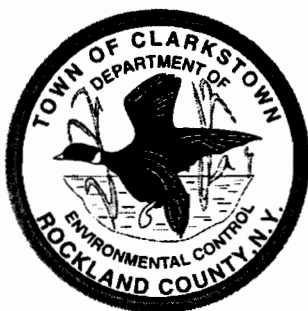




**TOWN OF CLARKSTOWN
DEPARTMENT OF ENVIRONMENTAL CONTROL**

**CLARKSTOWN SANITARY LANDFILL REMEDIATION
AND LANDFILL CAPPING
CONTRACT NO. 34-1996**

CONSTRUCTION CERTIFICATION REPORT

**APPENDIX E: LOW PERMEABILITY
MANUFACTURERS
DOCUMENTATION**

April 14, 2000

Prepared for:

Town of Clarkstown
Department of Environmental Control
10 Maple Avenue
New City, NY 10956

Submitted to:

New York State Department of Environmental Conservation
Division of Environmental Remediation
50 Wolf Road
Albany, NY 12233

Prepared by:

Roy F. Weston of New York, Inc.
130 West 30th Street
New York, NY 10001



APPENDIX E: LOW PERMEABILITY LAYER (GEOSYNTHETICS) MANUFACTURERS DOCUMENTATION

Appendix E1:	Nan-Ya Plastics Certificate of Analysis Reports and Multiaxial Tension Test Results
Appendix E2:	EL Geomembrane Fabrication Reports and Material Thickness Measurement Logs
Appendix E3:	EL Factory Seam Destructive Test Reports
Appendix E4:	Geotextile Certified Test Reports
Appendix E5:	Drainage Net/Composite Certified Test Reports

APPENDIX E1:

Nan-Ya Plastics Certificate of Analysis Reports and Multiaxial Tension Test Results

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX	PRODUCT NUMBER	FR6C075-1 <i>Sample 11/6/96</i>
	ENVIR	TESTING RH/TEMP.	52% 23C		
SPEC.	THICKNESS (MM) WIDTH(IN) 1.026 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	1				
SPEC. GRAVITY	1.24				
THICKNESS <i>1.026</i>	36.78			ASTM D-1593	40 ± 5%
100 % MOD LB/IN WIDTH	MD	39.63		30.08D-882A	36 MIN
	CD	36.96			36 MIN
TENSILE STRENGTH LB/IN WIDTH <i>131M 75</i>	MD	93.36		ASTM D-882A	92 MIN
	CD	92.85			92 MIN
ELONGATION RATE % <i>300</i>	MD	344.5		ASTM D-882A	325 MIN
	CD	421.5			325 MIN
SHRINKAGE %	MD	-2.77		ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS		ASTM D-1790	-29C
TEAR STRENGTH LB <i>ASTM D1603 24</i>	MD	15.63		ASTM D-1004	10.0 MIN
	CD	15.12			10.0 MIN
TECHNICAL DEPARTMENT OPINION	PASS				
SUPERVISOR	<i>Lejdia</i>		TESTER	Lejdia	
DATE: 12-17-96					

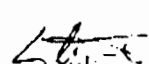
*Puncture resistance finished
not provided
CR 600-4
131M D5321
ASTM D1603
1238*

tested →

1.24 x 1.96 = 1.24

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PP1X				PRODUCT NUMBER	FR74189-2
	ENVIR	TESTING RH/TEMP.	52% 23C					W17B26
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERRED TO	STANDARDS
ROLL #	1		5	10	15	20		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	39.78		41.18	41.47	39.88	40.07	ASTM D- 1555	40±5%
100 % MOD LB/IN WIDTH	MD	38.78	37.12	43.32	37.36	40.61	ASTM D- 8822	16 MIN
	CD	37.85	36.22	37.05	36.85	38.19		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	100.6	99.26	103.7	104.2	102.9	ASTM D 8822	92 MIN
	CD	95.85	92.32	99.21	100.0	98.36		92 MIN
ELONGATION RATE %	MD	437.5	411.6	404.4	473.5	456.6	ASTM D- 8822	150 MIN
	CD	518.5	498.5	483.6	517.0	505.6		150 MIN
SHRINKAGE %	MD	-2.07	-2.15	2.43	-2.00	-2.08	ASTM D- 1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	PASS	ASTM D- 1792	-29°C
TEAR STRENGTH LB	MD	17.36	17.45	17.85	17.63	18.15	ASTM D 1004	10.0 MIN
	CD	17.22	17.17	17.05	17.11	17.04		10.0 MIN
VOLATILE LOSS %	-0.41		-0.44	-0.39	-0.40	-0.47	ASTM D1004-A	-0.5 MAX
WATER EXTRACTION %	0.12		-0.22	0.30	0.22	-0.31	ASTM D- 3081-A	0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS		ASTM D- 751A	87 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS		ASTM D 3083A	1. BREAKING VALUE 2. DEFORMATION AT BREAK 3. HOURS AT 100% EXTENSION
	CD	PASS	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR				TESTER		Lerdia		
DATE 04-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74189-2 <i>W/7B2L</i>
	ENVIR	TESTING RH/TEMP.	52% 23C					
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS
ROLL #	25		30	35	40	45		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	39.70		40.00	39.17	39.99	40.47	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	40.61	41.36	38.25	36.56	39.84	ASTM D-882A	36 MIN
	CD	38.11	38.05	36.26	36.45	39.55		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	100.1	98.90	101.4	104.5	105.5	ASTM D-882A	92 MIN
	CD	95.61	96.62	95.25	95.10	97.36		92 MIN
ELONGATION RATE %	MD	460.3	445.5	485.2	491.3	414.4	ASTM D-882A	350 MIN
	CD	511.2	507.6	510.6	506.6	476.6		350 MIN
SHRINKAGE %	MD	-2.11	-2.10	-2.22	-2.14	-2.05	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.63	17.45	17.63	17.45	17.96	ASTM D-1004	10.0 MIN
	CD	17.11	17.07	17.14	17.22	17.07		10.0 MIN
VOLATILE LOSS %	-0.33		-0.41	-0.48	-0.42	-0.39	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.18		-0.22	-0.28	-0.26	-0.21	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	pass	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS		ASTM D-3083A	1. BREAKING POINT 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Ste</i>			TESTER			Lejdia	
DATE: 04-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA 02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR 4189-2 <i>W17B26</i>
	ENVIR	TESTING RH/TEMP.	52% 23C					
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 9.2"				TEST METHOD REFERRED TO	STANDARDS
ROLL #	50		55	60	65	70		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	40.15		40.51	40.22	40.63	40.61	ASTM D-1593	40.54
100 % MOD LB/IN WIDTH	MD	37.36	45.52	51.06	50.75	53.22	ASTMD-882A	36 MIN
	CD	36.41	44.63	49.25	50.05	51.06		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	102.2	114.5	112.2	116.5	115.6	ASTM D-882A	92 MIN
	CD	97.80	111.0	112.5	112.6	111.0		92 MIN
ELONGATION RATE %	MD	464.5	478.6	459.6	456.6	476.6	ASTM D-882A	350 MIN
	CD	490.5	482.2	445.6	488.5	479.6		350 MIN
SHRINKAGE %	MD	-2.85	2.69	-2.58	-2.22	-2.17	ASTM D-1204	-5.0 MAX
COLD CRACK	%C	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH L/R	MD	17.63	18.25	18.05	17.96	18.12	ASTM D-1004	10.0 MIN
	CD	17.00	17.17	17.33	17.25	17.31		10.0 MIN
VOLATILE LOSS %	-0.47		0.44	-0.39	-0.36	-0.40	ASTM D1203 A	-0.5 MAX
WATER EXTRACTION %	-0.22		-0.26	-0.30	-0.33	-0.31	ASTM D-3083 A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING LOCUS 2. DISINTEGRATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Stur</i>				TESTER		Lejdia	
DATE: 04-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA 02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74189 2
	ENVIR	TESTING RH/TEMP	52% 23C					<i>W7A26</i>
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 9.2"				TEST METHOD REFERRED TO	STANDARDS
ROLL #	75		80	85	90	95		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	39.63		39.96	39.36	39.45	40.00	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	42.36	51.52	46.79	47.45	50.12	ASTM D-882A	36 MIN
	CD	40.16	45.05	45.78	43.78	44.63		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	115.5	116.6	112.7	105.5	112.3	ASTM D-882A	92 MIN
	CD	104.5	106.6	100.3	102.1	105.3		92 MIN
ELONGATION RATE %	MD	447.5	455.5	447.6	458.6	460.6	ASTM D-882A	350 MIN
	CD	455.5	480.5	462.7	477.6	480.3		350 MIN
SHRINKAGE %	MD	2.66	2.78	-2.54	-2.55	-2.63	ASTM D-1204	-5.0 MAX
COLD CRACK	%C	PASS	PASS	PASS	PASS	PASS	ASTM D-1720	29°C
TEAR STRENGTH LB	MD	17.58	17.12	17.05	17.05	17.12	ASTM D-1004	10.0 MIN
	CD	17.05	16.99	16.98	17.01	17.08		10.0 MIN
VOLATILE LOSS %	-0.11		-0.10	0.38	0.44	-0.41	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.12		0.18	-0.16	-0.22	-0.21	ASTM D-3083-A	0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PAS	ASTM D-3083A	1. DEFACING FACTOR 2. FIBRATION AT HREFAN 3. MODULUS AT 100% FIBRATION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Stev</i>			TESTER		Lejdia		
DATE: 04-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEMIX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74189 2
	ENVIR	TESTING RH/TEMP	52% 23C					W17B26
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERRED TO	STANDARDS
ROLL #	100		105	110	115	120		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	40.36		39.36	40.12	40.05	40.50	ASTM D 1523	40.54
100 % MOD LB/IN WIDTH	MD	41.12	40.63	42.12	40.61	39.63	ASTM D- 882A	36 MIN
	CD	18.63	16.63	40.00	38.63	39.11		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	105.5	100.3	99.63	98.52	101.1	ASTM D- 882A	92 MIN
	CD	100.3	98.63	97.52	98.12	98.33		92 MIN
ELONGATION RATE %	MD	413.3	425.6	430.3	441.1	458.3	ASTM D- 882A	350 MIN
	CD	442.3	452.3	469.3	477.6	474.1		350 MIN
SHRINKAGE %	MD	-3.00	-2.52	-2.88	2.96	1.12	ASTM D- 1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C
TEAR STRENGTH LB	MD	17.82	17.66	17.78	17.25	17.36	ASTM D- 1004	10.0 MIN
	CD	17.22	17.05	17.12	17.06	17.11		10.0 MIN
VOLATILE LOSS %	0.47		-0.33	-0.60	-0.42	0.46	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.11		-0.19	-0.26	-0.30	-0.33	ASTM D- 3081-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D- 751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D 3083A	1. PREPARED FOR USE 2. EXAMINATION AT BRUX 3. MONITORING AT 100% EXTENSION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Steve</i>			TESTER		Injda		
DATE: 06-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEMEX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74189-2 <i>W17B26</i>
	ENVIR	TESTING RH/TEMP.	523 230					
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS
ROLL #	125		130	135	140	145		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	34.70		40.16	40.26	40.36	40.37	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	39.05	40.74	38.44	41.78	40.33	ASTM D-882A	36 MIN
	CD	36.15	36.25	37.52	38.21	38.12		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	102.1	105.5	104.5	106.2	108.6	ASTM D-882A	92 MIN
	CD	100.3	97.63	94.63	100.0	101.2		92 MIN
ELONGATION RATE %	MD	465.5	437.5	422.1	457.6	460.6	ASTM D-882A	350 MIN
	CD	507.5	456.6	480.6	475.6	480.6		350 MIN
SHRINKAGE %	MD	-2.85	-2.47	-2.33	-2.21	-3.08	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.61	18.63	18.45	18.33	18.36	ASTM D-1004	10.0 MIN
	CD	17.66	17.78	17.45	17.21	17.08		10.0 MIN
VOLATILE LOSS %	-0.39		-0.45	-0.44	-0.41	-0.43	ASTM D1203 A	-0.5 MAX
WATER EXTRACTION %	-0.12		-0.14	-0.17	-0.15	-0.11	ASTM D 3083 A	-0.35 MAX
HYDROSTATIC RESISTANCE J.R/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PAS	ASTM D-3083A	1. HASTENING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Steve</i>			TESTER		Lejdia		
DATE: 04 29 97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74189-2 <i>W17826</i>
	ENVIR	TESTING RH/TEMP.	52% 23C					
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS
ROLL #	150		155	160	165	170		
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24		
THICKNESS	38.88		40.34	39.40	41.11	40.63	ASTM D 1503	40±5%
100 % MOD TIR/IN WIDTH	MD	40.88	42.41	38.60	48.33	49.12	ASTM D- 882A	36 MIN
	CD	37.54	41.45	36.52	36.83	37.99		36 MIN
TENSILE STRENGTH LBS/IN WIDTH	MD	104.5	108.1	106.6	112.1	111.3	ASTM D- 882A	92 MIN
	CD	95.33	102.2	96.63	98.78	99.12		92 MTN
ELONGATION RATE %	MD	441.5	447.5	392.5	431.6	400.3	ASTM D- 882A	350 MIN
	CD	445.5	499.6	464.5	456.6	466.1		350 MIN
SHRINKAGE %	MD	-2.78	-2.47	-2.96	-2.61	-3.00	ASTM D 1204	-1.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	PASS	ASTM D 1790	-29°C
TEAR STRENGTH TIR	MD	18.12	17.25	18.45	18.63	18.48	ASTM D- 1004	10.0 MIN
	CD	17.44	17.08	17.11	17.27	17.01		10.0 MIN
VOLEATILE LOSS %	0.33		-0.41	-0.46	-0.45	-0.40	ASTM D1203 A	-0.5 MAX
WATER EXTRACTION %	-0.18		-0.16	-0.20	-0.22	-0.19	ASTM D 3083-A	0.15 MAX
HYDROSTATIC RESISTANCE LB/50 IN.	PASS		PASS	PASS	PASS	PASS	ASTM D 751A	82 MTN
SOIL BURIAL % CHANGE MAX. IN ORIGINAT. VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D 3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Steve</i>			TESTER		Tajdia		
DATE: 04-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA 02	PRODUCT CODE	PPTX				PRODUCT NUMBER	PR/4189 2 <i>W17B26</i>	
	ENVIR	TESTING RH/TEMP.	524 23C						
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS	
ROLL #	175		180	185	190	195			
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24			
THICKNESS	40.46		40.44	40.22	40.12	40.06	ASTM D-1593	40±5%	
100 % MOD T.R./IN WIDTH	MD	40.25	38.63	41.50	42.53	41.10	ASTM D-882A	36	MTN
	CD	39.64	36.18	36.96	37.45	38.00		36	MIN
TENSILE STRENGTH T.R./IN WIDTH	MD	107.5	105.5	101.2	106.6	105.5	ASTM D-882A	92	MTN
	CD	96.63	99.12	100.0	105.6	100.1		92	MIN
ELONGATION RATE %	MD	365.6	496.6	485.6	514.6	488.6	ASTM D-882A	350	MTN
	CD	475.5	508.6	511.2	548.6	425.6		350	MIN
SHRINKAGE %	MD	-3.00	3.25	3.08	-2.88	-3.13	ASTM D-1204	-5.0	MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C	
TEAR STRENGTH LB	MD	17.85	17.53	17.45	18.00	17.69	ASTM D-1004	10.0	MTN
	CD	17.22	16.96	16.88	16.78	16.71		10.0	MIN
VOCATIVE LOSS %	-0.11		0.42	0.45	-0.43	-0.41	ASTM D1701-A	0.5	MAX
WATER EXTRACTION %	-0.11		-0.18	-0.27	-0.21	-0.24	ASTM D-3083-A	0.35	MAX
HYDROSTATIC RESISTANCE T.R./SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82	MTN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PAS	ASTM D-3083A	1 DEFACING FACTOR 2 PERCENTAGE AT DEFAC 3 MODULUS AT 100% ELONGATION	
	CD	PASS	PASS	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS								
SUPERVISOR	<i>Steve</i>				TESTER		Linda		
DATE: 04-22-97									

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74189-2 <i>W/7B26</i>	
	ENVIR	TESTING MM/TEMP.	52% 23C						
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERRED TO	STANDARDS	
ROLL #	200		205	210	215	220			
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24			
THICKNESS	39.45		40.00	39.63	39.45	40.53	ASTM D 1593	40±5%	
100 % MOD LB./IN WIDTH	MD	43.13	44.36	42.52	43.05	44.12	ASTM D- 882A	36	MIN
	CD	36.63	38.12	37.46	36.63	37.45		36	MIN
TENSILE STRENGTH LB./IN WIDTH	MD	101.6	105.5	105.2	100.6	105.6	ASTM D- 882A	92	MIN
	CD	95.52	97.63	96.63	99.12	94.63		92	MIN
ELONGATION RATE %	MD	456.6	477.5	485.5	480.6	478.6	ASTM D- 882A	350	MIN
	CD	486.6	510.6	505.2	499.6	480.6		350	MIN
SHRINKAGE %	MD	-2.85	-2.74	-2.58	-2.99	-3.01	ASTM D 1204	-5.0	MAX
COLD CRACK	CD	PASS	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C	
TEAR STRENGTH LB	MD	18.00	17.60	17.90	17.45	17.22	ASTM D- 1004	10.0	MIN
	CD	17.05	17.00	17.25	17.12	17.01		10.0	MIN
VOLATILE LOSS %	0.44		-0.41	-0.43	-0.39	0.36	ASTM D1703-A	0.5	MAX
WATER EXTRACTION %	-0.22		-0.25	0.23	0.21	-0.10	ASTM D- 3083-A	0.35	MAX
HYDROSTATIC RESISTANCE LR/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D- 751A	82	MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D- 3083A	1. HYPOTENSIVE METHOD 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION	
	CD	PASS	PASS	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS								
SUPERVISOR	<i>Steve</i>			TESTER				LOGDIA	
DATE: 04-22-97									

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR/4189-2 <i>W/7026</i>
	ENVIR	TESTING RH/TEMP.	52% 23C					
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERRED TO <i>tested by gretchen</i>	STANDARDS	
ROLL #	225	230	235	<u>240</u>	245			
SPEC. GRAVITY	1.24	1.24	1.24	1.24	1.24			
THICKNESS	39.96		39.78	39.45	39.22	39.78	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	39.63	37.52	36.52	38.05	39.63	ASTM D-882A	36 MIN
	CD	36.63	36.12	36.44	36.85	36.05		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	100.8	98.05	100.3	95.63	98.78	ASTM D-882A	92 MIN
	CD	99.63	93.63	94.52	94.63	93.93		92 MIN
ELONGATION RATE %	MD	466.5	500.5	422.5	422.5	436.3	ASTM D-882A	350 MIN
	CD	508.5	525.5	546.6	577.6	496.6		350 MIN
SHRINKAGE %	MD	-2.22	-2.63	-2.78	-2.45	-3.13	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.12	18.36	18.25	18.00	18.36	ASTM D-1004	10.0 MIN
	CD	17.33	17.45	17.63	17.77	17.28		10.0 MIN
VOLATILE LOSS %	-0.44		-0.40	-0.42	-0.46	-0.44	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.18		0.22	-0.19	-0.20	0.26	ASTM D-1083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. REDUCTION AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Steve</i>			TESTER		Lejdia		
DATE: 04-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74109-2 <i>1217826</i>	
	ENVIR	TESTING RH/TEMP.	52% 23C						
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERRED TO	STANDARDS	
ROLL #	250		255	260	265	270			
SPEC. GRAVITY	1.24		1.24	1.24	1.24	1.24			
THICKNESS	39.89		40.01	40.66	39.54	40.00	ASTM D 1591	40+5%	
100 % MOD LB/IN WIDTH	MD	39.70	38.63	39.63	40.00	40.12	ASTM D- 882A	36	MIN
	CD	38.61	37.52	36.96	37.45	38.00		36	MTN
TENSILE STRENGTH LB/IN WIDTH	MD	108.5	108.6	105.5	102.3	100.8	ASTM D- 882A	92	MIN
	CD	100.3	100.1	99.63	98.63	97.52		92	MTN
ELONGATION RATE %	MD	536.5	505.5	511.2	525.5	513.3	ASTM D- 882A	150	MIN
	CD	551.5	536.5	536.3	540.6	533.3		150	MIN
SHRINKAGE %	MD	-2.25	-2.10	-2.77	-2.63	2.45	ASTM D- 1204	5.0	MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	PASS	ASTM D- 1790	29°C	
TEAR STRENGTH LB	MD	18.33	18.78	18.69	18.45	18.22	ASTM D- 1004	10.0	MIN
	CD	17.36	17.63	17.78	17.25	17.18		10.0	MIN
VOATILE LOSS %	-0.42		-0.46	-0.44	-0.40	-0.41	ASTM D1703-A	-0.5	MAX
WATER EXTRACTION %	-0.18		-0.30	-0.22	-0.25	0.76	ASTM D- 3083-A	0.35	MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D- 751A	82	MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PAS	ASTM D 3083A	1. REPAIRING CRACKS 2. ELONGATION AT BREAK 3. MEASURES AT 100% ELONGATION	
	CD	PASS	PASS	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS								
SUPERVISOR	<i>5/11</i>				TESTER		Leydia		
DATE: 04-29 97									

