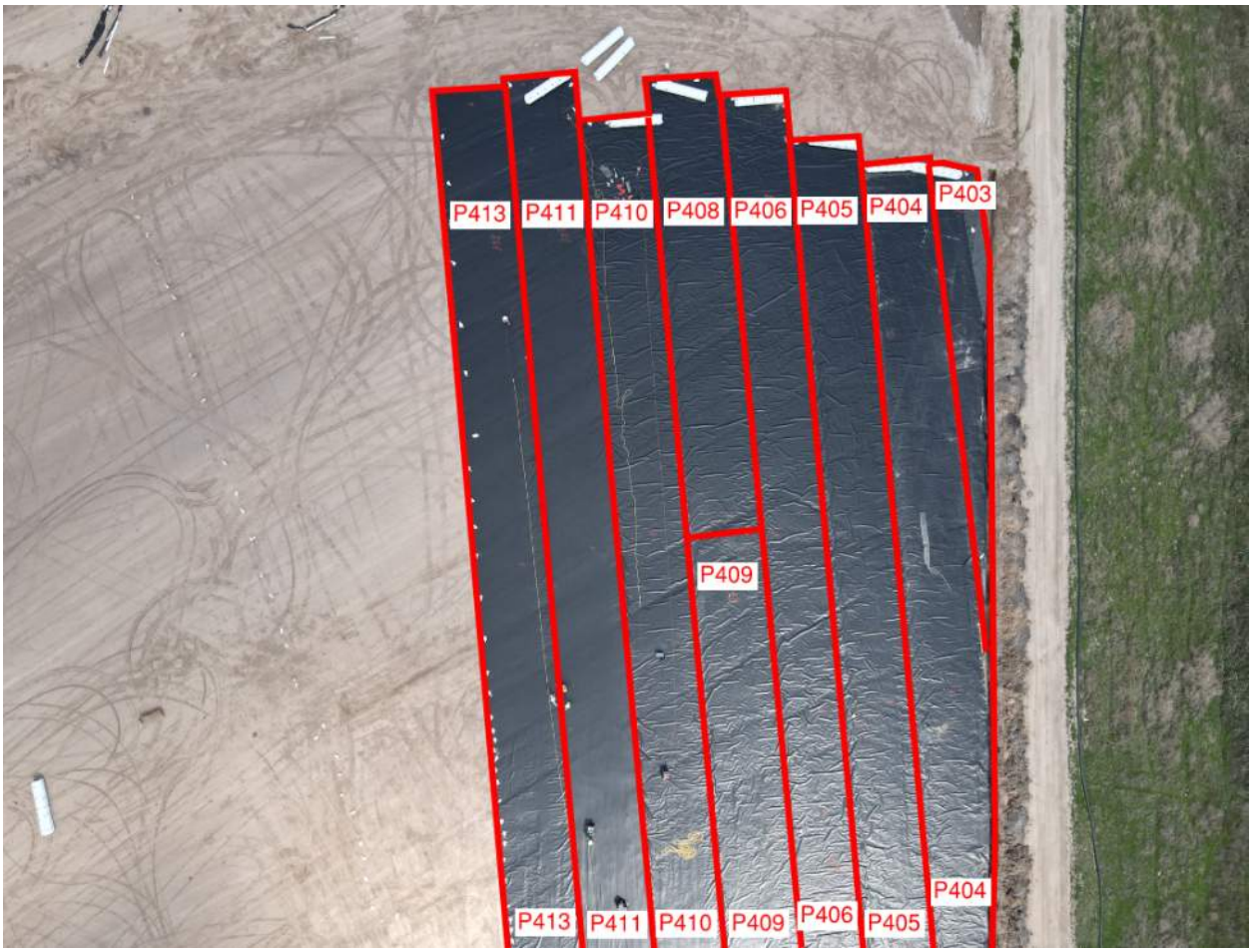


Figure 55: March 9, 2023



Figure 56: Mach 10, 2023

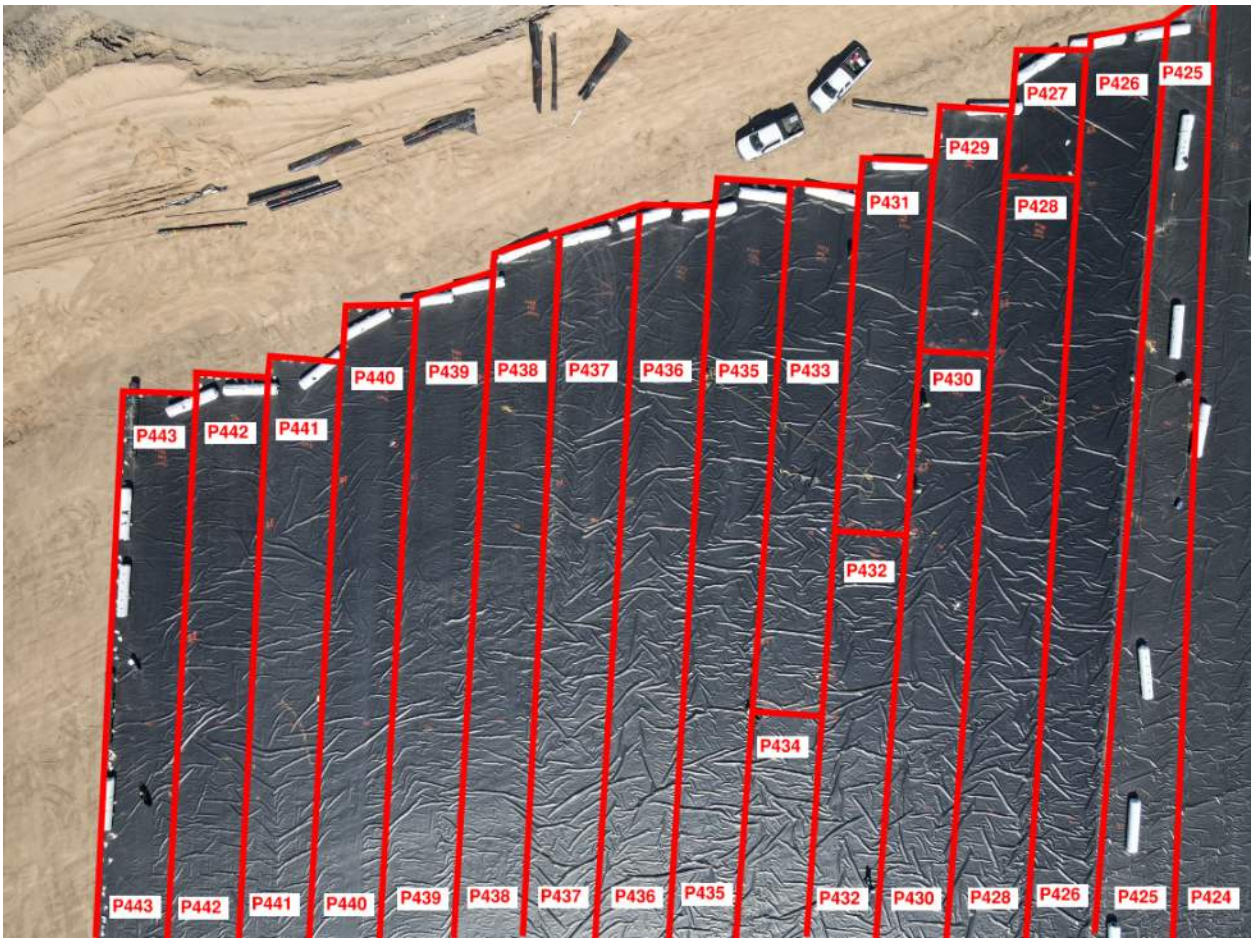


Figure 57: March 13, 2023

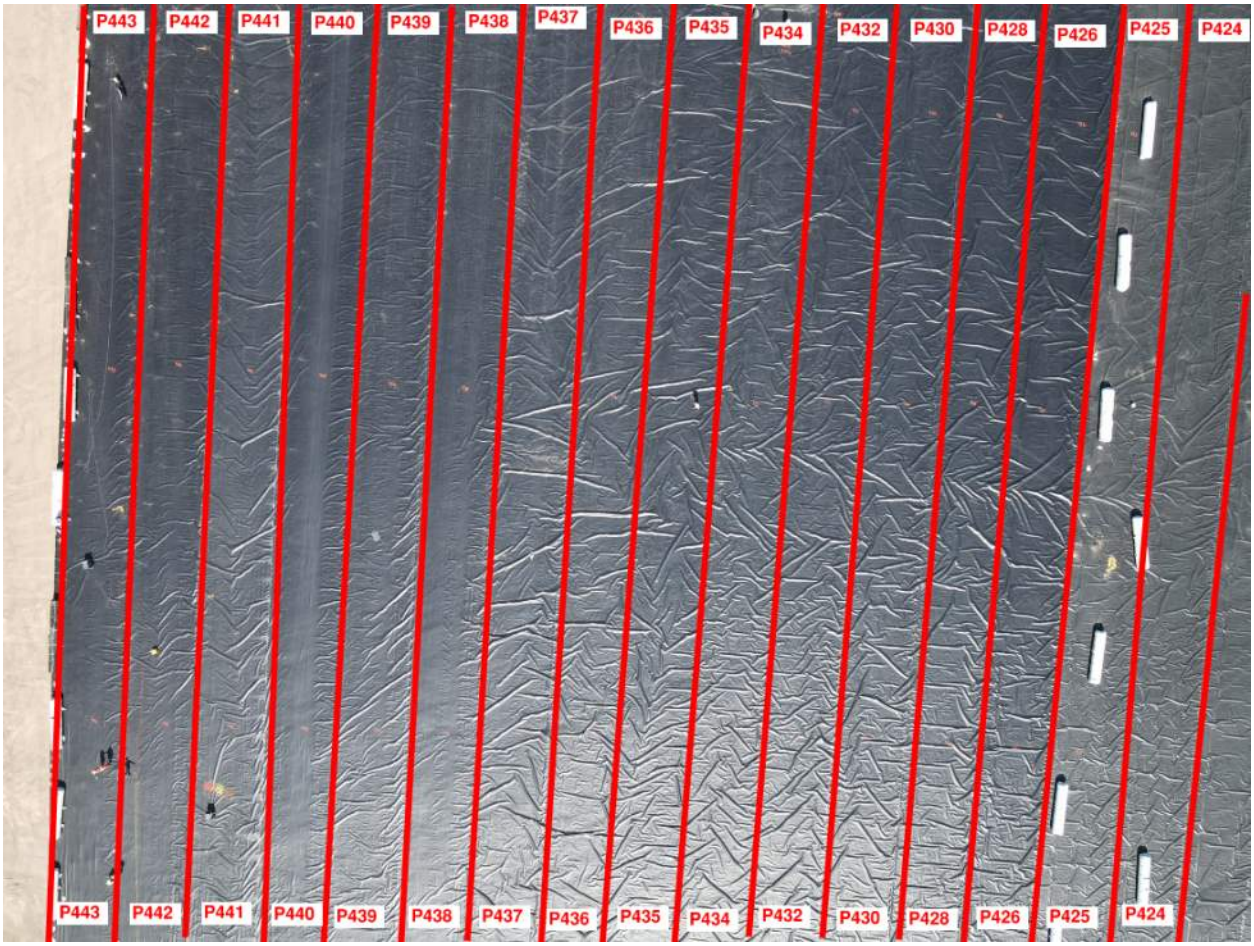


Figure 58: March 13, 2023



Figure 59: March 13, 2023



Figure 60: March 15, 2023



Figure 61: March 15, 2023



Figure 62: March 23, 2023



Figure 63: December 15, 2022



Figure 64: December 17, 2022



Figure 65: December 17, 2022



Figure 66: December 18, 2022



Figure 67: December 14, 2023



Figure 68: February 15, 2023



Figure 69: February 15, 2023



Figure 70: February 15, 2023



Figure 71: February 22, 2023



Figure 72: January 2, 2024



Figure 73: January 2, 2024



Figure 74: January 21, 2024



Figure 75: February 5, 2024



Figure 76: February 7, 2024



Figure 77: February 7, 2024



Figure 78: February 15, 2024



Figure 79: February 15, 2024



Figure 80: February 13, 2024

Memo

Date: Tuesday, May 27, 2025

Project: Gibbons Creek Site F Landfill

To: Mike Dunn

From: David Vogt

Subject: Final Stabilization at the Site F Landfill

The Gibbons Creek Environmental Redevelopment Group has completed the construction of the landfill cap at the Site F Landfill. The Site F Landfill is located approximately 1 mile north of the site's administrative buildings and is approximately 95 acres in size.