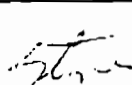
NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX	PRODUCT NUMBER	FR74189-2
	ENVIR	TESTING RH/TEMP.	52% 23C		<i>6/17/78 26</i>
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"	TEST METHOD REFERED TO	STANDARDS
ROLL #	275				
SPEC. GRAVITY	1.24				
THICKNESS	40.46			ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	38.83		ASTM D-882A	36 MIN
	CD	37.63			36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	108.6		ASTM D-882A	92 MIN
	CD	101.2			92 MIN
ELONGATION RATE %	MD	511.3		ASTM D-882A	350 MIN
	CD	555.1			350 MIN
SHRINKAGE %	MD	-2.52		ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS		ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.45		ASTM D-1004	10.0 MIN
	CD	17.03			10.0 MIN
VOLATILE LOSS %	-0.44			ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.20			ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ.IN.	PASS			ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS		ASTM D-3083A	1 POLYMER FACTOR 2 ELONGATION AT BREAK 3 MAXIMUM AT 100% 4 ELONGATIONS
	CD	PASS			
TECHNICAL DEPARTMENT OPINION	PASS				
SUPERVISOR	<i>Steve</i>			Lejdia	
DATE: 04-29-97					

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1
	ENVIR	TESTING RH/TEMP.	52V 23C				607627
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERRED TO	STANDARDS
ROLL #	1		5	10	15		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.06		41.14	40.26	40.05	ASTM D-1591	40.5%
100 % MOD LB/IN WIDTH	MD	42.08	41.78	44.64	45.20	ASTM D-882A	35 MIN
	CD	40.03	39.98	40.26	43.52		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	115.2	119.1	115.5	113.3	ASTM D-882A	92 MIN
	CD	114.6	109.6	115.0	112.4		92 MIN
ELONGATION RATE %	MD	511.8	500.6	500.2	471.6	ASTM D-882A	350 MIN
	CD	571.8	539.5	546.6	489.6		350 MIN
SHRINKAGE %	MD	-2.66	-2.74	-2.33	-2.21	ASTM D-1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.00	18.63	18.25	18.38	ASTM D-1004	10.0 MIN
	CD	17.52	17.58	17.21	17.85		10.0 MIN
VOLATILE LOSS %	-0.42		0.46	-0.42	-0.44	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.25		-0.23	-0.25	-0.30	ASTM D-3081-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D 751A	82 MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	SEPARATING FACTOR 2. FLOWMETER AT 8K/2A 3. MODIFIED AT 100% ELECTROLYTIC
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR				TESTER	Lerdia		
DATE 04 30 97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA 02	PRODUCT CODE	PPIX			PRODUCT NUMBER	FR74190-1 <i>617B27</i>
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	20		25	30	35		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.10		40.13	39.58	39.99	ASTM D- 1593	40±5%
100 % MOD LB/IN WIDTH	MD	42.78	46.66	42.21	41.38	ASTM D- 882A	16 MIN
	CD	42.18	40.25	41.29	38.63		16 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	118.2	119.6	113.0	118.2	ASTM D- 882A	92 MIN
	CD	106.6	109.6	112.0	106.6		92 MIN
ELONGATION RATE %	MD	469.6	525.8	498.8	517.6	ASTM D 882A	350 MIN
	CD	505.5	534.0	529.7	526.6		350 MIN
SHRINKAGE %	MD	-2.45	-2.28	2.77	-2.36	ASTM D 1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C
TEAR STRENGTH LB	MD	18.11	18.25	18.45	18.78	ASTM D 1004	10.0 MIN
	CD	17.28	17.45	17.69	17.22		10.0 MIN
VOLATILE LOSS %	-0.45		-0.42	-0.39	-0.40	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.14		-0.22	-0.26	-0.19	ASTM D- 3083 A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D- 751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D- 3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>Leti</i>			TESTER		Leydia	
DATE: 04-10-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1 <i>0017827</i>
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	40		45	50	55		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	41.51		40.53	40.45	40.85	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	45.26	44.10	45.45	47.24	ASTM D-882A	36 MIN
	CD	44.02	41.37	39.47	45.09		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	119.0	114.6	113.0	124.6	ASTM D-882A	92 MIN
	CD	114.5	108.6	100.0	117.6		92 MIN
ELONGATION RATE %	MD	493.6	490.5	358.6	493.6	ASTM D-882A	350 MIN
	CD	496.6	499.5	537.5	531.3		350 MIN
SHRINKAGE %	MD	-2.14	-2.25	-2.85	-2.17	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.33	17.93	17.61	17.12	ASTM D-1004	10.0 MIN
	CD	17.00	17.12	17.15	17.28		10.0 MIN
VOLATILE LOSS %	-0.42		-0.44	-0.38	-0.37	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.27		-0.26	-0.25	-0.20	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>4 time</i>			TESTER		Lejdia	
DATE: 04-30-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1 <i>W17B27</i>
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	60		65	70	75		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.41		39.96	40.17	39.70	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	43.56	48.58	45.13	44.12	ASTM D-882A	36 MIN
	CD	42.61	37.80	39.49	41.78		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	118.2	122.6	124.5	124.6	ASTM D-882A	92 MIN
	CD	113.8	108.3	115.5	110.3		92 MIN
ELONGATION RATE %	MD	489.6	509.6	514.5	509.6	ASTM D-882A	350 MIN
	CD	523.6	516.6	523.7	530.6		350 MIN
SHRINKAGE %	MD	-2.36	-2.28	-2.68	-2.89	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	17.96	17.58	17.55	17.28	ASTM D-1004	10.0 MIN
	CD	17.25	17.36	17.18	16.96		10.0 MIN
VOLATILE LOSS %	-0.46		-0.44	-0.46	-0.41	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.25		-0.30	-0.27	-0.29	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>Steven</i>			TESTER		Lejdia	
DATE: 04-30-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR74190-1	
	ENVIR	TESTING RH/TEMP.	52% 23C					<i>IN 17027</i>	
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS	
ROLL #	80		85	90	95				
SPEC. GRAVITY	1.24		1.24	1.24	1.24				
THICKNESS	40.75		40.31	39.78	40.37	ASTM D- 1593	40.54		
100 % MCD LB/IN WIDTH	MD	41.25	40.85	37.63	40.21	ASTM D- 882A	36	MIN	
	CD	41.38	37.52	38.63	38.81		36	MIN	
TENSILE STRENGTH LB/IN WIDTH	MD	114.6	107.1	114.4	110.6	ASTM D 882A	92	MIN	
	CD	113.0	97.80	101.1	105.6		92	MIN	
ELONGATION RATE %	MD	491.2	388.6	501.5	465.5	ASTM D 882A	350	MIN	
	CD	523.6	541.0	574.6	468.6		350	MIN	
SHRINKAGE %	MD	-2.36	-2.28	-2.74	-2.33	ASTM D- 1204	-5.0	MAX	
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C		
TEAR STRENGTH LB	MD	18.00	18.25	18.36	18.12	ASTM D- 1004	10.0	MIN	
	CD	17.96	17.77	17.31	17.21		10.0	MIN	
VOLATILE LOSS %	-0.47		-0.45	-0.42	-0.40	ASTM D1203 A	-0.5	MAX	
WATER EXTRACTION %	-0.25		-0.21	-0.29	-0.22	ASTM D- 3083-A	-0.35	MAX	
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D- 751A	82	MIN	
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D- 3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION		
	CD	PASS	PASS	PASS	PASS				
TECHNICAL DEPARTMENT OPINION	PASS								
SUPERVISOR	<i>L. J. ...</i>				TESTER	Leydia			
DATE: 04-30-97									

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1
	ENVIR	TESTING RH/TEMP.	52% 23C				<i>W17827</i>
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	100		105	110	115		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	39.15		39.77	39.96	41.45	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	41.21	39.55	42.09	44.97	ASTM D-882A	36 MIN
	CD	36.63	36.57	37.80	42.96		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	113.6	113.3	111.3	117.6	ASTM D-882A	92 MIN
	CD	105.5	104.3	110.3	105.5		92 MIN
ELONGATION RATE %	MD	523.6	519.6	500.7	448.6	ASTM D-882A	350 MIN
	CD	541.5	541.6	569.6	528.1		350 MIN
SHRINKAGE %	MD	-2.71	-2.58	-2.33	-2.21	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.58	18.78	18.22	18.36	ASTM D-1004	10.0 MIN
	CD	17.11	17.25	17.38	17.48		10.0 MIN
VOLATILE LOSS %	-0.45		-0.41	-0.44	-0.46	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.16		-0.18	-0.20	-0.22	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>[Signature]</i>			TESTER		Lejdia	
DATE: 04-30-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190 1 1017822
	ENVIR	TESTING RH/TEMP.	524 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERRED TO	STANDARDS
ROLL #	120		125	130	135		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.13		40.10	40.00	41.11	ASTM D- 1593	40±5%
100 % MOD LB/IN WIDTH	MD	42.33	40.47	45.63	44.25	ASTM D- 882A	36 MIN
	CD	40.65	37.63	41.85	40.36		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	109.6	113.6	122.2	112.3	ASTM D- 882A	92 MIN
	CD	106.6	110.3	1105.6	108.6		92 MIN
ELONGATION RATE %	MD	447.7	478.6	446.6	450.6	ASTM D- 882A	350 MIN
	CD	502.7	554.5	552.3	511.1		350 MIN
SHRINKAGE %	MD	-2.74	-2.44	-2.21	-2.85	ASTM D- 1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C
TEAR STRENGTH LB	MD	18.12	18.25	18.78	18.31	ASTM D- 1004	10.0 MIN
	CD	17.33	17.05	17.12	17.21		10.0 MIN
VOLATILE LOSS %	-0.36		-0.41	-0.47	-0.44	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.13		-0.18	-0.20	-0.17	ASTM D- 3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D- 751A	82 MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D- 3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% FLAMINATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>[Signature]</i>			TESTER		Lejdia	
DATE: 05-01-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1 <i>W17B27</i>
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	140		145	150	155		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.88		42.58	40.48	40.53	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	44.63	44.42	44.11	42.02	ASTM D-882A	36 MIN
	CD	44.25	42.83	41.22	38.07		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	105.5	111.9	114.9	119.0	ASTM D-882A	92 MIN
	CD	103.3	105.5	106.66	113.3		92 MIN
ELONGATION RATE %	MD	394.6	446.6	480.6	475.6	ASTM D-882A	350 MIN
	CD	446.6	457.6	496.6	505.5		350 MIN
SHRINKAGE %	MD	-2.45	-2.63	-2.77	-2.52	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.25	18.78	18.45	18.21	ASTM D-1004	10.0 MIN
	CD	17.60	17.78	17.25	17.36		10.0 MIN
VOLATILE LOSS %	-0.43		-0.47	-0.39	-0.33	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.12		-0.16	-0.19	-0.20	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>Life</i>			TESTER		Lejdia	
DATE: 05-01-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1 W17827
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	160		165	170	175		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	41.00		40.77	40.00	40.12	ASTM D-1593	40.51
100 % MOD LB/IN WIDTH	MD	42.02	46.52	44.52	41.63	ASTM D-882A	36 MIN
	CD	39.45	45.52	41.22	38.96		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	125.5	118.6	115.5	105.0	ASTM D-882A	92 MIN
	CD	114.5	103.1	101.2	100.0		92 MIN
ELONGATION RATE %	MD	510.3	419.6	477.5	480.6	ASTM D-882A	150 MIN
	CD	519.6	486.6	490.6	505.6		350 MIN
SHRINKAGE %	MD	-2.63	-2.58	-2.45	-2.31	ASTM D-1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	17.85	17.12	18.05	17.96	ASTM D-1004	10.0 MIN
	CD	17.12	16.96	16.73	16.39		10.0 MIN
VOLATILE LOSS %	-0.44		-0.40	-0.38	-0.40	ASTM D1203-A	0.5 MAX
WATER EXTRACTION %	-0.17		-0.11	-0.18	-0.16	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/90 IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-1083A	1. IMPARTING FACTOR 2. STABILIZATION AT PULM 3. INTERPOL AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>4/6/97</i>				TESTER	Lejdia	
DATE: 05 01 97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1 <i>617B27</i>
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	180		185	190	195		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	41.49		40.62	40.64	40.35	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	42.44	38.99	39.55	38.07	ASTM D-882A	36 MIN
	CD	39.71	36.69	36.41	36.52		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	120.2	121.5	120.4	121.0	ASTM D-882A	92 MIN
	CD	111.3	113.8	114.6	113.5		92 MIN
ELONGATION RATE %	MD	496.6	566.3	557.2	556.6	ASTM D-882A	350 MIN
	CD	505.5	585.5	581.6	592.3		350 MIN
SHRINKAGE %	MD	-2.63	-2.74	-2.47	-2.88	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.12	18.96	18.61	18.08	ASTM D-1004	10.0 MIN
	CD	18.00	17.45	17.25	17.33		10.0 MIN
VOLATILE LOSS %	-0.41		-0.38	-0.36	-0.44	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.16		-0.18	-0.12	-0.10	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>[Signature]</i>			TESTER		Lejdia	
DATE: 05-01-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1 <i>W17B27</i>
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	200		205	210	215		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.29		40.18	40.34	39.82	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	38.63	40.17	37.00	39.46	ASTM D-882A	36 MIN
	CD	36.50	37.54	36.52	36.55		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	108.5	121.2	115.5	114.5	ASTM D-882A	92 MIN
	CD	105.3	111.6	113.3	113.0		92 MIN
ELONGATION RATE %	MD	464.0	478.7	525.5	503.3	ASTM D-882A	350 MIN
	CD	555.1	577.6	570.6	546.6		350 MIN
SHRINKAGE %	MD	-2.85	-2.14	-2.33	-2.47	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.22	18.08	18.31	18.11	ASTM D-1004	10.0 MIN
	CD	17.96	18.00	17.58	17.99		10.0 MIN
VOLATILE LOSS %	-0.44		-0.40	-0.38	-0.42	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.20		-0.21	-0.18	-0.19	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>Sten</i>			TESTER		Lejdia	
DATE: 05-01-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUA CA-02	PRODUCT CODE	PFTX			PRODUCT NUMBER	FR74190-1 W17877
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	220		225	230	235		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	40.26		40.60	40.40	40.70	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	42.05	45.60	40.13	40.54	ASTM D-882A	36 MIN
	CD	41.12	41.13	38.10	36.99		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	116.6	121.2	115.5	108.6	ASTM D-882A	92 MIN
	CD	114.5	119.6	101.6	106.6		92 MIN
ELONGATION RATE %	MD	469.6	505.5	511.2	480.7	ASTM D-882A	350 MIN
	CD	526.6	570.3	541.6	535.1		350 MIN
SHRINKAGE %	MD	-2.67	-2.77	-2.58	-2.39	ASTM D-1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	17.85	17.36	17.45	17.78	ASTM D-1004	10.0 MIN
	CD	17.25	17.12	17.05	17.32		10.0 MIN
VOLATILE LOSS %	-0.47		-0.45	-0.44	-0.40	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.13		-0.16	-0.11	-0.15	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>Steve</i>			TESTER		Leydia	
DATE: 05-01-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	FR74190-1
	ENVIR	TESTING RH/TEMP.	52% 23C				607B27
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"			TEST METHOD REFERED TO	STANDARDS
ROLL #	240		245	250	260		
SPEC. GRAVITY	1.24		1.24	1.24	1.24		
THICKNESS	41.25		40.53	40.63	41.35	ASTM D- 1593	40±5%
100 % MOD LB/IN WIDTH	MD	42.34	46.90	40.72	41.10	ASTM D- 882A	36 MIN
	CD	40.94	38.88	36.63	40.96		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	113.9	116.0	113.3	116.6	ASTM D- 882A	92 MIN
	CD	113.3	115.0	107.8	115.5		92 MIN
ELONGATION RATE %	MD	537.5	474.5	477.3	500.8	ASTM D- 882A	350 MIN
	CD	545.5	489.6	526.6	527.6		350 MIN
SHRINKAGE %	MD	-2.85	-2.33	-2.21	-2.17	ASTM D- 1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C
TEAR STRENGTH LB	MD	17.95	17.12	17.28	17.36	ASTM D- 1004	10.0 MIN
	CD	17.05	17.00	17.14	17.11		10.0 MIN
VOLATILE LOSS %	-0.40		-0.35	-0.37	-0.33	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.12		-0.14	-0.15	-0.20	ASTM D- 3783-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D- 751A	62 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D- 3083A	1. BREAKING FACTOR
	CD	PASS	PASS	PASS	PASS		2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR	<i>Signature</i>			TESTER	Legdia		
DATE: 05-01-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX	PRODUCT NUMBER	FR74190-1
	ENVIR	TESTING RH/TEMP.	52% 23C		<i>W17B27</i>
SPEC.	THICKNESS (MM) 1.026		WIDTH (IN) 92"	TEST METHOD REFERED TO	STANDARDS
ROLL #	270		275		
SPEC. GRAVITY	1.24		1.24		
THICKNESS	40.63		40.25	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	43.12	41.36	ASTM D-882A	36 MIN
	CD	40.45	39.96		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	105.6	99.96	ASTM D-882A	92 MIN
	CD	100.1	98.45		92 MIN
ELONGATION RATE %	MD	511.2	500.3	ASTM D-882A	350 MIN
	CD	525.5	512.3		350 MIN
SHRINKAGE %	MD	-2.77	-2.63	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	17.58	17.33	ASTM D-1004	10.0 MIN
	CD	17.08	17.11		10.0 MIN
VOLATILE LOSS %	-0.45		-0.39	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.13		-0.18	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	ASTM D-3083A	1.BREAKING FACTOR 2.ELONGATION AT BREAK 3.MODULUS AT 100% ELONGATION
	CD	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS				
SUPERVISOR	<i>Steve</i>		tester	Lejdia	
DATE:05-01-97					

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NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR79087-2 <i>W17C64H</i>
	ENVIR	TESTING RH/TEMP.	52% 23C					
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS
ROLL #	180		190	200	210	220		
SPEC. GRAVITY	1.25		1.25	1.25	1.25	1.25		
THICKNESS	40.25		40.03	39.85	39.45	40.11	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	46.63	48.55	48.63	50.00	51.55	ASTM D-882A	36 MIN
	CD	44.66	42.52	45.52	48.66	45.51		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	105.5	112.5	108.6	106.6	112.1	ASTM D-882A	92 MIN
	CD	98.63	98.12	100.3	105.5	100.6		92 MIN
ELONGATION RATE %	MD	474.5	485.5	500.0	502.5	478.9	ASTM D-882A	350 MIN
	CD	514.3	512.3	508.3	522.3	499.6		350 MIN
SHRINKAGE %	MD	-2.12	-2.00	-2.10	-2.17	-2.11	ASTM D-1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.63	17.63	18.45	18.66	17.11	ASTM D-1004	10.0 MIN
	CD	17.12	17.00	17.08	17.12	16.99		10.0 MIN
VOLATILE LOSS %	-0.41		-0.43	-0.40	-0.46	-0.41	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.21		-0.16	-0.18	-0.14	-0.15	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ.IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR
	CD	PASS	PASS	PASS	PASS	PASS		2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
TECHNICAL DEPARTMENT OPINION	PASS							
SUPERVISOR	<i>Steve</i>			TESTER		Leydia		
DATE: 09-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX		PRODUCT NUMBER	FR79087-2 W17C64
	ENVIR	TESTING RH/TEMP.	52% 23C			
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"		TEST METHOD REFERED TO	STANDARDS
ROLL #	1		10	20		
SPEC. GRAVITY	1.25		1.25	1.25		
THICKNESS	40.23		40.55	40.85	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	50.25	49.63	51.12	ASTM D-882A	36 MIN
	CD	48.55	52.12	47.85		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	122.2	111.5	118.6	ASTM D-882A	92 MIN
	CD	98.52	105.5	100.3		92 MIN
ELONGATION RATE %	MD	518.5	489.6	496.6	ASTM D-882A	350 MIN
	CD	522.2	508.6	508.6		350 MIN
SHRINKAGE %	MD	-2.12	-2.08	-2.66	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	18.121	17.93	18.78	ASTM D-1004	10.0 MIN
	CD	17.22	17.66	17.12		10.0 MIN
VOLATILE LOSS %	-0.39		-0.34	-0.47	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.10		-0.34	-0.30	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS		
TECHNICAL DEPEARTMENT OPINION	PASS					
SUPERVISOR			TESTER	Lejda		
DATE: 09-29-97						

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR79087-2 <i>wi7c64E</i>
	ENVIR	TESTING RH/TEMP.	52% 23C					
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS
ROLL #	130		140	150	160	170		
SPEC. GRAVITY	1.25		1.25	1.25	1.25	1.25		
THICKNESS	40.00		38.63	39.99	38.45	40.00	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	50.00	53.36	52.52	50.00	49.36	ASTM D-882A	36 MIN
	CD	48.52	45.55	47.46	49.06	49.19		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	120.2	115.5	108.6	120.3	101.9	ASTM D-882A	92 MIN
	CD	116.6	108.5	101.1	99.63	100.0		92 MIN
ELONGATION RATE %	MD	488.5	485.5	466.6	480.6	489.9	ASTM D-882A	350 MIN
	CD	500.3	499.6	510.3	505.5	510.1		350 MIN
SHRINKAGE %	MD	-2.02	-2.10	-2.11	-2.02	-1.99	ASTM D-1204	-5.0 MAX
COLD CRACK	%	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	19.12	18.96	17.99	17.45	18.81	ASTM D-1004	10.0 MIN
	CD	17.45	17.58	17.33	17.25	17.11		10.0 MIN
VOLATILE LOSS %	-0.39		-0.44	-0.41	-0.47	-0.43	ASTM D1203-A	-0.5 MAX
WATER EXTRACTION %	-0.18		-0.19	-0.15	-0.20	-0.16	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ.IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D-3063A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS	PASS	PASS		
TECHNICAL DEPEARTMENT OPINION	PASS							
SUPERVISOR	<i>Steve</i>			TESTER		Lejdia		
DATE: 09-29-97								

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS



CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR79087-2 <i>W17C6KH</i>	
	ENVIR	TESTING RH/TEMP.	52% 23C						
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS	
ROLL #	180		190	200	210	220			
SPEC. GRAVITY	1.25		1.25	1.25	1.25	1.25			
THICKNESS	40.25		40.03	39.85	39.45	40.22	ASTM D-1593	40±5%	
100 % MOD LB/IN WIDTH	MD	46.63	48.55	48.63	50.00	51.85	ASTM D-882A	36	MIN
	CD	44.66	42.52	45.52	48.66	45.52		36	MIN
TENSILE STRENGTH LB/IN WIDTH	MD	105.5	112.5	108.6	106.6	112.2	ASTM D-882A	92	MIN
	CD	98.63	98.12	100.3	105.5	100.6		92	MIN
ELONGATION RATE %	MD	474.5	485.5	500.0	502.5	478.3	ASTM D-882A	350	MIN
	CD	514.3	512.3	508.3	522.3	499.6		350	MIN
SHRINKAGE %	MD	-2.12	-2.00	-2.10	-2.17	-2.00	ASTM D-1204	-5.0	MAX
COLD CRACK	°C	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29°C	
TEAR STRENGTH LB	MD	18.63	17.63	18.45	18.66	17.00	ASTM D-1004	10.0	MIN
	CD	17.12	17.00	17.08	17.12	16.99		10.0	MIN
VOLATILE LOSS %	-0.41		-0.43	-0.40	-0.46	-0.41	ASTM D1203-A	-0.5	MAX
WATER EXTRACTION %	-0.21		-0.16	-0.18	-0.14	-0.15	ASTM D-3083-A	-0.35	MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	82	MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D-3083A	1 BREAKING FACTOR 1 ELONGATION AT BREAK 1 MODULUS AT 100% ELONGATION	
	CD	PASS	PASS	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS								
SUPERVISOR	<i>Steve</i>			TESTER		Leydia			
DATE: 09-29-97									

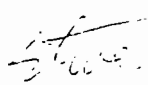
NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX		PRODUCT NUMBER	FR79087-2 W17C64M
	ENVIR	TESTING RH/TEMP.	52% 23C			
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"		TEST METHOD REFERRED TO	STANDARDS
ROLL #	280		290	300		
SPEC. GRAVITY	1.25		1.25	1.25		
THICKNESS	40.22		40.01	40.01	ASTM D-1593	40±5%
100 % MOD LB/IN WIDTH	MD	47.52	50.85	47.25	ASTM D-882A	36 MIN
	CD	42.12	40.63	43.66		36 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	105.5	100.3	118.6	ASTM D-882A	92 MIN
	CD	98.96	97.45	101.26		92 MIN
ELONGATION RATE %	MD	488.6	490.6	500.0	ASTM D-882A	350 MIN
	CD	512.3	500.0	525.1		350 MIN
SHRINKAGE %	MD	-2.00	-2.05	-2.08	ASTM D-1204	-5.0 MAX
COLD CRACK	°C	PASS	PASS	PASS	ASTM D-1790	-29°C
TEAR STRENGTH LB	MD	19.00	18.88	17.63	ASTM D-1004	10.0 MIN
	CD	17.22	17.31	17.45		10.0 MIN
VOLATILE LOSS %	-0.44		-0.45	-0.38	ASTM D1103-A	-0.5 MAX
WATER EXTRACTION %	-0.15		-0.13	-0.11	ASTM D-3083-A	-0.35 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	ASTM D-751A	82 MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	ASTM D-3083A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 100% ELONGATION
	CD	PASS	PASS	PASS		
TECHNICAL DEPARTMENT OPINION	PASS					
SUPERVISOR				TESTER	LEWIS	
DATE: 09-29-97						

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX		PRODUCT NUMBER	FR79087-2 <i>W17C64</i>	
	ENVIR	TESTING RH/TEMP.	52% 23C				
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"		TEST METHOD REFERRED TO	STANDARDS	
ROLL #	310		320	330			
SPEC. GRAVITY	1.25		1.25	1.25			
THICKNESS	40.12		40.00	40.11	ASTM D-1593	40±5%	
100 % MOD LB/IN WIDTH	MD	48.63	47.45	48.05	ASTM D-882A	36	MIN
	CD	40.45	40.77	42.16		36	MIN
TENSILE STRENGTH LB/IN WIDTH	MD	101.2	110.3	115.6	ASTM D-882A	92	MIN
	CD	99.00	98.85	101.0		92	MIN
ELONGATION RATE %	MD	455.5	485.5	477.6	ASTM D-882A	350	MIN
	CD	511.0	502.0	511.1		350	MIN
SHRINKAGE %	MD	-2.10	-2.00	-2.22	ASTM D-1204	-5.0	MAX
COLD CRACK	%	PASS	PASS	PASS	ASTM D-1790	-29°C	
TEAR STRENGTH LB	MD	18.89	18.78	18.45	ASTM D-1004	10.0	MIN
	CD	17.44	17.31	17.63		10.0	MIN
VOLATILE LOSS %	-0.43		-0.40	-0.44	ASTM D1200-A	-0.5	MAX
WATER EXTRACTION %	-0.15		-0.16	-0.10	ASTM D-3063-A	-0.35	MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	ASTM D-751A	82	MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	ASTM D-3063A	1. BREAKING FACTOR 2. ELONGATION AT BREAK 3. MODULUS AT 10% ELONGATION	
	CD	PASS	PASS	PASS			
TECHNICAL DEPARTMENT OPINION	PASS						
SUPERVISOR				TESTER	LENN		
DATE: 09-29-97							

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX				PRODUCT NUMBER	FR85063-1 <i>W18B20</i>	
	ENVIR	TESTING RH/TEMP.	52% 23C						
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"				TEST METHOD REFERED TO	STANDARDS	
ROLL #	1		5	10	15	20			
SPEC. GRAVITY	1.25		1.25	1.25	1.25	1.25			
THICKNESS	39.63		39.45	39.63	39.45	39.12	ASTM D-1593	40±5%	
100 % MOD LB/IN WIDTH	MD	55.15	53.38	53.05	53.60	54.12	ASTM D-882A	41	MIN
	CD	52.54	52.52	46.52	51.12	50.55		41	MIN
TENSILE STRENGTH LB/IN WIDTH	MD	126.5	120.0	121.2	129.6	130.0	ASTM D-882A	97	MIN
	CD	119.9	118.5	98.93	123.0	99.63		97	MIN
ELONGATION RATE %	MD	472.5	454.5	419.5	471.5	480.0	ASTM D-882A	400	MIN
	CD	523.3	505.5	458.5	503.5	511.3		400	MIN
SHRINKAGE %	MD	-1.89	-1.58	-1.63	-2.08	-1.08	ASTM D-1204	-3.0	MAX
COLD CRACK	Ec	PASS	PASS	PASS	PASS	PASS	ASTM D-1790	-29 C	
TEAR STRENGTH LB	MD	19.96	19.45	18.63	18.45	18.44	ASTM D-1004	10.5	MIN
	CD	17.45	18.33	17.85	17.33	17.45		10.5	MIN
VOLATILE LOSS %	-0.47		-0.50	-0.44	-0.48	-0.46	ASTM D1203-A	-0.50	MAX
WATER EXTRACTION %	-0.12		-0.13	-0.17	-0.15	-0.19	ASTM D-3083-A	-0.20	MAX
HYDROSTATIC RESISTANCE LB/SQ.IN.	PASS		PASS	PASS	PASS	PASS	ASTM D-751A	120	MIN
SOIL BURIAL % CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	PASS	ASTM D-3083A	1.BREAKING FACTOR	
	CD	PASS	PASS	PASS	PASS	PASS		2.ELONGATION AT BREAK 3.MODULE AT 100% ELONGATION	
TECHNICAL DEPARTMENT OPINION	PASS PGI STD								
SUPERVISOR					TESTER	Lejdia			
DATE:05-28-98									

NAN YA PLASTICS CORPORATION, AMERICA

CERTIFICATE OF ANALYSIS

CUSTOMER NAME	ROCHEUX CA-02	PRODUCT CODE	PPTX			PRODUCT NUMBER	JR85064-1 <i>W18B21</i>
	ENVIR	TESTING RH/TEMP.	92± 23C				
SPEC.	THICKNESS (MM) 1.018		WIDTH (IN) 92"			TEST METHOD REFERRED TO	STANDARDS
ROLL #	1		5	10	15		
SPEC. GRAVITY	1.25		1.25	1.25	1.25		
THICKNESS	40.70		40.70	39.29	38.22	ASTM D- 2583	40.70
100 & MOD LB/IN WIDTH	MD	56.11	59.21	58.63	47.57	ASTM D- 882A	41 MIN
	CD	51.01	56.46	54.63	43.23		41 MIN
TENSILE STRENGTH LB/IN WIDTH	MD	130.3	132.3	131.2	115.5	ASTM D- 882A	97 MIN
	CD	118.5	125.5	121.2	108.0		97 MIN
ELONGATION RATE %	MD	445.5	430.3	446.5	449.6	ASTM D- 882A	400 MIN
	CD	455.5	435.5	455.5	475.6		400 MIN
SHRINKAGE %	MD	-1.99	-1.96	-2.03	-2.12	ASTM D- 1204	-3.0 MAX
COLD CRACK	MD	PASS	PASS	PASS	PASS	ASTM D- 1790	-29°C
TEAR STRENGTH LB	MD	20.00	19.85	19.25	20.05	ASTM D- 1004	10.5 MIN
	CD	18.36	18.12	18.00	18.86		10.5 MIN
VOLATILE LOSS %	-0.43		-0.50	-0.41	-0.47	ASTM D1203-A	-0.50 MAX
WATER EXTRACTION %	-0.10		-0.15	-0.13	-0.17	ASTM D- 3083-A	-0.20 MAX
HYDROSTATIC RESISTANCE LB/SQ. IN.	PASS		PASS	PASS	PASS	ASTM D- 751A	120 MIN
SOIL BURIAL & CHANGE MAX. IN ORIGINAL VALUE	MD	PASS	PASS	PASS	PASS	ASTM D- 2042A	1. DRAKING FACTOR 54
	CD	PASS	PASS	PASS	PASS		2. ELONGATION AT BREAK 201
							3. MODULUS AT 100% ELONGATION 203
TECHNICAL DEPARTMENT OPINION	PASS PGI STD						
SUPERVISOR	<i>LTW</i>				TESTER	Lejdia	

CONFORMANCE TEST RESULTS



CLIENT: ENVIRONMENTAL LINERS
CLIENT PROJECT: CLARKSTOWN LANDFILL CAP
Not Provided
CLIENT PROJ. NO.: L97137-01
PROJECT NO.: L97137-01-01
LAB ID NO.: 40 MIL EMBROSSED PVC
MATERIAL: Not Provided
SAMPLE I.D. W17B20-240

result

spec calls for

factory & c

TEST	ASTM METHOD	UNITS	SPECIMEN NO.					AVE	STD
			1	2	3	4	5		
THICKNESS <i>5199</i>	D 1593-92	mils	39.71	39.59	39.81	40.12	39.96	39.84	0.209
DENSITY <i>1825 OK</i>	D1505-90(A)	g/cc	1.217	1.214				1.216	0.0021
DIMENSIONAL STABILITY <i>1204</i>	D 1204-84 & NSF 1993	M.D. %	-1.90	-2.30				-2.10	
		C.D. %	0.00	0.00				0.00	
TEAR RESISTANCE <i>D1007</i>	D 1004-94	M.D. lbs	12.5	12.8	13.3	13.3	13.1		
		M.D. lbs	12.9	13.5	13.6	14.5	15.2	13.5	0.84
		C.D. lbs	12.1	12.7	12.2	11.7	13.2		
		C.D. lbs	13.1	13.4	12.7	12.9	13.9	12.8	0.66
HYDROSTATIC RESISTANCE <i>not called for</i>	D 751-95	psi	124	122	120	124	124		
			120	122	122	122	124	122.4	1.58
TENSILE PROPERTIES	D-882-95								
MACHINE DIRECTION									
MODULUS @ 100% ELONGATION		M.D. lb/in	45.0	47.5	47.5	50.0	47.5	47.5	1.77
BREAKING STRENGTH		M.D. lb/in	98.9	100.0	98.0	105.5	97.7	100.0	3.19
ELONGATION @ BREAK		M.D. %	613.0	467.0	452.0	450.0	407.0	477.8	78.81
CROSS DIRECTION									
MODULUS @ 100% ELONGATION		C.D. lb/in	48.0	44.5	47.0	48.0	47.5	47.0	1.46
BREAKING STRENGTH		C.D. lb/in	95.1	95.6	97.8	98.6	98.8	97.2	1.72
ELONGATION @ BREAK		C.D. %	446.0	443.0	447.0	452.0	458.0	449.2	5.89

Note: The elongation values for determining the S-100 Modulus are based on the crosshead extension and the initial grip separation of two inches

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CHECKED BY: *[Signature]* DATE: 5-12-97

*So, too thin (less than 40)
As per 7 spec, test
tear resistance, test
did not follow ASTM for thickness
Natchez spec
purchase direct steel (crosshead)
with 1/2 inch 5mm
carbon black
with flow*

CONFORMANCE TEST RESULTS



CLIENT: ENVIRONMENTAL LINERS
CLIENT PROJECT: CLARKSTOWN LANDFILL CAP

Not Provided

CLIENT PROJ. NO.: L07137-01

PROJECT NO.: L07137-01-04

LAB ID NO.: 40 MIL EMBOSSED PVC

MATERIAL: Not Provided

SAMPLE I.D.: W17B20-274

TEST	ASTM METHOD	UNITS	SPECIMEN NO.					AVE	STD
			1	2	3	4	5		
THICKNESS	D 1593-92	mils	39.88	40.08	39.95	39.83	39.89	39.92	0.099
DENSITY	D1505-90(A)	g/cc	1.223	1.219				1.221	0.0036
DIMENSIONAL STABILITY	D 1204-84 & NSF 1993	MO-%	-1.60	-2.01				-1.81	
		CO-%	0.10	-0.10				0.00	
TEAR RESISTANCE	D 1004-84	M.D. lbs	13.0	13.1	14.4	12.6	13.4		
		M.D. lbs	13.9	13.8	13.5	14.0	14.2	13.8	0.67
		C.D. lbs	12.8	13.7	13.7	12.7	13.6		
		C.D. lbs	12.5	13.3	12.8	12.8	13.8	13.2	0.50
HYDROSTATIC RESISTANCE	D 751-95	psi	122	124	124	124	124		
			122	122	124	122	122	123.0	1.06
TENSILE PROPERTIES	D-882-95								
MACHINE DIRECTION									
MODULUS @ 100% ELONGATION		M.D. lb/in	51.0	50.0	51.0	52.0	50.5	50.9	0.74
BREAKING STRENGTH		M.D. lb/in	101.7	100.3	95.1	105.3	104.7	101.4	4.10
ELONGATION @ BREAK		M.D. %	403.0	405.0	367.0	428.0	434.0	407.4	26.41
CROSS DIRECTION									
MODULUS @ 100% ELONGATION		C.D. lb/in	47.0	47.0	49.0	47.0	47.5	47.5	0.87
BREAKING STRENGTH		C.D. lb/in	93.7	89.1	101.5	94.5	96.6	95.1	4.51
ELONGATION @ BREAK		C.D. %	404.0	372.0	445.0	406.0	423.0	410.0	26.88

Note: The elongation values for determining the S-100 Modulus are based on the crosshead extension and the initial grip separation of two inches.

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CHECKED BY: [Signature] DATE: 5-12-97

CONFORMANCE TEST RESULTS



CLIENT: ENVIRONMENTAL LINERS
CLIENT PROJECT: CLARKSTOWN LANDFILL CAP

Not Provided

CLIENT PROJ. NO.: L97137-01

PROJECT NO.: L97137-01-03

LAB ID NO.: 40 MIL SMOOTH PVC

MATERIAL Not Provided

SAMPLE I.D. W17827-269

TEST	ASTM METHOD	UNITS	SPECIMEN NO.					AVE	STD
			1	2	3	4	5		
THICKNESS	D 1593-92	mils	40.18	39.93	40.34	40.22	40.12	40.16	0.149
DENSITY	D1505-80(A)	g/cc	1.221	1.222				1.222	0.0004
DIMENSIONAL STABILITY	D 1204-84 & NSF 1993	MD-%	-1.19	-1.60				-1.40	
		CD-%	-0.30	1.10				0.40	
TEAR RESISTANCE	D 1004-94	M.D. lbs	13.7	13.6	13.6	14.7	14.0		
		M.D. lbs	14.2	13.7	15.0	15.2	14.6	14.2	0.61
		C.D. lbs	14.5	14.3	13.0	13.4	14.0		
		C.D. lbs	14.8	14.1	14.8	14.3	13.9	14.1	0.57
HYDROSTATIC RESISTANCE	D 751-95	psi	132	132	132	130	132		
			132	130	132	130	130	131.2	1.03
TENSILE PROPERTIES	D-882-95								
MACHINE DIRECTION									
MODULUS @ 100% ELONGATION		M.D. lb/in	56.0	58.0	58.0	55.0	59.0	57.2	1.64
BREAKING STRENGTH		M.D. lb/in	105.8	114.1	115.7	113.6	112.6	112.4	3.83
ELONGATION @ BREAK		M.D. %	404.0	444.0	460.0	454.0	435.0	439.4	21.97
CROSS DIRECTION									
MODULUS @ 100% ELONGATION		C.D. lb/in	51.0	53.0	54.0	53.0	54.0	53.0	1.22
BREAKING STRENGTH		C.D. lb/in	104.8	105.1	100.8	108.4	108.7	105.1	2.96
ELONGATION @ BREAK		C.D. %	447.0	464.0	416.0	471.0	486.0	456.8	26.77

*Note: The elongation values for determining the S-100 Modulus are based on the crosshead extension and the initial grip separation of two inches.