The construction activities consisted of the following:

- Installation of a minimum 1-foot-thick compacted clay barrier with a maximum permeability of 1 x 10^{-7} cm/sec.
- Installation of a 40-mil LLDPE geomembrane over the compacted clay barrier.
- Installation of a geocomposite over the geomembrane to promote drainage.
- Installation of a 1.5-feet thick soil layer over the geomembrane and geocomposite.
- Installation of a 0.5-feet thick topsoil layer over the soil layer.
- Installation of stormwater conveyance structures.

The TPDES General Construction Permit TXR150000 defines final stabilization as a status where "All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, or gabions) have been employed."

The area was visually inspected on May 15, 2025, to confirm that a vegetative cover with a density of at least 70% had been established by David Vogt, a professional engineer in the state of Texas.

Upon completion of the final visual inspection, it was determined the area had achieved its minimum 70% vegetative cover density. In accordance with TXR150000, and the visual inspections completed on May 15, 2025, I confirm that Final Stabilization has occurred at the Site F Landfill and that the temporary erosion control measures corresponding to the completed areas may be removed.

HDR appreciates the opportunity to serve as your consultant on this Project and to submit this inspection report for the Site F Landfill. If you have any questions concerning this inspection, please contact the undersigned.

Sincerely,

HDR Engineering, Inc.





5-27-2025

David C. Vogt, PE

P.E. License #93905
Project Manager
HDR Engineering, Inc.
17111 Preston Road, Suite 300
Dallas, TX 75248
Texas Engineering Firm No. 754

APPENDIX D

LANDFILL CAP CONSTRUCTION DOCUMENTS

Gibbons Creek Environmental
Redevelopment Group, LLC

HDR
Firm Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248-1229
972.960.4400

Construction Drawings For

Gibbons Creek Electric Station

Site F Landfill Closure



VICINITY MAP
NOT TO SCALE

Project No.
10290148

Anderson, Texas
August 2021



INDEX OF DRAWINGS

GENERAL
00G-01 COVER SHEET
00G-02 ABBREVIATIONS AND GENERAL NOTES

CIVIL
00C-01 SURVEYOR GRID
00C-02 EXISTING CONDITIONS
00C-03 SITE PLAN
00C-04 ACTIVE WASTE DISPOSAL AREA - SITE PREPARATION
00C-05 ACTIVE WASTE DISPOSAL AREA - PHASE 1 FILL PLACEMENT
00C-06 ACTIVE WASTE DISPOSAL AREA - PHASE 2 FILL PLACEMENT
00C-07 ACTIVE WASTE DISPOSAL AREA - PHASE 3 FILL PLACEMENT
00C-08 CLOSURE GRADING - TOP OF CCR
00C-09 BORROW AREA EXCAVATION PLAN
00C-10 SUBGRADE PLAN - TOP OF COMPACTED CLAY LAYER
00C-11 INFILTRATION LAYER PLAN
00C-12 FINAL COVER PLAN
00C-13 PROPOSED CROSS SECTIONS
00C-14 MISCELLANEOUS DETAILS
00C-15 EROSION CONTROL DETAILS - SILT FENCE
00C-16 EROSION CONTROL DETAILS - ROCK FILTER DAM
00C-17 EROSION CONTROL DETAILS - CONSTRUCTION EXITS
00C-18 EROSION CONTROL DETAILS - DIKES
00C-19 EROSION CONTROL DETAILS - SWALES
00C-20 EROSION CONTROL DETAILS - EROSION CONTROL LOG