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CHECKED BY: Jan DATE: 5-12-97

CONFORMANCE TEST RESULTSCLIENT: ENVIRONMENTAL LINERS
CLIENT PROJECT: CLARKSTOWN LANDFILL CAP

Not Provided

CLIENT PROJ. NO.: L97137-01

PROJECT NO.: L97137-01-02

LAB ID NO.: 40 MIL SMOOTH PVC

MATERIAL: Not Provided

SAMPLE I.D. W17B27-270

TEST	ASTM METHOD	UNITS	SPECIMEN NO.					AVE	STD	
			1	2	3	4	5			
OK THICKNESS	D 1593-92	mils	40.29	40.10	40.38	39.91	39.88	40.11	0.222	
OK DENSITY	D1505-90(A)	g/cc	1.222	1.221				1.221	0.0004	
OK DIMENSIONAL STABILITY	D 1204-84	MD-%	-1.71	-1.50				-1.80		
	& NSF 1993	CD-%	0.80	-0.10				0.40		
NG TEAR RESISTANCE	D 1004-94	M.D. lbs	12.8	13.7	14.5	15.2	14.6			
		M.D. lbs	14.3	15.4	15.1	16.1	15.3	14.6	0.83	
		C.D. lbs	16.1	13.6	13.5	14.1	14.6			
		C.D. lbs	14.1	14.5	14.1	14.0	14.2	14.3	0.72	
HYDROSTATIC RESISTANCE	D 751-95	psi	132	130	130	130	132			
			132	130	130	130	132	130.8	1.03	
TENSILE PROPERTIES		D-882-95								
MACHINE DIRECTION										
MODULUS @ 100% ELONGATION			M.D. lb/in	55.0	56.0	56.0	56.5	58.0	56.3	1.10
BREAKING STRENGTH			M.D. lb/in	102.8	107.5	108.0	114.2	110.4	108.6	4.18
ELONGATION @ BREAK			M.D. %	384.0	424.0	435.0	484.0	428.0	431.0	35.68
CROSS DIRECTION										
MODULUS @ 100% ELONGATION		C.D. lb/in	52.0	54.0	54.0	55.0	55.5	54.1	1.34	
BREAKING STRENGTH		C.D. lb/in	104.2	103.0	102.7	107.0	108.6	106.1	2.69	
ELONGATION @ BREAK		C.D. %	449.0	448.0	432.0	457.0	483.0	453.8	18.87	

Note: The elongation values for determining the S-100 Modulus are based on the crosshead extension and the initial grip separation of two inches.

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CHECKED BY: *[Signature]* DATE: 5-12-97

MULTIAXIAL TENSION TEST

ASTM D-5617

CLIENT: OGDEN REMEDIATION SERVICES
 PROJECT: CLARKSTOWN LANDFILL PROJECT
 MATERIAL I.D 40 mm EMBOSSED PVC
 W178268234

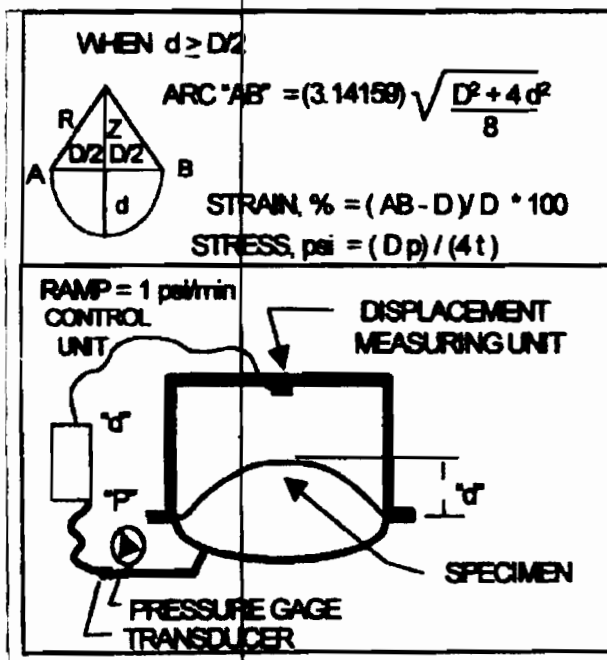
DATE: 11-12-98
 JOB No.: 98S2111-21
 TESTED BY: DL
 CHK'D BY: JB

DIAMETER OF UNIT: 24 inches
 LOAD RATE: 1 psi/min.
 MATERIAL THICKNESS: 40 mils
 FAILURE DESCRIPTION: Center Burst Failure

TEMPERATURE: 20 degrees "C"
 REL. H.: 64 %
 FAILURE SHAPE: ELLIPTICAL

FAILURE PRESSURE: 6.8 psi
 FAILURE DISPLACEMENT: 23.1 inches

ARC DISTANCE, AB : 53.02 inches



FAILURE STRAIN: 341.82 %

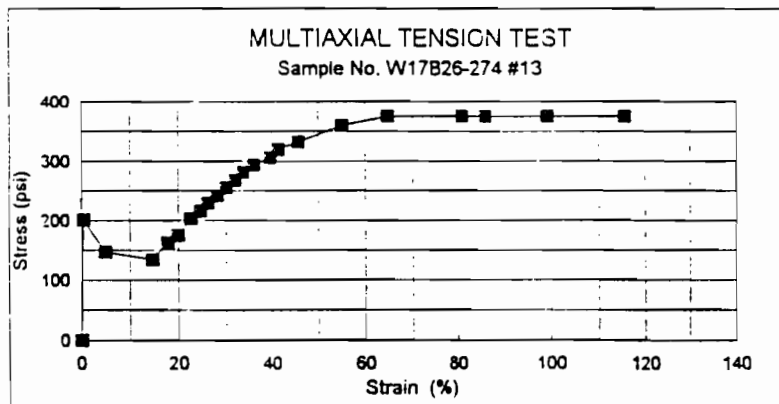
FAILURE STRESS: 510.00 psi

MULTIAXIAL TENSION TEST

ASTM D-5617

Client:	Ogden Remediation Services	Date:	06/13/97
Project:	Clarkstown Landfill	Job No.:	96S2111
Material:	40 mil Embossed PVC	Test Performed by:	K.U.
Sample ID:	W17B26-274 #13	Checked by:	M.S.

Pressure [psi]	Displacement [in.]	Stress [psi]	Strain [%]
0.00	0.00	0.00	0.00
0.20	0.90	201.13	0.37
0.50	3.28	147.45	4.91
0.70	5.73	135.02	14.57
0.90	6.37	162.99	17.84
1.00	6.75	175.52	19.91
1.20	7.22	203.73	22.61
1.30	7.55	216.31	24.59
1.40	7.82	229.55	26.26
1.50	8.12	242.38	28.17
1.60	8.40	255.43	30.00
1.70	8.70	268.30	32.01
1.80	8.97	281.51	33.85
1.90	9.31	294.23	36.24
2.00	9.78	306.30	39.64
2.10	10.02	320.14	41.41
2.20	10.58	332.62	45.67
2.40	11.75	360.08	55.01
2.50	13.12	375.00	64.57
2.50	15.42	375.00	80.85
2.50	16.14	375.00	86.16
2.50	17.87	375.00	99.24
2.50	19.95	375.00	115.49

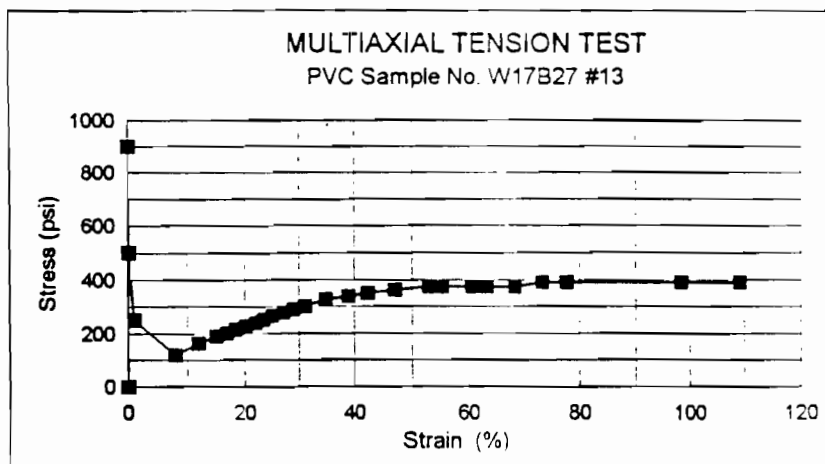


MULTIAXIAL TENSION TEST

ASTM D-5617

Client:	Ogden Remediation Services	Date:	06/13/97
Project:	Clarkstown Landfill	Job No.:	96S2111
Material:	40 mil Smooth PVC	Test Performed by:	K.U.
Sample ID:	W17B27 #13	Checked by:	M.S.

Pressure [psi]	Displacement [in.]	Stress [psi]	Strain [%]
0.00	0.00	0.00	0.00
0.10	0.10	900.06	0.00
0.20	0.36	500.45	0.06
0.40	1.45	251.90	0.97
0.50	4.18	120.72	7.90
0.80	5.17	165.11	11.95
1.00	5.82	191.01	15.01
1.10	6.18	202.68	16.84
1.20	6.47	215.45	18.37
1.30	6.80	227.31	20.19
1.40	7.11	239.43	21.97
1.50	7.35	252.58	23.38
1.60	7.61	265.32	24.96
1.70	7.96	276.79	27.15
1.80	8.23	289.43	28.88
1.90	8.56	301.42	31.06
2.10	9.10	327.13	34.76
2.20	9.68	337.65	38.90
2.30	10.15	349.85	42.39
2.40	10.75	362.18	46.99
2.50	11.49	375.35	52.88
2.50	11.76	375.08	55.09
2.50	12.50	375.00	60.39
2.50	12.92	375.00	63.21
2.50	13.66	375.00	68.30
2.60	14.37	390.00	73.29
2.60	14.97	390.00	77.59
2.60	17.76	390.00	98.39
2.60	19.15	390.00	109.18

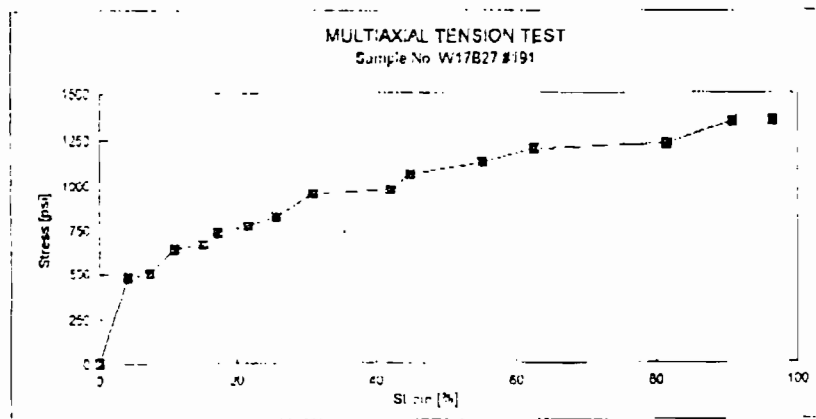


MULTIAXIAL TENSION TEST
ASTM D-5617

CLIENT: Ogden Remediation Services
PROJECT: Clarkstown Landfill
MATERIAL: 40 mil Smooth PVC
SAMPLE ID: W17B27 #191, BLK #1751-178

JOB No.: 96S2111
DATE: 1-22-98
TESTED BY: KU
CHECKED BY: MS

Pressure [psi]	Displacement [in]	Stress [psi]	Strain [%]
0.00	0.00	0.00	0.00
1.50	3.01	476.72	4.14
2.00	4.02	498.01	7.32
3.00	4.95	638.27	10.98
3.50	5.85	666.43	15.16
4.00	6.28	731.58	17.26
4.50	7.06	772.22	21.68
5.00	7.74	823.27	25.78
6.00	8.56	951.84	31.06
6.40	10.11	974.13	42.09
7.00	10.48	1059.65	44.90
7.50	11.76	1125.23	55.09
8.00	12.82	1200.00	62.54
8.20	15.50	1230.00	81.44
9.00	16.75	1350.00	90.72
9.00	17.50	1350.00	96.40

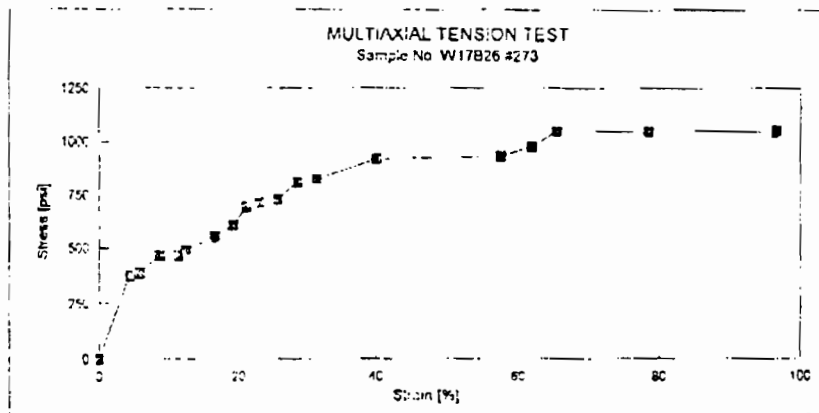


MULTIAXIAL TENSION TEST
ASTM D-5617

CLIENT: Ogden Remediation Services
PROJECT: Clarkstown Landfill
MATERIAL: 40 mil Embossed PVC
SAMPLE ID: W17B26 #273 BLK #267&268

JOB No.: 98S2111
DATE: 1-22-98
TESTED BY: KU
CHECKED BY: MS

Pressure [psi]	Displacement [in]	Stress [psi]	Strain [%]
0.00	0.00	0.00	0.00
1.20	3.11	370.59	4.42
1.40	3.60	381.50	5.90
2.00	4.39	464.90	8.70
2.20	5.03	462.80	11.33
2.40	5.27	438.92	12.40
3.00	6.12	555.93	16.53
3.40	6.62	602.91	19.19
4.00	6.97	650.75	21.16
4.20	7.29	709.88	23.03
4.40	7.73	724.86	25.70
5.00	8.18	805.75	29.56
5.20	8.62	823.07	31.46
6.00	9.83	917.96	40.00
6.20	12.06	930.00	57.47
6.50	12.72	975.00	61.66
7.00	13.25	1050.00	65.46
7.00	15.08	1050.00	78.38
7.00	17.52	1050.00	96.56





TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

May 14, 1997

Mr Rich Lacey
Geotechnics
544 Braddock Avenue
East Pittsburgh, PA 15112

fax: 412-823-8999

Dear Mr. Lacey:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs.
TRI is pleased to submit this final report for laboratory testing in support of the Clarksville
Cap Landfill project (Geotechnics project #L97).

or Clarksville??

TRI Job Reference Number:	E2047-20-03
Date Received:	05-07-97
Material(s):	4 40 mil PVC geomembranes
Sample ID(s):	26-240, 27-269, 27-270, 27-274
Test(s) requested:	Low Temperature Impact (ASTM D 1790)

If you have any questions or require any additional information, please call
us at 1-800-880-8378.

Sincerely,

Martin D. Nelson
Project Manager: Geosynthetics Technologies



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

GEOMEMBRANE TEST RESULTS

Geotechnics
Clarksville Cap Project

Material: 40 mil PVC geomembrane
Sample ID: 26-240

TRI Log #: E2047-20-03

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD	PROJECT SPEC.
Low Temperature Impact (ASTM D 1790)	1	2	3	4	5	6	7	8	9	10			
(@ -40C)													
MD (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A
ID (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A

MD Machine Direction
ID Transverse Direction
N/A Not Available

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDS 05-14-97
Quality Review/Date



TRI/ENVIRONMENTAL, INC.

A Texas Research International Company

GEOMEMBRANE TEST RESULTS

Geotechnics

Clarksville Cap Project

Material: 40 mil PVC geomembrane

Sample ID: 27-269

TRI Log #: E2047-20-03

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD	PROJECT SPEC.
Low Temperature Impact (ASTM D 1790)	1	2	3	4	5	6	7	8	9	10			
(@ -40C)													
MD (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A
TD (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A

MD Machine Direction

TD Transverse Direction

N/A Not Available

The testing herein is based upon accepted industry practice as well as the test method listed.

TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDN 05/14/97

Quality Review/Date



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

GEOMEMBRANE TEST RESULTS
Geotechnics
Clarksville Cap Project

Material: 40 mil PVC geomembrane
Sample ID: 27-270

TRI Log #: E2047-20-03

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD	PROJECT SPEC.
	1	2	3	4	5	6	7	8	9	10			
Low Temperature Impact (ASTM D 1790)													
(@ -40C)													
MD (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A
TD (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A

MD Machine Direction
TD Transverse Direction
N/A Not Available

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material

MDA 05-14-97
Quality Review/Date



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

GEOMEMBRANE TEST RESULTS
Geotechnics
Clarksville Cap Project

Material: 40 mil PVC geomembrane
Sample ID: 27-274

TRI Log #: E2047-20-03

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD	PROJECT SPEC.
	1	2	3	4	5	6	7	8	9	10			
Low Temperature Impact (ASTM D 1790)													
(@ -40C)													
MD (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A
ID (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	100%		N/A

MD Machine Direction
ID Transverse Direction
N/A Not Available

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDN 05-14-97
Quality Review/Date

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APPENDIX E2:

EL Geomembrane Fabrication Reports and Material Thickness
Measurement Logs

1

2

3

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL SMOOTH

LOT NUMBERS: W17B27

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
101	20	102	20
	21		21
	23		23

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
103	20	104	20
	21		21
	23		23

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
105	13	106	13
	22		22
	96		96

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
107	13	108	13
	22		22
	96		96

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION
REQUIREMENTS.

616

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL SMOOTH

LOT NUMBERS: W17B27

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
109	5	110	5
	6		6
	70		70
	217		217

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
111	5	112	5
	6		6
	70		70
	217		217

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
113	5	114	5
	6		6
	70		70
	217		217

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
115	275	116	275
	276		276

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
117	12	118	12
	24		24
	34		34
	35		35
	70		70

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
119	32	120	32
	33		33
	34		34
	38		38
	39		39

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
-----------------	--------------	-----------------	--------------

121

28
29
30
31
47

122

28
29
30
31
47

BLANKET NUMBER: ROLL NUMBER:

123

16
17
18
19
26
27

BLANKET NUMBER: ROLL NUMBER:

124

16
17
18
19
26
27

BLANKET NUMBER: ROLL NUMBER:

125

11
16
36
37
98
182

BLANKET NUMBER: ROLL NUMBER:

126

11
16
36
37
98
182

BLANKET NUMBER: ROLL NUMBER:

127

44
45
46
47
140
141

BLANKET NUMBER: ROLL NUMBER:

128

44
45
46
47
140
141

BLANKET NUMBER: ROLL NUMBER:

129

37
40
41
42
43
105

BLANKET NUMBER: ROLL NUMBER:

130

37
40
41
42
43
105

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION REQUIREMENTS.

61-

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL SMOOTH

LOT NUMBERS: W17B27

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
139	150	140	150
	151		151
	256		256
	259		259
	260		260

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
141	248	142	248
	250		250
	255		255
	256		256
	271		271
	272		272

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
143	248	144	248
	262		262
	263		263
	264		264
	265		265
	266		266

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
145	76	146	76
	79		79
	80		80
	84		84
	261		261
	262		262

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
147	75	148	75
	83		83
	84		84
	201		201
	202		202

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
-----------------	--------------	-----------------	--------------

149

71
72
73
74
268

150

71
72
73
74
268

BLANKET NUMBER:

ROLL NUMBER:

151

176
177
203
204
267

BLANKET NUMBER:

ROLL NUMBER:

152

176
177
203
204
267

BLANKET NUMBER:

ROLL NUMBER:

153

61
66
67
244
245

BLANKET NUMBER:

ROLL NUMBER:

154

61
66
67
244
245

BLANKET NUMBER:

ROLL NUMBER:

155

60
68
69
269
270

BLANKET NUMBER:

ROLL NUMBER:

156

60
68
69
269
270

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION REQUIREMENTS.

ok

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL SMOOTH

LOT NUMBERS: W17B27

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
157	81	158	81
	82		82
	194		194
	195		195
	199		199

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
159	77	160	77
	78		78
	192		192
	193		193
	198		198

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
161	62	162	62
	63		63
	64		64
	65		65
	242		242

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
163	140	164	140
	146		146
	147		147
	184		184
	185		185
	243		243

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
165	136	166	136
	137		137
	171		171
	196		196
	197		197

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
167	128	168	128

129
135
138
139
146

129
135
138
139
146

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
169	124	170	124
	132		132
	133		133
	170		170
	171		171
	186		186
	187		187

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
171	54	172	54
	55		55
	56		56
	57		57
	134		134
	135		135

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
173	52	174	52
	53		53
	56		56
	125		125
	126		126
	127		127

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
175	124	176	124
	125		125
	130		130
	131		131
	133		133
	190		190
	191		191

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
177	50	178	50
	51		51
	180		180
	181		181
	191		191

OK/

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION REQUIREMENTS.

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1816

MATERIAL: 40 MIL SMOOTH

LOT NUMBERS: W17827

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
179	164	180	164
	165		165
	179		179
	240		240
	241		241

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
181	205	182	205
	206		206
	207		207
	208		208
	215		215
	216		216

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
183	188	184	188
	189		189
	209		209
	210		210
	216		216
	235		235

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
185	107	186	107
	108		108
	213		213
	214		214
	234		234
	235		235

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
187	107	188	107
	115		115
	152		152
	153		153
	166		166
	178		178

BLANKET NUMBER: ROLL NUMBER:

189 120
121
172
173
183

BLANKET NUMBER: ROLL NUMBER:

190 120
121
172
173
183

BLANKET NUMBER: ROLL NUMBER:

191 154
155
166
167
211
212

BLANKET NUMBER: ROLL NUMBER:

192 154
155
166
167
211
212

BLANKET NUMBER: ROLL NUMBER:

193 118
119
163
168
169

BLANKET NUMBER: ROLL NUMBER:

194 118
119
163
168
169

BLANKET NUMBER: ROLL NUMBER:

195 144
145
211
217
228
229

BLANKET NUMBER: ROLL NUMBER:

196 144
145
211
217
228
229

BLANKET NUMBER: ROLL NUMBER:

197 111
156
157
161
162

BLANKET NUMBER: ROLL NUMBER:

198 111
156
157
161
162

BLANKET NUMBER: ROLL NUMBER:

199 111
113
144

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
201	150	202	150
	188		188
	183		183
	240		240
	274		274

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
203	150	204	150
	152		152
	189		189

UNDER SEPERATE COVER

¹
~~TACHED~~ ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY THE SPECIFICATION REQUIRE-
MENTS OF MATERIAL CERTIFICATIONS.

614

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
203	150	204	150
	152		152
	189		189

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
205	147	206	147
	162		162
	166		166
	168		168
	169		169

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
207	58	208	58
	103		103
	104		104
	143		143
	166		166
	190		190
	195		195

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
209	58	210	91
	103		141
	143		143
	166		153
	190		158
	195		160

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
211	91		
	141		
	143		
	153		
	158		

UNDER SEPERATE COVER 160

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION
REQUIREMENTS

2

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
212	151	213	151
	156		156
	158		158
	193		193
	187		187

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
214	124	215	124
	128		128
	149		149
	154		154
	187		187

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
216	1	217	1
	2		2
	4		4
	175		175
	176		176
	178		178

BLANKET NUMBER:	ROLL NUMBER:
218	1
	2
	4
	175
	176
	178
	182

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION
REQUIREMENTS.

G

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
219	3	220	3
	4		4
	60		60
	137		137
	140		140

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
221	136	222	136
	167		167
	171		171
	174		174
	177		177

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
223	9	224	9
	53		53
	54		54
	59		59
	60		60

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
225	9	226	9
	10		10
	120		120
	121		121
	164		164
	171		171

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
227	163	228	163
	164		164
	165		165
	170		170
	172		172

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LUT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
229	2	230	2
	144		144
	148		148
	172		172
	180		180
	181		181

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
231	1	232	1
	2		2
	3		3
	4		4
	106		106

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
233	11	234	11
	105		105
	106		106
	107		107
	108		108
	240		240

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
235	75	236	75
	76		76
	79		79
	80		80
	90		90

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
237	11	238	11
	12		12
	61		61
	109		109
	110		110

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
-----------------	--------------	-----------------	--------------

239

7
8
63
64
65

240

7
8
63
64
65

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

241

61
62
71
72
74
80

242

61
62
71
72
74
80

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

243

5
6
57
65
66

244

5
6
57
65
66

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

245

5
7
8
67
69
70

246

5
7
8
67
69
70

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

247

67
68
142
146

248

67
68
142
146

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

249

73
74
203

250

73
74
203

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

251

5
6
13
119
126
185

252

5
6
13
119
126
185

6/5

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
253	13	254	13
	14		14
	135		135
	138		138
	200		200

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
255	10	256	10
	11		11
	12		12
	13		13
	114		114
	186		186
	192		192

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
257	15	258	15
	84		84
	85		85
	86		86
	97		97
	98		98
	135		135

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
259	15	260	15
	45		45
	46		46
	83		83
	84		84
	111		111
	112		112

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION
REQUIREMENTS.

6/2

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
261	157		
	192		
	206		
	207		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
262	15	263	15
	39		39
	86		86
	157		157
	158		158
	191		191
	271		271
	272		272

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
264	15	265	9
	39		38
	86		129
	157		133
	158		
	191		
	271		
	272		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
266	9		
	38		
	129		
	133		

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION
REQUIREMENTS.

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
267	41	268	41
	42		42
	43		43
	273		273
	275		275

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
269	43	270	43
	44		44
	99		99
	100		100
	131		131
	139		139

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
271	118	272	118
	127		127
	134		134
	139		139
	194		194
	191		
	271		

ATTACHED ARE THE MANUFACTURE'S ACTUAL CERTIFICATION TEST RESULTS FOR THE
ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION
REQUIREMENTS.

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
273	40	274	40
	55		55
	56		56
	123		123
	130		130
	134		134
	204		204

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
275	125	276	125
	129		129
	159		159
	161		161
	198		198
	201		201
	204		204
	205		205

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
277	49	278	49
	50		50
	116		116
	125		125
	132		132
	196		196
	199		199

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
279	47	280	47
	51		51
	52		52
	116		116
	117		117
	122		122
	197		197

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17B26

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
281	30	282	87
	47		88
	48		95
			96

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
283	67	284	82
	31		229
	232		230
	161		232

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
285	30	286	77
	31		76
	235		81
	236		82

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
287	16	288	77
	36		225
	37		226
	235		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
289	16	290	93
	17		94
	18		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
291	219	292	219
	223		220
	224		259
	226		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
293	28	294	255
	29		256
	239		260

250

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

295

221

222

256

263

296

234

249

250

OK

1-225 supplied

THE FOLLOWING ROLL NUMBERS WERE FABRICATED INTO
FOR CLARKSTOWN LANDFILL, NY
JOB # 1818

LOT #FR74189-2 40 MIL PVC EMBOSSED 1-20
LOT# FR85063-1 SMOOTH have 9x for roll 1-20
LOT #FR79087-2 SMOOTH have 1-20 30-330

BLANKET #	ROLL #	BLANKET #	ROLL #
297	263	298	101
	264		102
	251		251
	252		
310	176	311	176
	177		177
	178		178
	179		179
	180		180
	181		181
	313		313
312	26	313	26
	183		183
	288		288
	289		289
	300		300
	306		306
	307		307
314	167	315	167
	168		168
	210		210
	300		300
	301		301
	308		308
	309		309
316	296	317	296
	308		297
	312		302
	313		303
318	292	319	298
	293		299
	298		304
	303		305

320

294
305
310
311

330

1
5
12
13
14
16
295
298

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eliners@environmental-liners.com
www.environmental-liners.com

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC

LOT NUMBERS: W17B27

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
301	3	302	3
	7		7
	6		6
	114		114
	174		174

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL
JOB #1616

Missing roll sheets
130-120
200-210

MATERIAL:

40 MIL PVC

LOT NUMBERS:

FR74190-1

FR79067-2

FR79067-2

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

303

113

216

222

223

232

233

304

113

216

222

223

232

233

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

305

145

146

147

148

156

216

221

306

145

146

147

148

156

216

221

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

307

145

155

156

209

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

419

262

267

268

276

420

262

267

268

276

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

421

215

216

245

246

276

422

215

216

245

246

276

BLANKET NUMBER:

ROLL NUMBER:

BLANKET NUMBER:

ROLL NUMBER:

423

22

23

424

22

23

24
25
216

24
25
216

ATTACHED ARE THE MANUFACTURER'S ACTUAL CERTIFICATION TEST RESULTS FOR THE ABOVE LISTED ROLL NUMBERS. THIS IS TO SATISFY MATERIAL SPECIFICATION REQUIREMENTS.



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THE FOLLOWING ROLL NUMBERS HAVE BEEN
FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL

40 MIL PVC SMOOTH
LOT # FR790872

LOT # FR850643

BLANKET #	ROLL #
321	3
	5
	6

BLANKET #	ROLL #
323	9
	10
	8

BLANKET#	ROLL#
325	9
	2
	17
	8
	7
	3
	4
	6
	13

BLANKET#	ROLL#
327,328	18
	19
	20
	21
	22
	11
	12

BLANKET #	ROLL#
322	4
	23
	7

BLANKET #	ROLL #
324	2
	4
	17
	18

BLANKET #	ROLL #
326	7
	3
	2
	4
	6
	13

BLANKET#	ROLL#
329,330	13
	14
	1
	5
	12
	16
	295
	298

*Factory list
average 400
no 1000
4000
1-1000*

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1618

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBER: W17826

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
401	18	402	17
	19		227
	101		228
	233		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
403	216	404	35
	226		217
	237		218
	256		

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
405	237	406	16
	238		247
	29		219
			219

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
407	219	408	213
	22		212
	23		211
			210

BLANKET NUMBER:	ROLL NUMBER:
409	24
	25
	26
	27

THE FOLLOWING ROLL-NUMBERS REPRESENT
THE MATERIAL FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL, NY
JOB #1818

MATERIAL: 40 MIL PVC EMBOSSED

LOT NUMBERS: W17826

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
410	20	411	20
	21		21
	33		33
	34		34
	241		241
	242		242

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
412	32	413	32
	33		33
	208		208
	209		209
	213		213
	214		214

BLANKET NUMBER:	ROLL NUMBER:	BLANKET NUMBER:	ROLL NUMBER:
414	92	415	92
	161		161
	265		265
	266		266
	267		267
	268		268
	270		270



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THE FOLLOWING ROLL NUMBERS HAVE BEEN
FABRICATED INTO BLANKETS FOR
CLARKSTOWN LANDFILL

40 MIL PVC EMBOSSED

LOT # FR85064

BLANKET #	ROLL #
425	23
	11
	12
	5

BLANKET #	ROLL #
426,427	5
	6
	7
	8
	9
	10
	13

BLANKET#	ROLL#
428,429	13
	14
	15
	16
	3
	4
	1

BLANKET#	ROLL #
430	1
PLEASE NOTE BLANKET	2
430 IS EMBOSSED PVC TO	1
SMOOTH PVC	9
LOT #FR85064 & FR85063	

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 6/03/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 276	40	41	41	41	41	40
W17B27# 275	41	41	40	40	40	41
W17B27# 6	41	40	39	41	41	40
W17B27# 5	40	41	40	39	41	41
W17B27# 217	40	40	40	40	40	40
W17B27# 70	40	40	41	41	41	40
W17B27# 12	40	41	41	40	40	40
W17B27# 25	41	40	40	40	40	41
W17B27# 24	41	41	40	40	41	40
W17B27# 35	40	40	41	41	41	40
W17B27# 36	40	41	41	40	39	41
W17B27# 37	41	41	40	41	40	41
W17B27# 43	39	40	41	41	40	39
W17B27# 42	40	39	40	41	41	40
W17B27# 41	41	41	40	39	41	40
W17B27# 40	41	40	41	40	39	41
W17B27# 105	40	40	41	40	40	41
W17B27# 17	40	41	41	41	40	40
W17B27# 16	40	41	40	41	41	40
W17B27# 182	41	40	41	39	41	41
W17B27# 11	39	40	40	40	41	40
W17B27# 98	40	40	39	40	40	39
W17B27# 28	41	41	40	40	39	40
W17B27# 29	41	40	41	41	40	40
W17B27# 44	40	41	40	41	40	41

SIGNATURE: _____

Mara Kinney

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 6/03/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 45	41	41	40	40	41	40
W17B27# 46	40	40	41	40	41	41
W17B27# 47	41	41	40	40	41	40
W17B27# 30	40	40	40	40	40	41
W17B27# 31	40	41	40	41	40	40
W17B27# 32	41	40	41	41	40	41
W17B27# 33	41	41	41	40	40	41
W17B27# 34	41	41	40	40	40	40
W17B27# 38	41	41	40	40	41	40
W17B27# 39	40	40	41	41	41	41
W17B27# 19	41	40	41	40	40	41
W17B27# 18	40	40	40	41	40	40
W17B27# 26	40	41	41	40	41	41
W17B27# 27	41	41	40			
W17B27 44	40	40	40			
W17B27 141	40	41	41	40	40	42
W17B27 140	40	40	40	41	41	40

SIGNATURE:

Mara Kunney

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 6/17/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 251	41	41	40	41	40	40
W17B27# 150	41	40	40	41	40	41
W17B27# 260	40	40	41	41	41	41
W17B27# 259	40	41	40	40	40	41
W17B27# 256	41	40	41	41	41	40
W17B27# 255	40	41	41	40	41	41
W17B27# 151	41	41	40	41	41	41
W17B27# 271	41	41	40	41	41	40
W17B27# 272	41	41	41	41	40	40
W17B27# 250	40	41	41	40	41	41
W17B27# 265	41	40	41	40	40	40
W17B27# 266	41	41	40	40	41	41
W17B27# 263	40	40	40	41	40	41
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						
W17B27#						

SIGNATURE: _____

Mara Kinney

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 6/20/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 248	41	40	40	41	40	40
W17B27# 264	41	40	41	41	41	40
W17B27# 262	41	40	40	41	40	40
W17B27# 261	41	41	41	40	41	41
W17B27# 80	40	41	41	41	40	40
W17B27# 79	41	41	41	41	41	41
W17B27# 84	40	39	40	41	40	40
W17B27# 83	41	40	40	40	41	41
W17B27# 75	41	41	41	41	40	41
W17B27# 201	40	40	41	41	41	40
W17B27# 202	41	40	40	40	40	40
W17B27# 72	41	40	41	41	41	40
W17B27# 71	41	40	40	41	40	41
W17B27# 74	41	41	40	41	40	40
W17B27# 73	40	40	41	40	40	40
W17B27# 268	41	40	41	40	40	40
W17B27# 267	41	41	41	40	40	40
W17B27# 177	41	41	40	41	40	40
W17B27# 176	41	41	41	40	41	41
W17B27# 203	40	41	41	41	41	41
W17B27# 204	41	40	41	41	40	41
W17B27# 66	40	41	41	40	41	40
W17B27# 67	41	41	41	41	41	41
W17B27# 245	41	41	41	40	41	40
W17B27# 244	41	40	41	41	40	40

SIGNATURE: Shara Kinney

40 MIL SMOOTH

Material Thickness Measurement Log

Date: 6/20/97

SIGNATURE: Thara Kinney

SIGNATURE:

C/ ARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/10/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 146	40	40	40	41	41	40
W17B27# 139	41	40	41	40	41	40
W17B27# 138	41	40	41	41	40	40
W17B27# 129	41	40	41	40	41	41
W17B27# 128	41	41	41	41	40	40
W17B27# 135	41	40	41	41	41	41
W17B27# 136	40	39	41	41	40	40
W17B27# 137	41	40	40	41	41	41
W17B27# 171	41	41	41	41	41	41
W17B27# 170	40	40	41	41	41	41
W17B27# 187	41	40	40	40	41	40
W17B27# 186	41	40	41	40	41	40
W17B27# 132	41	40	41	41	40	41
W17B27# 133	41	40	40	41	40	40
W17B27# 124	41	40	41	40	40	40
W17B27# 125	41	41	41	40	40	40
W17B27# 130	41	41	40	40	40	40
W17B27# 134	41	41	40	40	40	40
W17B27# 55	41	41	41	40	40	41
W17B27# 54	40	41	41	41	41	40
W17B27# 57	41	40	41	41	41	41
W17B27# 56	40	41	41	41	41	40
W17B27# 53	41	41	40	41	41	41
W17B27# 52	41	40	41	40	41	40
W17B27# 127	40	40	41	41	40	40

SIGNATURE: _____

Marc Kinney

SIGNATURE :

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/10/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 195	41	40	40	41	40	40
W17B27# 194	41	40	41	41	41	40
W17B27# 82	41	40	40	41	40	40
W17B27# 81	41	41	41	40	41	41
W17B27# 199	40	41	41	41	40	40
W17B27# 193	41	41	41	41	41	41
W17B27# 198	40	39	40	41	40	40
W17B27# 192	41	40	40	40	41	41
W17B27# 77	41	41	41	41	40	41
W17B27# 78	40	40	41	41	41	40
W17B27# 62	41	40	40	40	40	40
W17B27# 63	41	40	41	41	41	40
W17B27# 64	41	40	40	41	40	41
W17B27# 65	41	41	40	41	40	40
W17B27# 242	40	40	41	40	40	40
W17B27# 243	41	40	41	40	40	40
W17B27# 185	41	41	41	40	40	40
W17B27# 184	41	41	40	41	40	40
W17B27# 147	41	41	41	40	41	41
W17B27# 140	40	41	41	41	41	41
W17B27# 196	41	40	41	41	40	41
W17B27# 197	40	41	41	40	41	40
W17B27# 136	41	41	41	41	41	41
W17B27# 137	41	41	41	40	41	40
W17B27# 184	41	40	41	41	40	40

SIGNATURE:

David Kinney

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/10/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 146	40	40	40	41	41	40
W17B27# 139	41	40	41	40	41	40
W17B27# 138	41	40	41	41	40	40
W17B27# 129	41	40	41	40	41	41
W17B27# 128	41	41	41	41	40	40
W17B27# 135	41	40	41	41	41	41
W17B27# 136	40	39	41	41	40	40
W17B27# 137	41	40	40	41	41	41
W17B27# 171	41	41	41	41	41	41
W17B27# 170	40	40	41	41	41	41
W17B27# 187	41	40	40	40	41	40
W17B27# 186	41	40	41	40	41	40
W17B27# 132	41	40	41	41	40	41
W17B27# 133	41	40	40	41	40	40
W17B27# 124	41	40	41	40	40	40
W17B27# 125	41	41	41	40	40	40
W17B27# 130	41	41	40	40	40	40
W17B27# 134	41	41	40	40	40	40
W17B27# 55	41	41	41	40	40	41
W17B27# 54	40	41	41	41	41	40
W17B27# 57	41	40	41	41	41	41
W17B27# 56	40	41	41	41	41	40
W17B27# 53	41	41	40	41	41	41
W17B27# 52	41	40	41	40	41	40
W17B27# 127	40	40	41	41	40	40

SIGNATURE: _____

Marc Kinney

40 MIL SMOOTH

Material Thickness Measurement Log

Date: 7/10/97

IGNATURE :

Chas Kinney

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/29/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 164	41	40	40	41	40	40
W17B27# 165	41	40	41	41	41	40
W17B27# 241	41	40	40	41	40	40
W17B27# 240	41	41	41	40	41	41
W17B27# 179	40	41	41	41	40	40
W17B27# 205	41	41	41	41	41	41
W17B27# 206	40	40	40	41	40	40
W17B27# 207	41	40	40	40	41	41
W17B27# 208	41	41	41	41	40	41
W17B27# 215	40	40	41	41	41	40
W17B27# 216	41	40	40	40	40	40
W17B27# 210	41	41	41	41	41	41
W17B27# 209	41	40	40	41	40	41
W17B27# 189	41	41	40	41	40	41
W17B27# 188	40	40	41	40	40	40
W17B27# 234	40	40	40	40	40	40
W17B27# 235	41	41	41	40	40	40
W17B27# 213	41	41	40	41	40	40
W17B27# 214	41	41	41	41	41	41
W17B27# 107	40	41	41	40	41	41
W17B27# 115	41	40	41	40	40	41
W17B27# 178	40	41	41	40	41	40
W17B27# 152	41	41	41	41	41	41
W17B27# 153	41	41	41	41	41	40
W17B27# 166	41	40	41	41	40	40

SIGNATURE: _____

Thara Kinney

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/29/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B27# 108	40	40	40	41	41	40
W17B27# 173	41	40	41	40	41	40
W17B27# 183	41	40	41	41	40	40
W17B27# 172	41	40	41	40	41	41
W17B27# 120	41	41	41	41	40	40
W17B27# 121	41	40	41	41	41	41
W17B27# 167	40	40	41	41	40	40
W17B27# 154	41	40	40	41	41	41
W17B27# 155	41	41	41	41	41	41
W17B27# 212	40	40	41	41	41	41
W17B27# 168	41	40	40	40	41	40
W17B27# 169	41	40	41	40	41	40
W17B27# 118	41	40	41	41	40	41
W17B27# 119	41	40	40	41	40	40
W17B27# 163	41	40	41	40	40	40
W17B27# 162	41	41	41	40	40	40
W17B27# 211	41	41	40	40	40	40
W17B27# 228	41	41	40	40	40	40
W17B27# 229	41	41	41	41	41	41
W17B27# 217	40	41	41	41	40	40
W17B27# 144	41	40	41	41	41	41
W17B27# 145	40	40	40	40	40	40
W17B27# 156	40	40	40	41	41	41
W17B27# 157	41	40	41	40	41	40
W17B27# 111	41	40	41	40	40	40
W17B27# 161	41	41	41	41	40	40