C:\pwworking\centra01\d2842820\00G-01.dwg, Plot, 8/4/2021 8:56:07 AM, JGAUL

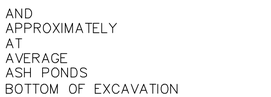
STANDARD ABBREVIATIONS

&	AND
APPROX	APPROXIMATELY
@	AT
AVG	AVERAGE
APS	ASH PONDS
BOE	BOTTOM OF EXCAVATION
BOL	BOTTOM OF LINER
X	BY
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CY	CUBIC YARD
DIA	DIAMETER
DET	DETAIL
DWG	DRAWING
E	EAST
ELEV	ELEVATION
EW	EACH WAY
EXIST	EXISTING
EXC	EXCAVATION
FGD	FLUE GAS DESULFICATION
FML	FLEXIBLE MEMBRANE LINER
FT	FEET
GAL	GALLON
GCSES	GIBBONS CREEK STEAM ELECTRIC STATION
GCERG	GIBBONS CREEK ENVIRONMENTAL REDEVELOPMENT GROUP
GND	GROUND
GDL	GRAVEL DRAINAGE LAYER
GNDL	GEONET DRAINAGE LAYER
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN	INCHES
IE	INVERT ELEVATION
LCRS	LEACHATE COLLECTION AND REMOVAL SYSTEM
LCS	LEACHATE COLLECTION SYSTEM
LCP	LEACHATE COLLECTION PIPE
LCPR	LEACHATE COLLECTION PIPE RISER
LF	LINEAR FEET
LB	POUND
MH	MANHOLE
MAX	MAXIMUM
MIL	.001 INCHES
MIN	MINIMUM
MW	MONITOR WELL
MSL	MEAN SEA LEVEL
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOI	NOTICE OF INTENT
NTS	NOT TO SCALE
OC	ON CENTER
OZ	OUNCE
%	PERCENT
PLCP	PERFORATED LEACHATE COLLECTION PIPE
PERF	PERFORATED
PGL	PROFILE GRADE LINE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PVI	POINT OF VERTICAL INTERSECTION
PT	POINT OF TANGENT
PZ	PIEZOMETER
Q	FLOW
QTY	QUANTITY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
REQ	REQUIRED
RD	ROAD
SCH	SCHEDULE
SDL	SAND DRAINAGE LAYER
SEC	SECTION
SAL	SITE A LANDFILL
SFL	SITE F LANDFILL
SHT	SHEET
S	SOUTH
SDR	STANDARD DIMENSION RATIO
SLQCP	SOIL LINER QUALITY CONTROL PLAN
SP	STEEL PIPE
SSP	SCRUBBER SLUDGE POND
SQ	SQUARE
SS	SIDE SLOPE
STA	STATION
T.A.S.	TERMINAL ANCHOR SECTION
TL	TANGENT LENGTH
TOC	TOP OF COVER
TOFC	TOP OF FINAL COVER
TOL	TOP OF LINER
TOS	TOE OF SLOPE
TS	TOP SLOPE
TPDES	TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM
TEMP	TEMPORARY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WEST
W/	WITH
WW	WETWELL
YD	YARD

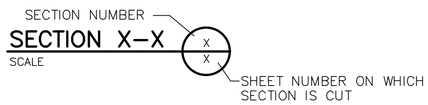
SYMBOLS

SECTION DETAIL INDICATORS

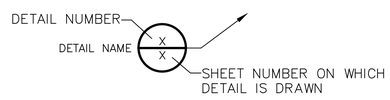
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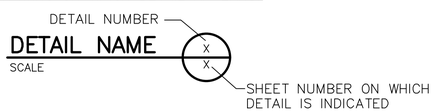
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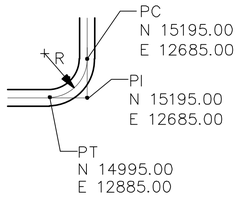


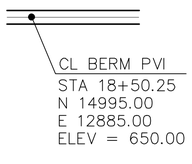
DRAWING ON WHICH DETAIL IS INDICATED:



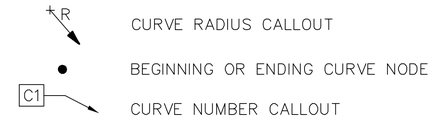
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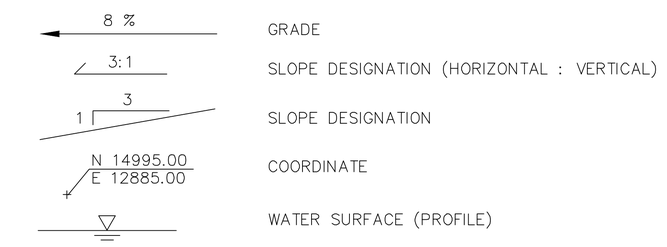




CURVE WITH HORIZONTAL CONTROL:



VERTICAL CONTROL DESIGNATION



GENERAL NOTES

1. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND PROJECT SPECIFICATIONS. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLANS AND THE PROJECT SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN.
2. COORDINATE SYSTEM IS BASED ON LOCAL SURVEY. THE BENCHMARKS TO BE USED FOR CONSTRUCTION ARE LOCATED AS SHOWN ON DRAWING NO. 00C-01. CURRENT GROUND ELEVATIONS MAY VARY FROM THOSE SHOWN DUE TO SITE WORK THAT HAS BEEN PERFORMED SINCE THE SURVEY WAS PERFORMED.
3. THE CONTRACTOR SHALL VERIFY EXISTING CONTOURS PRIOR TO THE START OF WORK.
4. THERE SHALL NOT BE ANY ADDITIONAL PAYMENT OR EXTENSION OF CONTRACT TIME FOR WORKING WITH SATURATED SOILS OR HANDLING WATER SEEPAGE DUE TO RAINFALL, RUNOFF AND INFILTRATION.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING ROADS, BENCHMARKS AND EXISTING GROUNDWATER MONITOR WELLS DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PROTECT THE GROUNDWATER MONITOR WELLS, BENCHMARKS AND EXISTING ROADS.
6. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN ESTABLISHED BY THE OWNER OR ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER SAFE WORKING DISTANCE FROM ALL UTILITY EASEMENTS OR LINES.
7. EXCAVATION BY "BLASTING" IS NOT PERMITTED ON THIS PROJECT.
8. FINISHED GROUND ELEVATIONS SHALL MATCH EXISTING GROUND ELEVATIONS EXCEPT AS SHOWN ON THE PLANS. ALL EXCESS SOIL FROM THE EXCAVATION AND GRADING SHALL BE PLACED IN DESIGNATED STOCKPILE LOCATIONS AS APPROVED BY THE OWNER. IF WASTE IS ENCOUNTERED DURING EXCAVATION, THE OWNER SHALL BE NOTIFIED AND THE WASTE REMOVED AND PLACED IN AREAS DESIGNATED AS APPROVED BY THE OWNER. TRANSPORT OF SOIL TO FILL AREAS SHALL BE CONDUCTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. THE CONTRACTOR SHALL CONSTRUCT, AND UPON COMPLETION OF THE PROJECT, REMOVE TEMPORARY CONSTRUCTION ACCESS ROADS. SUCH ROADS SHALL BE LOCATED AS APPROVED BY THE OWNER. DRAINAGE PATTERNS AT THE SITE SHALL NOT BE ALTERED BY ROAD CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF TEMPORARY DRAINAGE STRUCTURES, INCLUDING CULVERTS, AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND UPON COMPLETION OF THE PROJECT, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS AS APPROVED BY GCERG AND IN ACCORDANCE WITH THE SITE SWPPP AND PURSUANT TO TPDES REQUIREMENTS. SUCH CONTROLS SHALL BE PLACED AT THE LIMITS OF DISTURBED AREAS AND AT INTERMEDIATE LOCATIONS WHERE CONCENTRATED FLOW IS LIKELY.
11. TEMPORARY CONSTRUCTION SLOPES SHALL NOT BE GREATER THAN 2H:1V. STEEPER SLOPES WILL ONLY BE ALLOWED IF THE CONTRACTOR PROVIDES A GEOTECHNICAL ENGINEERING REPORT SPECIFYING MAXIMUM SLOPES AND THE DURATION FOR WHICH SUCH SLOPES SHALL REMAIN IN PLACE.
12. THE CONTRACTOR SHALL REMOVE ALL VEGETATION WITHIN THE CONSTRUCTION LIMITS AS REQUIRED TO CONSTRUCT THE PROJECT. ALL VEGETATION SHALL BE REMOVED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.
13. THE CONTRACTOR SHALL OBTAIN AND CONDUCT WORK CONSISTENT WITH A TPDES PERMIT FOR CONSTRUCTION, REFER TO TECHNICAL SPECIFICATIONS. ALL WORK SHALL CONFORM TO THE PROJECT SWPPP PREPARED BY GCERG AND CHARAH, AS WELL AS TPDES CONSTRUCTION GENERAL PERMIT TXR 150000.
14. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ERROR OR DISCREPANCY FOUND ONCE THE CONTRACT DOCUMENT IS CAREFULLY REVIEWED AND ALL ASPECTS OF FIELD WORK HAVE BEEN VERIFIED. IN THE EVENT THE CONTRACTOR CONTINUES TO WORK ON AN ITEM WHERE AN ERROR EXISTS, IT SHALL BE DEEMED THAT THE CONTRACTOR BID AND INTENDED TO EXECUTE THE MORE STRINGENT OR HIGHER QUALITY REQUIREMENT WITHOUT AN INCREASE IN CONTRACT SUM OR TIME. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CORRECT ANY FAILURE OF COMPANY PARTS TO COORDINATE OR FIT PROPERLY INTO FINAL POSITION, AS A RESULT OF CONTRACTOR FAILURE TO RAISE OR RESOLVE A DISCREPANCY.
15. THE DRAWINGS AND SPECIFICATIONS SHOULD AGREE WITH EACH OTHER, AND WORK CALLED FOR BY DRAWINGS AND NOT MENTIONED IN SPECIFICATION, OR VICE VERSA, SHALL BE FURNISHED BY BOTH. WHEN DISCREPANCIES EXIST BETWEEN SCALE AND DIMENSIONS, THE DIMENSIONED FIGURE SHALL BE USED.
16. CONTRACTOR AND EACH SUBCONTRACTOR SHALL VERIFY ALL GRADES, LINES, LEVELS, AND DIMENSIONS AS INDICATED ON DRAWINGS, AND HE SHALL REPORT ERRORS TO THE ENGINEER BEFORE COMMENCING WORK.
17. CONTRACTOR SHALL PROVIDE EROSION CONTROL BY SEEDING FOR ALL AREAS DISTURBED BY CONTRACTOR DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL NOT DISTURB ANY AREA WITHOUT THE APPROVAL OF THE ENGINEER. EROSION CONTROL BY SEEDING SHALL CONFORM TO STANDARD SPECIFICATION 329200.
18. CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROLS AS PER SPECIFICATIONS DURING CONSTRUCTION. SUCH CONTROLS SHALL BE PLACED AT LIMITS OF DISTURBED AREAS AND AT INTERMEDIATE LOCATIONS WHERE CONCENTRATED FLOW IS LIKELY.
19. STORMWATER THAT HAS COME INTO CONTACT WITH THE CCR MATERIAL IS TO BE CONSIDERED CONTACT STORMWATER. CONTRACTOR WILL CONTROL THE WATER ON SITE IN COMPLIANCE WITH THE TPDES PERMIT AND THE PROJECT WATER MANAGEMENT PLAN, THE LATEST EDITION.
20. WASTE MATERIAL PLACED IN THE LANDFILL FOR DISPOSAL SHALL BE SUFFICIENTLY DRIED TO PASS A PAINT FILTER TEST PRIOR TO PLACEMENT.
21. NO CCR MATERIAL WILL BE PERMITTED TO BE SPILLED FROM THE HAUL TRUCKS. ANY CCR MATERIAL SPILLED ON THE HAUL ROUTE MUST IMMEDIATELY BE CONTAINED AND REMOVED. THE CONTRACTOR SHALL FOLLOW CHARAH'S CCR SPILL RESPONSE PLAN AND COORDINATE ANY SPILL WITH CHARAH/GCERG AS REQUIRED.
22. CONTRACTOR TO DETERMINE, INSTALL AND MAINTAIN APPROPRIATE STORMWATER POLLUTION PREVENTION BMP'S IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND AS DIRECTED BY THE OWNER. CONTRACTOR WILL BE RESPONSIBLE FOR PERFORMING INSPECTIONS AND DOCUMENTATION REQUIRED UNDER THE SITE'S STORMWATER POLLUTION PLAN.
23. CONTRACTOR TO SECURE NOI FOR TXR150000 CONSTRUCTION TPDES PERMIT COVERAGE AND POST THE SITE NOTICE AT THE SITE ENTRANCE ALONG FM244. NOI MUST BE SUBMITTED A MINIMUM OF 7 DAYS PRIOR TO THE START OF CONSTRUCTION.
24. SEE SPECIFICATIONS 31 35 26.17 FOR MINIMUM SOIL COVER REQUIREMENTS FOR VEHICLE USE ON TOP OF GEOMEMBRANES.

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HDR
Firm Registration No. F-754

17111 Preston Road, Suite 300
Dallas, Texas 75248-1229
972.960.4400

ISSUED FOR CONSTRUCTION

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER D. VOGT, P.E.

PROJECT NUMBER 10290148

STATE OF TEXAS · DAVID C. VOGT · 93905 · LICENSED · PROFESSIONAL ENGINEER · 8-2-21

1356

Gibbons Creek Environmental Redevelopment Group, LLC

SITE F LANDFILL CLOSURE
Anderson, Texas

ABBREVIATIONS AND GENERAL NOTES

0 1" 2"

FILENAME 00G-02.dwg

SCALE

SHEET **00G-02**