SIGNATURE: Chara Kinney

7/ 8

SIGNATURE: Mara Kurney

CLARKSTOWN LANDFILL

40 MIL PVC

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: _____

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
FR74190-1 113 SM	40	40	40	41	41	40
FR74190-1 222 SM	41	40	40	40	40	41
FR74190-1 223 SM	40	40	40	41	40	40
FR74190-1 232 SM	40	41	40	41	41	40
FR74190-1 233 SM	41	41	41	40	40	40
FR74190-1 218 SM	40	40	40	41	41	41
FR74190-1 221 SM	40	40	40	41	40	41
FR79087-2 148 SM	41	41	41	40	41	41
FR79087-2 147 SM	41	40	40	40	41	41
FR79087-2 146 SM	41	41	41	41	40	40
FR79087-2 156 SM	40	41	41	40	41	40
FR79087-2 145 SM	40	41	40	40	40	41
FR79087-2 155 SM	41	40	40	41	41	41
FR79087-2 209 SM	40	40	40	40	40	40
FR74189-2 268 EM	40	41	41	41	41	41
FR74189-2 267 EM	41	41	41	40	40	40
FR74189-2 262 EM	40	40	40	40	40	41
FR74189-2 276 EM	40	41	41	40	40	41
FR74189-2 246 EM	40	40	41	41	41	40
FR74189-2 245 EM	41	41	40	40	41	41
FR74189-2 215 EM	41	41	41	41	41	41
FR74189-2 216 EM	40	40	40	41	40	41
FR74189-2 24 EM	40	41	41	40	40	41
FR74189-2 25 EM	41	41	40	41	41	41
FR74189-2 22 EM	41	41	41	41	40	40
FR74189-2 23 EM	40	40	40	40	41	40

SIGNATURE: Shara Kinney

CLARKSTOWN LANDFILL

40 MIL PVC

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: MARCH 20, 1998

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
FR79087-2 177 SM	40	40	40	41	41	40
FR79087-2 176 SM	41	40	40	40	40	41
FR79087-2 179 SM	40	40	40	41	40	40
FR79087-2 178 SM	40	41	40	41	41	40
FR79087-2 181 SM	41	41	41	40	40	40
FR79087-2 180 SM	40	40	40	41	41	41
FR79087-2 313 SM	40	40	40	41	40	41
FR79087-2 288 SM	41	41	41	40	41	41
FR79087-2 307 SM	41	40	40	40	41	41
FR79087-2 289 SM	41	41	41	41	40	40
FR79087-2 300 SM	40	41	41	40	41	40
FR79087-2 301 SM	40	41	40	40	40	41
FR79087-2 167 SM	41	40	40	41	41	41
FR79087-2 168 SM	40	40	40	40	40	40
FR74189-2 210 SM	40	41	41	41	41	41
FR79087-2 309 SM	41	41	41	40	40	40
FR79087-2 308 SM	40	40	40	40	40	41
FR79087-2 183 SM	40	41	41	40	40	41
FR79087-2 306 SM	40	40	41	41	41	40
FR79087-2 26 SM	41	41	40	40	41	41

SIGNATURE: _____

Theresa Kinney

CLARKSTOWN LANDFILL
40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: _____

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
FR790872 296	40	41	41	40	41	41
FR79087-2 297	40	41	41	40	40	41
FR79087-2 302	40	40	41	41	41	41
FR79087-2 303	41	41	40	40	40	41
FR79087-2 293	41	40	41	41	41	40
FR79087-2 292	40	40	40	41	41	41
FR79087-2 298	41	41	41	40	41	40
FR79087-2 177	41	40	41	40	41	41
FR79087-2 176	41	41	40	41	41	40
FR79087-2 179	41	40	41	40	40	41
FR79087-2 178	41	41	40	41	40	40
FR79087-2 181	41	40	40	41	40	40
FR79087-2 180	40	41	41	41	41	41
FR79087-2 313	41	40	41	40	41	40
FR79087-2 183	40	40	41	41	40	41
FR79087-2 26	41	41	40	41	41	40
FR79087-2 306	41	40	41	41	41	41
FR79087-2 307	40	41	40	40	40	41
FR79087-2 288	41	41	40	40	41	41
FR79087-2 289	40	40	41	40	41	41
FR79087-2 300	40	41	41	40	41	41
FR79087-2 301	41	41	41	41	41	41
FR79087-2 167	40	41	40	40	40	40
FR79087-2 168	40	40	41	41	40	40
FR79087-2 210	41	41	41	41	40	41
FR79087-2 309	40	40	41	40	40	41
FR79087-2 308	41	41	40	41	40	41
FR79087-2 312	41	40	41	40	40	41

SIGNATURE: Chara Kinney

ENVIRONMENTAL LINERS INC.

Date: _____

SIGNATURE: Chase Kunnery

SIGNATURE: Thara Kurnay

CLARKSTOWN LANDFILL

40 MIL SMOOTH

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: JUNE 10, 1998

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
FR85063-1 # 6	40	40	40	41	40	40
FR85063-1 # 5	40	41	40	40	40	40
FR85063-1 # 3	41	40	40	41	40	40
FR85063-1 # 4	42	41	40	41	40	40
FR85063-1 # 23	41	41	40	41	41	41
FR85063-1 # 7	41	40	41	40	40	41
FR85063-1 # 1	40	40	40	40	40	40
FR85063-1 # 2	40	40	40	41	41	41
FR85063-1 # 17	40	40	40	40	40	40
FR85063-1 # 18	41	40	40	41	40	42
FR85063-1 # 19	40	40	41	40	42	41
FR85063-1 # 20	42	40	41	40	40	41
FR85063-1 # 21	40	40	40	40	40	40
FR85063-1 # 22	40	40	41	41	40	41
FR85063-1 # 11	40	41	42	40	40	40
FR85063-1 # 12	40	40	40			

SIGNATURE: _____

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.**Material Thickness Measurement Log**Date: 5/13/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 274	41	41	41	40	41	41
W17B26# 240	41	41	42	40	40	41
W17B26# 188	41	41	40	41	40	41
W17B26# 183	40	40	41	40	41	41
W17B26# 150	40	40	40	41	41	41
W17B26# 152	41	40	41	40	41	40
W17B26# 189	40	41	41	41	41	40
W17B26# 145	41	40	40	41	40	40
W17B26# 184	41	40	41	40	41	40
W17B26# 147	40	40	41	40	41	41
W17B26# 162	41	42	41	40	40	40
W17B26# 168	41	41	41	40	40	41
W17B26# 169	41	41	41	40	41	41
W17B26# 166	40	41	41	40	40	40
W17B26# 195	41	41	41	41	40	41
W17B26# 190	40	41	41	41	41	41
W17B26# 58	40	40	41	40	40	40
W17B26# 103	40	40	40	41	40	40
W17B26# 104	42	41	41	40	40	40
W17B26# 143	40	41	41			
W17B26# 141	40	41	41	40	40	40
W17B26# 91	41	42	41	40	40	40
W17B26# 160	41	41	41	41	40	41
W17B26# 153	41	40	40	41	41	40
W17B26# 158	40	41	41			

SIGNATURE: _____

Shara Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.**Material Thickness Measurement Log**Date: 5/19/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 141	40	41	40	40	40	40
W17B26# 91	41	42	40	40	40	40
W17B26# 160	41	41	41	41	40	41
W17B26# 153	41	40	41	41	41	40
W17B26# 158	40	41	40	40	40	40
W17B26# 156	41	41	40	40	40	41
W17B26# 151	41	40	40	40	40	40
W17B26# 193	40	41	40	40	40	41
W17B26# 187	41	41	40	40	41	41
W17B26# 149	41	41	40	40	40	40
W17B26# 154	41	40	41	41	41	40
W17B26# 124	41	41	40	40	40	41
W17B26# 128	40	41	41	41	40	41
W17B26# 143	40	41	41	40	40	40
W17B26# 178	41	40	40	41	41	40
W17B26# 176	41	41	41	40	41	40
W17B26# 175	41	40	40	40	40	40
W17B26# 182	41	41	40	41	40	40
W17B26# 2	40	40	40	40	40	40
W17B26# 1	40	40	40	40	40	40
W17B26# 4	40	41	40			

SIGNATURE: Mara Kimzey

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 5/27/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 1	40	41	40	40	40	40
W17B26# 3	40	40	40	41	40	40
W17B26# 140	40	41	40	40	40	41
W17B26# 137	41	41	42	40	41	40
W17B26# 60	40	40	40	40	41	40
W17B26# 59	40	41	40	41	40	40
W17B26# 53	40	40	41	41	41	40
W17B26# 54	40	41	40	41	40	40
W17B26# 9	40	40	41	41	41	41
W17B26# 10	40	40	40	40	40	41
W17B26# 120	41	41	41	41	41	40
W17B26# 121	40	41	41	41	41	41
W17B26# 171				40	40	41
W17B26# 164	40	41	41	40	40	40
W17B26# 165	41	41	41	41	41	40
W17B26# 163	40	41	41	41	41	41
W17B26# 170	40	41	40	41	40	40
W17B26# 136	40	41	40	41	40	40
W17B26# 174	40	40	40	40	40	40
W17B26# 167	41	40	40	40	40	40
W17B26# 172	41	41	41			
W17B26# 177	40	40	41			

SIGNATURE: Mara Kennedy

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 5/30/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 172				40	41	40
W17B26# 180	40	40	40	40	40	41
W17B26# 181	41	40	41	40	40	40
W17B26# 148	41	41	40	41	41	41
W17B26# 144	40	41	41	41	40	40
W17B26# 2	41	41	40	41	40	40
W17B26# 1	40	40	40	41	40	40
W17B26# 4	41	41	41	40	40	40
W17B26# 3	41	40	41	40	40	40
W17B26# 106	40	41	41	40	41	40
W17B26# 105	41	40	41	40	40	41
W17B26# 108	41	41	42	40	41	41
W17B26# 240	41	41	40	41	41	41
W17B26# 107	41	41	41	40	41	41
W17B26# 11	41	42	41	40	40	40
W17B26# 12	40	41	41	40	41	41
W17B26# 109	40	41	41	41	40	40
W17B26# 110	40	40	40	41	41	41
W17B26# 61	40	41	40			

SIGNATURE:

Shara Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.**Material Thickness Measurement Log**Date: 5/30/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 63	41	41	40	40	41	40
W17B26# 64	40	40	40	40	40	41
W17B26# 8	41	40	41	40	40	40
W17B26# 7	41	41	40	41	41	41
W17B26# 65	40	41	41	41	40	40
W17B26# 66	41	41	40	41	40	40
W17B26# 57	40	40	40	41	40	40
W17B26# 6	41	41	41	40	40	40
W17B26# 5	41	40	41	40	40	40
W17B26# 69	40	41	41	40	41	40
W17B26# 70	41	40	41	40	40	41
W17B26# 76	41	41	42	40	41	41
W17B26# 90	41	41	40	41	41	41
W17B26# 75	41	41	41	40	41	41
W17B26# 79	41	42	41	40	40	40
W17B26# 80	40	41	41	40	41	41
W17B26# 72	40	41	41	41	40	40
W17B26# 71	40	40	40	41	41	41
W17B26# 67	40	41	40	40	41	40
W17B26# 68	41	41	40	41	40	40
W17B26# 142	41	40	41	41	41	40
W17B26# 146	40	41	40	40	40	41
W17B26# 62	41	40	41	41	40	41
W17B26# 61	40	40	41	40	41	41
W17B26# 73	40	41	41	40	41	40

SIGNATURE: Thana Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 5/30/97

[illegible]

SIGNATURE :

Thara Kunney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 6/09/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 192	41	40	40	40	41	40
W17B26# 135	41	41	40	41	41	41
W17B26# 15	40	40	41	41	40	41
W17B26# 97	40	41	40	41	41	40
W17B26# 98	40	41	40	41	41	40
W17B26# 85	41	41	41	40	40	41
W17B26# 86	41	40	41	40	40	41
W17B26# 73	41	41	41	40	41	40
W17B26# 203	41	40	41	40	41	40
W17B26# 202	40	41	42	40	40	41
W17B26# 113	41	40	40	41	40	41
W17B26# 114	40	41	41	40	41	41
W17B26# 12	41	41	41	40	40	40
W17B26# 13	40	41	41	40	41	41
W17B26# 14	41	41	41	41	40	40
W17B26# 115	40	40	40	41	40	40
W17B26# 138	40	40	40	40	41	41
W17B26# 84	40	41	40	41	40	40
W17B26# 83	41	40	41	41	41	40
W17B26# 111	40	40	40	40	40	41
W17B26# 112	41	40	41	41	40	41
W17B26# 45	40	41	41	40	41	41
W17B26# 46	41	40	41	41	40	41
W17B26# 10	40	40	41	40	41	40
W17B26# 11	41	41	40	41	40	40
W17B26# 186	41	40	40	41	40	41
W17B26# 192	40	41	40	40	41	41
W17B26# 207	40	41	41			

SIGNATURE: Chara Kinney

SIGNATURE: _____

40 MIL EMBOSSED

Material Thickness Measurement Log

Date: 6/30/97

SIGNATURE:

SIGNATURE: Thara Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/18/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 123	40	41	41	40	41	41
W17B26# 40	40	41	41	40	40	41
W17B26# 134	40	40	41	41	41	41
W17B26# 130	41	41	40	40	40	41
W17B26# 55	41	40	41	41	41	40
W17B26# 56	40	40	40	41	41	41
W17B26# 204	41	41	41	40	41	40
W17B26# 205	41	40	41	40	41	41
W17B26# 159	41	41	40	41	41	40
W17B26# 161	41	40	41	40	40	41
W17B26# 201	41	41	40	41	40	40
W17B26# 198	41	40	40	41	40	40
W17B26# 125	40	41	41	41	41	41
W17B26# 132	41	40	41	40	41	40
W17B26# 50	40	40	41	41	40	41
W17B26# 49	41	41	40	41	41	40
W17B26# 196	41	40	41	41	41	41
W17B26# 199	40	41	40	40	40	41
W17B26# 116	41	41	40	40	41	41
W17B26# 117	40	40	41	40	41	41
W17B26# 197	40	41	41	40	41	41
W17B26# 122	40	40	40	41	41	40
W17B26# 51	41	41	40	40	40	40
W17B26# 52	40	40	41	41	40	41
W17B26# 47	40	41	41	41	41	40

SIGNATURE: Thara Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 7/30/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 47	40	41	41	40	41	41
W17B26# 48	40	41	41	40	40	41
W17B26# 30	40	40	41	41	41	41
W17B26# 93	41	41	40	40	40	41
W17B26# 95	41	40	41	41	41	40
W17B26# 96	40	40	40	41	41	41
W17B26# 87	41	41	41	40	41	40
W17B26# 88	41	40	41	40	41	41
W17B26# 231	41	41	40	41	41	40
W17B26# 232	41	40	41	40	40	41
W17B26# 230	41	41	40	41	40	40
W17B26# 229	41	40	40	41	40	40
W17B26# 82	40	41	41	41	41	41
W17B26# 30	41	40	41	40	41	40
W17B26# 31	40	40	41	41	40	41
W17B26# 236	41	41	40	41	41	40
W17B26# 235	41	40	41	41	41	41
W17B26# 36	40	41	40	40	40	41
W17B26# 37	41	41	40	40	41	41
W17B26# 16	40	40	41	40	41	41
W17B26# 81	40	41	41	40	41	41
W17B26# 77	41	41	41	41	41	41
W17B26# 78	40	41	40	40	40	40
W17B26# 225	40	40	41	41	40	40
W17B26# 226	41	41	41	41	40	41
W17B26# 17	41	40	40	40	41	41
W17B26# 28	40	40	41	41	41	40
W17B26# 93	41	41	40	40	40	41

SIGNATURE: _____

Diana Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 8/13/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 101	40	41	41	40	41	41
W17B26# 233	40	41	41	40	40	41
W17B26# 19	40	40	41	41	41	41
W17B26# 18	41	41	40	40	40	41
W17B26# 227	41	40	41	41	41	40
W17B26# 228	40	40	40	41	41	41
W17B26# 257	41	41	41	40	41	40
W17B26# 258	41	40	41	40	41	41
W17B26# 218	41	41	40	41	41	40
W17B26# 217	41	40	41	40	40	41
W17B26# 35	41	41	40	41	40	40
W17B26# 237	41	40	40	41	40	40
W17B26# 218	40	41	41	41	41	41
W17B26# 253	41	40	41	40	41	40
W17B26# 254	40	40	41	41	40	41
W17B26# 14	41	41	40	41	41	40
W17B26# 217	41	40	41	41	41	41
W17B26# 248	40	41	40	40	40	41
W17B26# 243	41	41	40	40	41	41
W17B26# 244	40	40	41	40	41	41
W17B26# 212	40	41	41	40	41	41
W17B26# 211	41	41	41	41	41	41
W17B26# 27	40	41	40	40	40	40
W17B26# 26	40	40	41	41	40	40
W17B26# 21	41	41	41	41	40	41
W17B26#						
W17B26#						
W17B26#						

SIGNATURE: Thara Kinney

CLARKSTOWN LANDFILL

40 MIL EMBOSSED

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: 9/04/97

ROLL/BATCH NUMBER	ROLL START			ROLL END		
	SIDE	CENTER	SIDE	SIDE	CENTER	SIDE
W17B26# 21	40	41	41	40	41	41
W17B26# 34	40	41	41	40	40	41
W17B26# 20	40	40	41	41	41	41
W17B26# 241	41	41	40	40	40	41
W17B26# 242	41	40	41	41	41	40
W17B26# 208	40	40	40	41	41	41
W17B26# 209	41	41	41	40	41	40
W17B26# 32	41	40	41	40	41	41
W17B26# 213	41	41	40	41	41	40
W17B26# 214	41	40	41	40	40	41
W17B26# 92	41	41	40	41	40	40
W17B26# 261	41	40	40	41	40	40
W17B26# 265	40	41	41	41	41	41
W17B26# 266	41	40	41	40	41	40
W17B26# 270	40	40	41	41	40	41
W17B26# 268	41	41	40	41	41	40
W17B26# 269	41	40	41	41	41	41
W17B26#						
W17B26#						
W17B26#						
W17B26#						

SIGNATURE: _____

CLARKSTOWN LANDFILL

40 MIL PVC

ENVIRONMENTAL LINERS INC.

Material Thickness Measurement Log

Date: JUNE 8, 1998

[illegible]

SIGNATURE:

—

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APPENDIX E3:

EL Factory Seam Destructive Test Reports



ENVIRONMENTAL LINERS, INC.

2009 NORTH INDUSTRIAL ROAD • CORTEZ, COLORADO 81321 • INTERSTATE 1-800-821-0531
IN COLORADO (970) 565-9540 / 565-4221 / FAX (970) 565-8844

eliners@fone.net
www.fone.net/eliners

June 26, 1997

Ogden Remediation Services Co., Inc.
166 Route 303
West Nyack, New York 10994

Fax 914-358-2790

Attn: Mr. Mike Diana

Re: Clarkstown Sanitary Landfill Cap
Rockland County, New York
PVC Factory Seam Testing

Gentlemen:

Environmental Liners, Inc. tests our factory seams for shear strength per ASTM D3083. Our dielectric factory seam does not provide a seam that can be peel tested per ASTM D413, consequently, we perform a modified version that peels the seam longitudinally (the length of the seam). The modified peel test must have a film tearing bond (FTB) and show equal sealing and pressure under the bar contact area. If the seam does not seal equally, the bar is adjusted for alignment and trued to provide a uniform flat surface for the length of the bar. The results of the two (2) samples tested per fabricated blanket are recorded and submitted to the Contractor.

If you have any questions, please feel free to call.

Sincerely,

ENVIRONMENTAL LINERS, INC.

Donald R. Haley
Project Manager



ENVIRONMENTAL LINERS, INC.

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www.fone.net/eliners

July 9, 1997

Ogden Remediation Services Co., Inc.
106 Route 303
West Nyack, New York 10994

Fax 914-358-2790

Attn: Mr. Mike Diann

Re: Clarkstown Sanitary Landfill Cap
Rockland County, New York
PVC Seam Testing

Gentlemen:

Environmental Liners, Inc. seam testing lab falls under the guidelines of the Geosynthetic Institute (GSI) for conducting peel and shear tests on flexible geomembrane liners. We have over fifteen years experience testing factory and field seams per ASTM guidelines. Our current Production Manager, Mr. Terry McNamee, has over five years of testing experience and is currently responsible for our lab testing.

If you have any questions, please feel free to call.

Sincerely,

ENVIRONMENTAL LINERS, INC.

Donald R. Haley
Project Manager

cc: PHM
JEB
MSD
FFX
CLDL



ENVIRONMENTAL LINERS, INC.

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eliners@tone.net
www.tone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
101 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
101 A	1	77.1	FTB-SE
	2	76.9	FTB-SE
	3	76.6	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		76.9	

Terry McNamee 
Terry McNamee, Production Manager



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www.lone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
101 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
101 B	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	76.7	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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www.fona.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
102 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
102 A	1	77.0	FTB-SE
	2	76.7	FTB-SE
	3	76.7	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		76.9	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
102 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
102 B	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	76.9	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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www.tone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
103 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
103 A	1	77.4	FTB-SE
	2	77.7	FTB-SE
	3	77.6	FTB-SE
	4	77.0	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.4	

Terry McNamara
Terry McNamara, Production Manager



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www.tone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
103 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
103 B	1	77.6	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.7	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

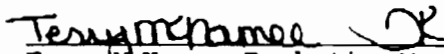
TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
104 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
104 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	76.9	FTB-SE
	4	76.5	FTB-SE
	5	77.0	FTB-SE
AVERAGE		76.9	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
104 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
104 B	1	77.5	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
105 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
105 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.7	FTB-SE
	4	76.5	FTB-SE
	5	77.0	FTB-SE
AVERAGE		76.8	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
105 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
105 B	1	77.5	FTB-SE
	2	76.9	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
106 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
106 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.8	FTB-SE
	4	76.6	FTB-SE
	5	77.4	FTB-SE
AVERAGE		76.9	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
106 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
106 B	1	76.9	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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eliner@tone.net
www.tone.net/eliner

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
107 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
107 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	76.9	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
107 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
107 B	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
108 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
108 A	1	76.9	FTB-SE
	2	76.9	FTB-SE
	3	77.5	FTB-SE
	4	76.8	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.0	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
108 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
108 B	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	76.9	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
109 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
109 A	1	77.1	FTB-SE
	2	77.1	FTB-SE
	3	76.9	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
109 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
109 B	1	77.0	FTB-SE
	2	76.8	FTB-SE
	3	76.9	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.0	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
110 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
110 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
110 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
110 B	1	77.0	FTB-SE
	2	77.7	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
111 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
111 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
111 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
111 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
112 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
112 A	1	77.4	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
112 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
112 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.6	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
113 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
113 A	1	77.5	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	76.7	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
113 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
113 B	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.8	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee 
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
114 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
114 A	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
114 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
114 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.1	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
115 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
115 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
115 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
115 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

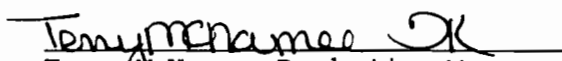
TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
116 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
116 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	76.9	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
116 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
116 B	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
117 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
117 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
117 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
117 B	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

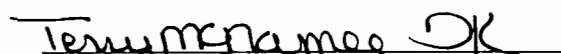
TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
118 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
118 A	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	76.8	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
118 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
118 B	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
119 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
119 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

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Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
119 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
119 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
120 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
120 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.5	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
120 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
120 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
121 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
121 A	1	77.6	FTB-SE
	2	76.9	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
121 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
121 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	76.8	FTB-SE
	4	77.0	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.1	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
122 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
122 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
122 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
122 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
123 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
123 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	76.8	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

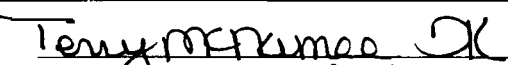
TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
123 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
123 B	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.6	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

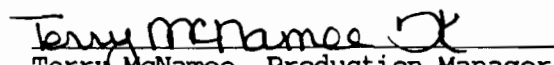
TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
124 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
124 A	1	77.3	FTB-SE
	2	77.7	FTB-SE
	3	77.0	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
124 B LONGITUDINAL	1		FTB
			- *
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
124 B	1	77.7	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.4	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
125 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
125 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.0	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
125 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
125 B	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
126 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
126 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

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Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
126 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
126 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	76.8	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
127 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
127 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
127 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
127 B	1	77.6	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.4	

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Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
128 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
128 A	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

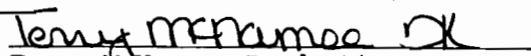
TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
128 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
128 B	1	77.1	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.0	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/08/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
129 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
129 A	1	76.8	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	76.7	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/08/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
129 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
129 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.3	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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129-137
m82'5

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/08/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
130 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
130 A	1	77.2	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
139 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
139 A	1	77.3	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

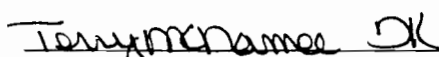
TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
139 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
139 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

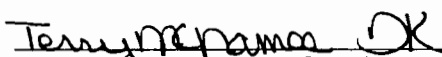
TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
140 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
140 A	1	77.5	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

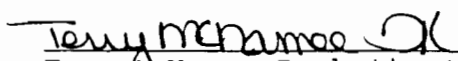
TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
140 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
140 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
141 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
141 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
141 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
141 B	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McGamee SK
Terry McGamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

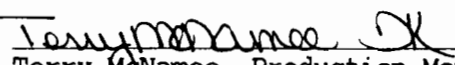
TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
142 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
142 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

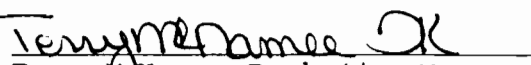
TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
142 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
142 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
142 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
142 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
143 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
143 A	1	77.6	FTB-SE
	2	77.7	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
143 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
143 B	1	77.0	FTB-SE
	2	76.7	FTB-SE
	3	77.4	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

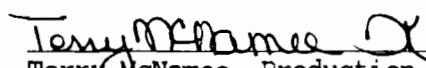
TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
144 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
144 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

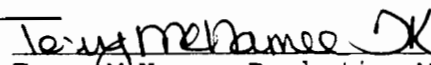
TIME: 3:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
144 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
144 B	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
145 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
145 A	1	77.6	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

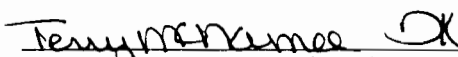
TIME: 3:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
145 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
145 B	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.3	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

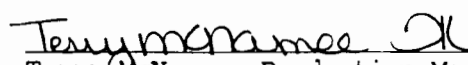
TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
146 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
146 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.7	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

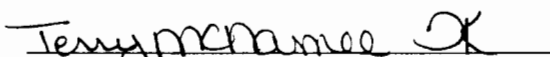
TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
146 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
146 B	1	77.1	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
147 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
147 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.5	FTB-SE
	4	77.3	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.3	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

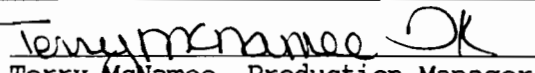
TIME: 6:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
147 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
147 B	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

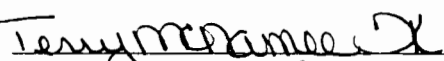
TIME: 7:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
148 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
148 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.7	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		76.9	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/16/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
148 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
148 B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

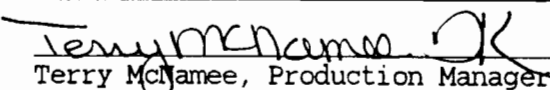
TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
149 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
149 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.3	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
149 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
149 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

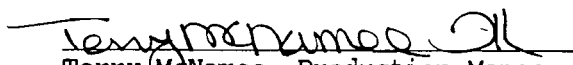
TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
150 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
150 A	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

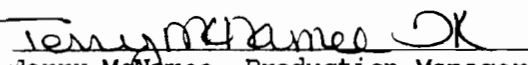
TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
150 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
150 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
151 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
151 A	1	77.1	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

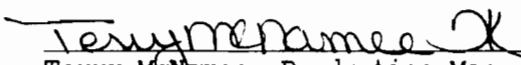
TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
151 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
151 B	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

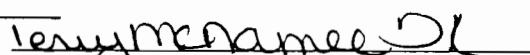
TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
152 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
152 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

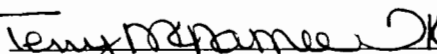
TIME: 5:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
152 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
152 B	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

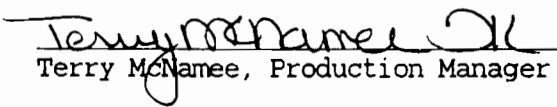
TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
153 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
153 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

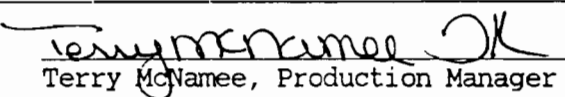
TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
154 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
154 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
154 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
154 B	1	77.3	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

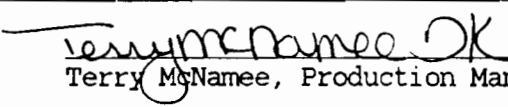
TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
155 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
155 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
155 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
155 B	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

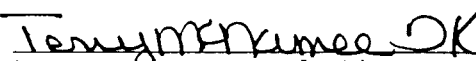
TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
156 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
156 A	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

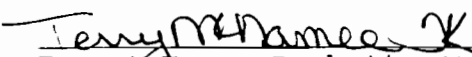
TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
156 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
156 B	1	77.5	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
157 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
157 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

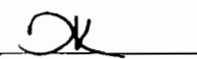
TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
157 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
157 B	1	77.2	FTB-SE
	2	77.3	FTB-SE
	3	77.5	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
158 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
158 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.6	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
158 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
158 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
159 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
159 A	1	76.8	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
159 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
159 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
160 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
160 A	1	77.2	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
160 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
160 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.5	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
161 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
161 A	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
161 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
161 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
162 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
162 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
162 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
162 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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163 B messy
164 A messy

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
163 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
163 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
164 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
164 B	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
165 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
165 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
165 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
165 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
166 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
166 A	1	77.1	FTB-SE
	2	77.0	FTB-SE
	3	77.5	FTB-SE
	4	77.5	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
166 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
166 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.1	FTB-SE
	4	77.3	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/07/97

PROJECT NAME: CLARKSTOWN LANDFILL

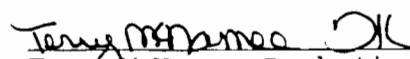
TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
167 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
167 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/07/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
167 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
167 B	1	77.2	FTB-SE
	2	77.4	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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168 B
missing
168-175 missing

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/07/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
168 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
168 A	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
179 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
179 A	1	77.3	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
179 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
179 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

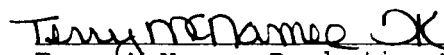
TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
180 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
180 A	1	77.3	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
180 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
180 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
181 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
181 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.6	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
181 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
181 B	1	77.2	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.3	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
182 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
182 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
182 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
182 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
183 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
183 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee DK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
183 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
183 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
184 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
184 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	76.9	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
184 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
184 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
185 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
185 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
185 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
185 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
186 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
186 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee *JK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
186 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
186 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
187 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
187 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
187 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
187 B	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
188 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
188 A	1	77.3	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
188 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
188 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
189 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
189 A	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.6	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
189 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
189 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
190 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
190 A	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
190 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
190 B	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
191 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
191 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
191 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
191 B	1	76.9	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

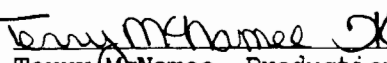
TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
192 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
192 A	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
192 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
192 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
193 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
193 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee 
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
193 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
193 B	1	77.2	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
194 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
194 A	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
194 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
194 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
195 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
195 A	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
195 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
195 B	1	77.1	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
196 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
196 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
196 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
196 B	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
197 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
197 A	1	77.2	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
197 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
197 B	1	77.3	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
198 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
198 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry M. Namee OK
Terry M. Namee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
198 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
198 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
199 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
199 A	1	77.4	FTB-SE
	2	77.6	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/24/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
199 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
199 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

200
MISSA

PROJECT NO.: 1818

DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
201 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
201 A	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77.9	FTB-SE
	4	77.9	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.6	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

3RD SEAM ID		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
201 B LONGITUDINAL	1		FTB
AVERAGE			

3RD SEAM ID		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
201 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.8	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

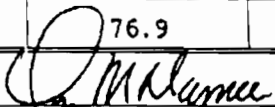
TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
202 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
202 A	1	76.9	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	76.7	FTB-SE
	5	76.9	FTB-SE
AVERAGE		76.9	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818 DATE: 5/13/97
PROJECT NAME: CLARKSTOWN LANDFILL TIME: 9:30
GEOMEMBRANE TYPE: 40 MIL PVC, EMBOSSED
SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
202 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
202 B	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		76.9	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
203 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
203-B <i>(Handwritten 'X' and checkmark)</i>	1	77.0	FTB-SE
	2	76.7	FTB-SE
	3	77.0	FTB-SE
	4	76.7	FTB-SE
	5	77.2	FTB-SE
AVERAGE		76.9	

(Signature)
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
203 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
203 B	1	77.5	FTB-SE
	2	77.4	FTB-SE
	3	77.8	FTB-SE
	4	77.8	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.6	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818 DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
204 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
204 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.7	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/13/97

PROJECT NAME: CLARKSTOWN LANDFILL

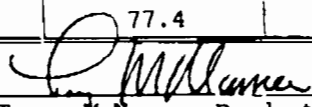
TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
204 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
204 B	1	77.8	FTB-SE
	2	77.3	FTB-SE
	3	76.9	FTB-SE
	4	77.6	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818DATE: 5/14/97PROJECT NAME: CLARKSTOWN LANDFILLTIME: 7:00GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSEDSEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
205 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
205 A	1	76.8	FTB-SE
	2	77.0	FTB-SE
	3	76.7	FTB-SE
	4	76.7	FTB-SE
	5	76.9	FTB-SE
AVERAGE		76.8	

Terry McNamee OK
Terry McNamee, Production Manager

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
205 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
205 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	76.9	FTB-SE
	4	76.9	FTB-SE
	5	76.7	FTB-SE
AVERAGE		76.8	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
206 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
206 A	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	76.8	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
206 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
206 B	1	76.9	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	76.7	FTB-SE
AVERAGE		76.9	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
207 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
207 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.7	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager

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www.tone.net/eliners**BONDED SEAM STRENGTH TEST RESULTS
(ASTM D3083)**PROJECT NO.: 1818DATE: 5/14/97PROJECT NAME: CLARKSTOWN LANDFILLTIME: 11:30GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSEDSEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
207 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
207 B	1	76.9	FTB-SE
	2	77.4	FTB-SE
	3	77.4	FTB-SE
	4	77.7	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

missing
208 B

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
208 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
208 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
209 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
209 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.5	FTB-SE
	4	76.8	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
209 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
209 B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	76.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
210 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
210 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.7	FTB-SE
	4	77.8	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	

Terry McNanee
Terry McNanee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
210 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
210 B	1	77.4	FTB-SE
	2	77.6	FTB-SE
	3	77.6	FTB-SE
	4	76.7	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
211 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
211 A	1	77.6	FTB-SE
	2	77.7	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
211 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
211 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
212 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
212 A	1	76.5	FTB-SE
	2	76.7	FTB-SE
	3	76.7	FTB-SE
	4	77.0	FTB-SE
	5	76.9	FTB-SE
AVERAGE		76.7	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
212 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
212 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	76.7	FTB-SE
	4	76.8	FTB-SE
	5	76.8	FTB-SE
AVERAGE		76.8	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
213 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
213 A	1	76.9	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	76.6	FTB-SE
AVERAGE		76.8	

Terry McNamane *OK*
Terry McNamane, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
213 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
213 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	76.9	FTB-SE
	5	76.9	FTB-SE
AVERAGE		76.9	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
214 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
214 A	1	77.2	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		76.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
214 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
214 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818DATE: 5/19/97PROJECT NAME: CLARKSTOWN LANDFILLTIME: 7:30GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSEDSEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
215 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
215 A	1	76.9	FTB-SE
	2	76.6	FTB-SE
	3	77.3	FTB-SE
	4	76.9	FTB-SE
	5	77.1	FTB-SE
AVERAGE		76.9	

Terry McNamee
 Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
215 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
215 B	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
216 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
216 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.7	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
216 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
216 B	1	77.5	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
217 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
217 A	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.7	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
217 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
217 B	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.6	FTB-SE
	4	77.6	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.5	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
218 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
218 A	1	77.3	FTB-SE
	2	76.9	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
218 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
218 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.6	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
219 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
219 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	76.9	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
219 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
219 B	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
220 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
220 A	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	76.9	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
220 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
220 B	1	77.7	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
221 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
221 A	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.2	FTB-SE
	4	77.6	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
221 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
221 B	1	77.6	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	76.8	FTB-SE
	5	76.8	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818DATE: 5/20/97PROJECT NAME: CLARKSTOWN LANDFILLTIME: 11:00GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSEDSEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
222 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
222 A	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	76.7	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
222 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
222 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.3	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.1	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
223 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
223 A	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
223 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
223 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.7	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
224 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
224 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.7	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
224 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
224 B	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
225 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
225 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	76.9	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
225 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
225 B	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
226 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
226 A	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	76.7	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.1	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
226 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
226 B	1	77.1	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	76.9	FTB-SE
	5	76.8	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
227 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
227 A	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

Terry McNamee 
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
227 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
227 B	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
228 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
228 A	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/21/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
228 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
228 B	1	77.5	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	77.7	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.4	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
229 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
229 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.4	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
229 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
229 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	76.8	FTB-SE
	5	76.8	FTB-SE
AVERAGE		77.0	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
230 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
230 A	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	76.8	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
230 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
230 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	76.7	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
231 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
231 A	1	77.6	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
231 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
231 B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
232 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
232 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
232 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
232 B	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.3	FTB-SE
	4	77.6	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
233 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
233 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.6	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
233 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
233 B	1	77.1	FTB-SE
	2	77.7	FTB-SE
	3	77.5	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.4	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
234 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
234 A	1	77.3	FTB-SE
	2	76.9	FTB-SE
	3	77.5	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
234 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
234 B	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamara X
Terry McNamara, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
235 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
235 A	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
235 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
235 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	76.8	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
236 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
236 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.7	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
236 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
236 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	76.9	FTB-SE
	5	77.8	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
237 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
237 A	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	76.9	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
237 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
237 B	1	77.6	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.4	

Terry McNamee OL
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
238 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
238 A	1	77.1	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
238 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
238 B	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.5	FTB-SE
	4	77.5	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
239 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
239 A	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
239 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
239 B	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
240 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
240 A	1	77.6	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC, EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
240 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
240 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.5	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
241 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
241 A	1	76.9	FTB-SE
	2	77.6	FTB-SE
	3	77.5	FTB-SE
	4	76.8	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
241 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
241 B	1	77.5	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
242 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
242 A	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	76.8	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
242 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
242 B	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.7	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
243 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
243 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.5	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
243 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
243 B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
244 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
244 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	76.9	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
244 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
244 B	1	77.2	FTB-SE
	2	77.4	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
245 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
245 A	1	77.6	FTB-SE
	2	77.0	FTB-SE
	3	76.7	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
245 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
245 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.0	FTB-SE
	4	76.7	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
246 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
246 A	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
246 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
246 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.7	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
247 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
247 A	1	77.2	FTB-SE
	2	77.4	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
247 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
247 B	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.2	FTB-SE
	4	77.6	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
248 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
248 A	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
248 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
248 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
249 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
249 A	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
 Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
249 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
249 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
250 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
250 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.4	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
250 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
250 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.5	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.1	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
251 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
251 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
251 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
251 B	1	77.0	FTB-SE
	2	76.7	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
252 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
252 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 5/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
252 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
252 B	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry Namee
Terry Namee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
253 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
253 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
253 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
253 B	1	77.2	FTB-SE
	2	76.7	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.0	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
254 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
254 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
254 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
254 B	1	77.6	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
255 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
255 A	1	77.0	FTB-SE
	2	76.7	FTB-SE
	3	77.6	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
255 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
255 B	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
256 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
256 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	76.8	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
256 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
256 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.6	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
257 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
257 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
257 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
257 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	76.7	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
258 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
258 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee DK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/02/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
258 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
258 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	76.7	FTB-SE
	4	77.5	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.0	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
259 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
259 A	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
259 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
259 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.4	FTB-SE
	4	77.6	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
260 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
260 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.3	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/03/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
260 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
260 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.5	FTB-SE
	4	77.0	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
261 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
261 A	1	77.2	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
261 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
261 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

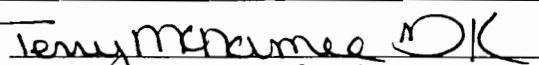
TIME: 5:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
262 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
262 A	1	77.3	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
262 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
262 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
263 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
263 A	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

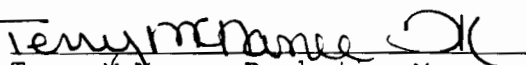
TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
263 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
263 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	76.8	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
264 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
264 A	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

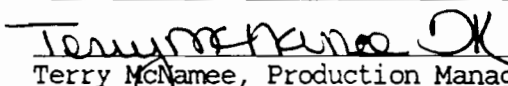
TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
264 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
264 A	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

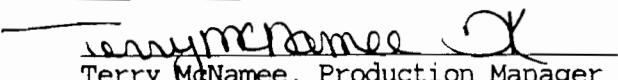
TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
264 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
264 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/22/97

PROJECT NAME: CLARKSTOWN LANDFILL

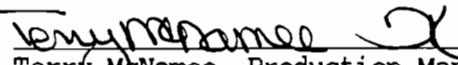
TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
265 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
265 A	1	77.1	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.7	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/22/97

PROJECT NAME: CLARKSTOWN LANDFILL

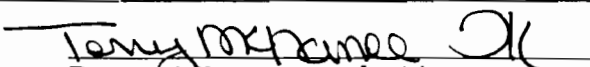
TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
265 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
265 B	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	77.3	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/22/97

PROJECT NAME: CLARKSTOWN LANDFILL

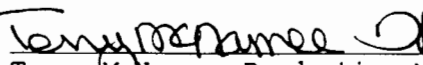
TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
266 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
266 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/22/97

PROJECT NAME: CLARKSTOWN LANDFILL

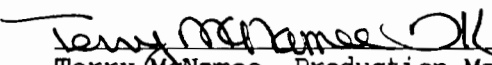
TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
266 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
266 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
267 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
267 A	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.5	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
267 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
267 B	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
268 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
268 A	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
268 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
268 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.6	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
269 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
269 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

cap us. *THM* FFX
JEB CUL
MJD

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

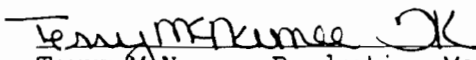
TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
269 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
269 B	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
270 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
270 A	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/30/97

PROJECT NAME: CLARKSTOWN LANDFILL

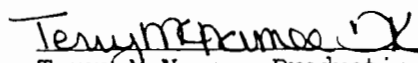
TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
270 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
270 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.3	FTB-SE
	4	77.7	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
271 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
271 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
271 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
271 B	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
272 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
272 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/01/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
272 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
272 B	1	77.5	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
273 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
273 A	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
273 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
273 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.6	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
274 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
274 A	1	77.3	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

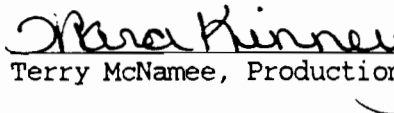
TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
274 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
274 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

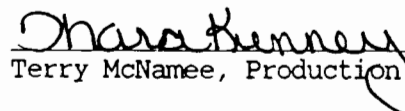
TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
275 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
275 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

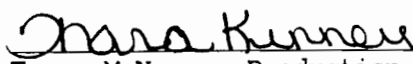
TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
275 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
275 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

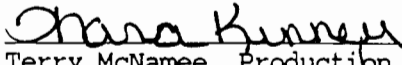
TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
276 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
276 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/14/97

PROJECT NAME: CLARKSTOWN LANDFILL

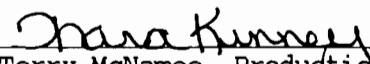
TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
276 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
276 B	1	77.5	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.6	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

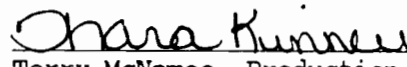
TIME: 10:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
277 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
277 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

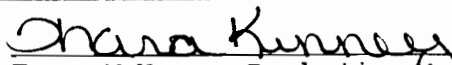
TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID <u>3ro</u>		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
277 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID <u>3rd</u>		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
277 B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
278 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
278 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
278 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
278 B	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
279 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
279 A	1	77.3	FTB-SE
	2	77.4	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Thara Kinney
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

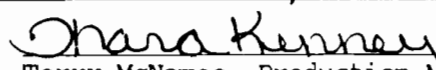
TIME: 3:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
279 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
279 B	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.7	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/15/97

PROJECT NAME: CLARKSTOWN LANDFILL

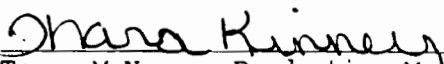
TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
280 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST.		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
280 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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MISSING
200 B

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/25/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
281 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
281 A	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/25/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
281 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
281 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
282 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
282 A	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
282 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
282 B	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
283 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
283 A	1	77.4	FTB-SE
	2	77.7	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

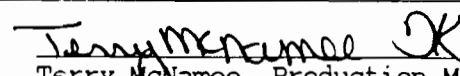
TIME: 5:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
283 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
283 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
284 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
284 A	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	76.8	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.0	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
284 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
284 B	1	77.6	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
285 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
285 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
285 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
285 B	1	77.7	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
286 A LONCITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
286 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/27/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
286 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
286 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.6	FTB-SE
	4	77.6	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

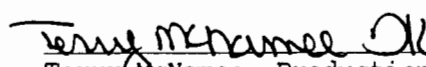
TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
287 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
287 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

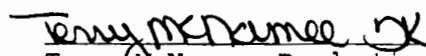
TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
287 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
287 B	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

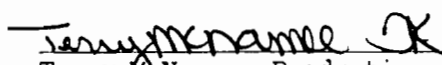
TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
288 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
288 A	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
288 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
288 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.6	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
289 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
289 A	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
289 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
289 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
290 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
290 A	1	77.5	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
290 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
290 B	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.7	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
291 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
291 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/28/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
291 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
291 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
292 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
292 A	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	76.9	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
292 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
292 B	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
293 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
293 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
293 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
293 B	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee 
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
294 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
294 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
294 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
294 B	1	77.1	FTB-SE
	2	77.4	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
295 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
295 A	1	77.0	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
295 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
295 B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
296 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
296 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.3	FTB-SE
	4	77.3	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/29/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
296 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
296 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 30-Jul-97

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1st		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
297 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
297A	1	76.9	FTB-SE
	2	77.5	FTB-SE
	3	77.5	FTB-SE
	4	77.4	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

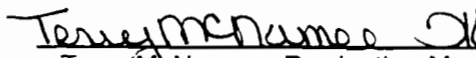
PROJECT NO.: 1818 DATE: 30-Jul-97
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
297B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
297B	1	77.9	FTB-SE
	2	77.7	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

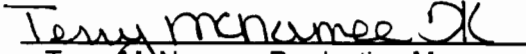
PROJECT NO.: 1818 DATE: 30-Jul-97
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
298A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
298A	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.8	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.4	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 30-Jul-97

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

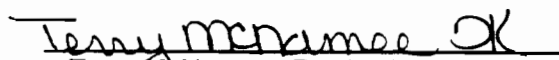
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
298B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
298B	1	78	FTB-SE
	2	77.5	FTB-SE
	3	77	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.4	


Terry McNamee, Production Manager

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 9/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
301 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
301 A	1	77.4	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 9/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
301 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
301 B	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 9/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
302 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
302 A	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 9/23/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
302 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
302 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1816

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
303 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
303 A	1	77.9	FTB-SE
	2	77.4	FTB-SE
	3	77.5	FTB-SE
	4	77.4	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.4	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
303 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
303 B	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
304 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
304 A	1	76.6	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
304 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
304 B	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

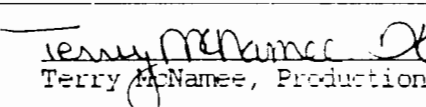
TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
305 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
305 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
305 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
305 B	1	77.6	FTB-SE
	2	77.1	FTB-SE
	3	76.6	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
306 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
306 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.4	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.3	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1618

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
306 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
306 B	1	77.3	FTB-SE
	2	77.5	FTB-SE
	3	78.1	FTB-SE
	4	77.6	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.5	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1616

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
307 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
307 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.2	FTB-SE
	4	77.7	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
307 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
307 B	1	77.6	FTB-SE
	2	77.4	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 12-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

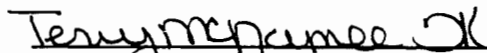
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
310A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
310A	1	76.8	FTB-SE
	2	77	FTB-SE
	3	77	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 12-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

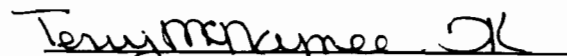
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
310B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
310B	1	77.2	FTB-SE
	2	77.2	FTB-SE
	3	77.5	FTB-SE
	4	77	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 12-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

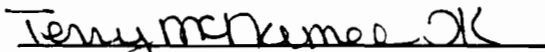
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
311A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
311A	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 12-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
311B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
311B	1	77.6	FTB-SE
	2	77	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: ~~28-Nov-06~~ 11/11/98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
312A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
312A	1	77.7	FTB-SE
	2	77.4	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77	FTB-SE
AVERAGE		77.3	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: ~~20-Nov-06~~ 10/11/98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
312B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
312B	1	77.8	FTB-SE
	2	77.3	FTB-SE
	3	77.5	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: ~~28 Nov 06~~ 4/11/98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
313A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
313A	1	77.2	FTB-SE
	2	77.1	FTB-SE
	3	77.6	FTB-SE
	4	77.6	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 28 Nov 06 11/11/08

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
313B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
313B	1	77.2	FTB-SE
	2	77.3	FTB-SE
	3	77	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 28-Nov-06 11/98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
314A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
314A	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.6	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 • DATE: 20-Nov-06 9/11/98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
314B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
314B	1	76.9	FTB-SE
	2	77.5	FTB-SE
	3	77.7	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 11-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
315A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
315A	1	77	FTB-SE
	2	77	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 28 Nov 06 4/11/98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
315B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
315B	1	77.3	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS

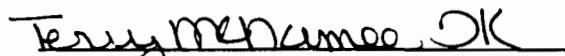
PROJECT NO.: 1818 DATE: 12-May-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
316A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
316A	1	76.9	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

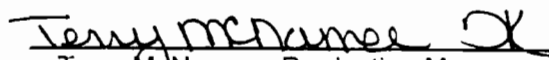
PROJECT NO.: 1818 DATE: 12-May-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
316B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
316B	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 13-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
317A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
317A	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 13-May-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
317B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
317B	1	77.1	FTB-SE
	2	77.9	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 13-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

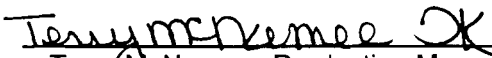
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
318A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
318A	1	77.2	FTB-SE
	2	77.4	FTB-SE
	3	77.4	FTB-SE
	4	77.3	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	


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GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
318B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
318B	1	76.9	FTB-SE
	2	77	FTB-SE
	3	77.3	FTB-SE
	4	77.7	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 13-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
319A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
319A	1	77.5	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.5	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.4	

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BONDED SEAM STRENGTH TEST RESULTS

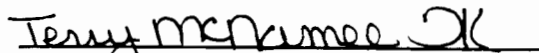
PROJECT NO.: 1818 DATE: 13-May-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
319B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
319B	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77	FTB-SE
	4	77.4	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 14-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

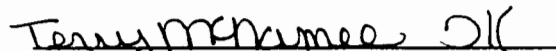
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
320A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
320A	1	76.9	FTB-SE
	2	76.9	FTB-SE
	3	77.5	FTB-SE
	4	77.2	FTB-SE
	5	77	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 14-May-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
320B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
320B	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.2	FTB-SE
	4	77	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

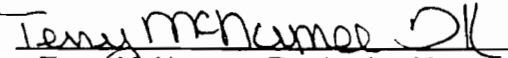
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321A	1	77.7	FTB-SE
	2	76.9	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

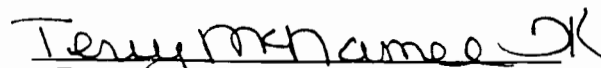
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321 B	1	77	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	77.5	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2 77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

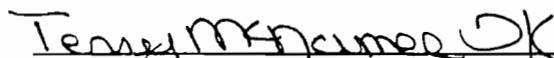
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 A	1	76.9	FTB-SE
	2	76.9	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

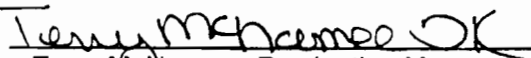
PROJECT NO.: 1818 DATE: 7-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 B	1	77.5	FTB-SE
	2	77	FTB-SE
	3	77.5	FTB-SE
	4	77.3	FTB-SE
	5	76.6	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

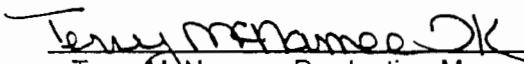
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 A	1	77.9	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.4	FTB-SE
	5	77	FTB-SE
AVERAGE		77.4	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 A	1	77.9	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.4	FTB-SE
	5	77	FTB-SE
AVERAGE		77.4	

*Reviewed
JMS
JMS*

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

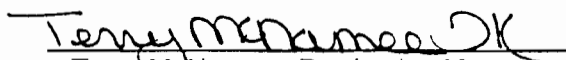
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 B	1	77.5	FTB-SE
	2	77.4	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	


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GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

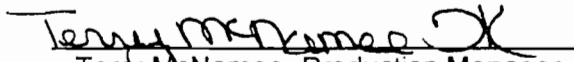
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 A	1	77	FTB-SE
	2	77.8	FTB-SE
	3	77.6	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 B	1	77.5	FTB-SE
	2	78	FTB-SE
	3	77.3	FTB-SE
	4	77	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 A	1	77	FTB-SE
	2	77	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.1	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

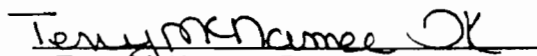
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 B	1	77.8	FTB-SE
	2	77.2	FTB-SE
	3	77	FTB-SE
	4	77.6	FTB-SE
	5	77	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

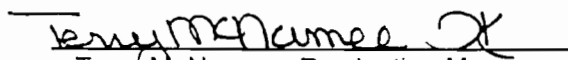
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 A	1	77	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

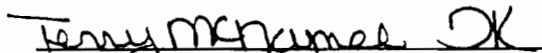
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 B	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

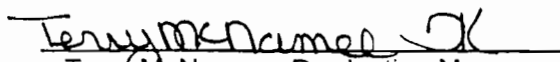
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 A	1	76.9	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 B	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.7	FTB-SE
	4	77	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

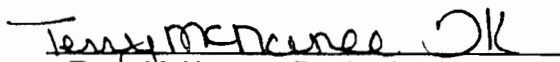
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 A	1	77.4	FTB-SE
	2	77	FTB-SE
	3	76.9	FTB-SE
	4	77	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 B	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.3	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 11-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 A	1	77.4	FTB-SE
	2	77.4	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 11-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

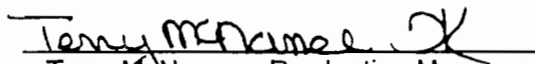
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 B	1	77	FTB-SE
	2	77	FTB-SE
	3	77.6	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 11-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

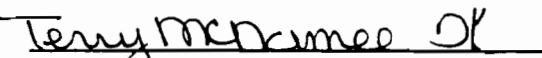
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
330A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
330A	1	77.6	FTB-SE
	2	77.4	FTB-SE
	3	77.2	FTB-SE
	4	77.6	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.5	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 11-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

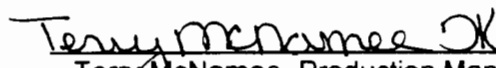
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
330B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
330B	1	77.1	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	76.9	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321A	1	77.7	FTB-SE
	2	76.9	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.2	

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2000

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Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
321 B	1	77	FTB-SE
	2	77.5	FTB-SE
	3	77.1	FTB-SE
	4	77.5	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2 77.2	

Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 A	1	76.9	FTB-SE
	2	76.9	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

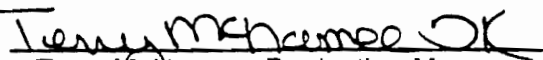
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
322 B	1	77.5	FTB-SE
	2	77	FTB-SE
	3	77.5	FTB-SE
	4	77.3	FTB-SE
	5	76.6	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

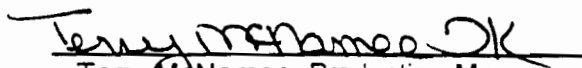
PROJECT NO.: 1818 DATE: 7-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 A	1	77.9	FTB-SE
	2	77.2	FTB-SE
	3	77.6	FTB-SE
	4	77.4	FTB-SE
	5	77	FTB-SE
AVERAGE		77.4	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

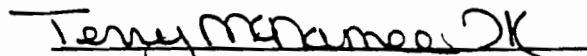
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
323 B	1	77.5	FTB-SE
	2	77.4	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 B	1	77	FTB-SE
	2	77.8	FTB-SE
	3	77.6	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 7-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

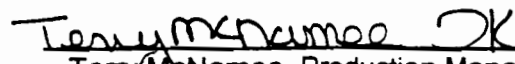
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
324 B	1	77.5	FTB-SE
	2	78	FTB-SE
	3	77.3	FTB-SE
	4	77	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 A	1	77	FTB-SE
	2	77	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
325 B	1	77.8	FTB-SE
	2	77.2	FTB-SE
	3	77	FTB-SE
	4	77.6	FTB-SE
	5	77	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

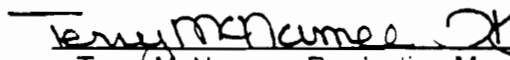
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 A	1	77	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
326 B	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

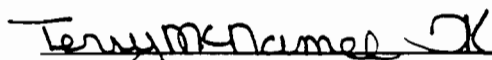
PROJECT NO.: 1818 DATE: 10-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 A	1	76.9	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
327 B	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.7	FTB-SE
	4	77	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.3	

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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

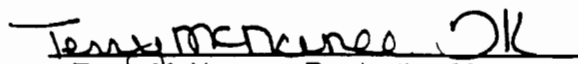
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 A	1	77.4	FTB-SE
	2	77	FTB-SE
	3	76.9	FTB-SE
	4	77	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

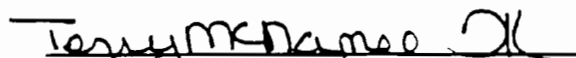
PROJECT NO.: 1818 DATE: 10-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
328 B	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.3	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 11-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

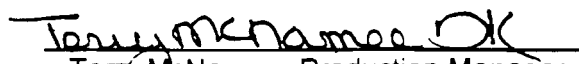
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 A	1	77.4	FTB-SE
	2	77.4	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

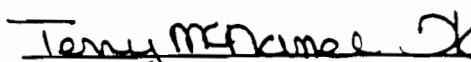
PROJECT NO.: 1818 DATE: 11-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
329 B	1	77	FTB-SE
	2	77	FTB-SE
	3	77.6	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	


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MISSING
370 - HX



BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
401 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
401 A	1	77.4	FTB-SE
	2	77.4	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
401 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
401 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee **OK**
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
402 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
402 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
402 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
402 B	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
403 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
403 A	1	77.5	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/04/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
403 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
403 B	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.3	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
404 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
404 A	1	77.3	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
404 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
404 B	1	77.5	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
405 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
405 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1816

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
405 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
405 B	1	77.2	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee *JK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1618

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

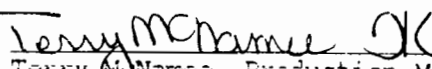
TIME: 12:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
406 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
406 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1616

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:40

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
406 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
406 B	1	77.2	FTB-SE
	2	77.3	FTB-SE
	3	77.4	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
407 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
407 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3.15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
407 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
407 B	1	77.5	FTB-SE
	2	77.3	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
408 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
408 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.6	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.. 1818

DATE: 8/05/97

PROJECT NAME: CLARKSTOWN LANDFILL

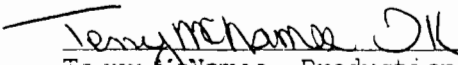
TIME: 4:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
408 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
408 B	1	77.1	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

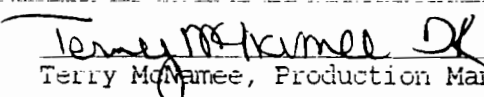
TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
409 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
409 A	1	77.2	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/06/97

PROJECT NAME: CLARKSTOWN LANDFILL

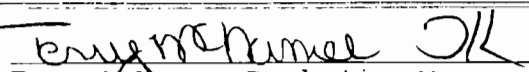
TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
409 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
409 B	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
410 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
410 A	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
410 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
410 B	1	77.1	FTB-SE
	2	77.0	FTB-SE
	3	77.5	FTB-SE
	4	77.5	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppf)	BREAK TYPE
411 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppf)	BREAK TYPE
411 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.2	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/18/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
411 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
411 B	1	77.4	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
412 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
412 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
412 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
412 B	1	77.1	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
413 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
413 A	1	77.3	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/19/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
413 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
413 B	1	77.2	FTB-SE
	2	77.0	FTB-SE
	3	77.0	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
414 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PP1)	BREAK TYPE
414 A	1	77.0	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
414 E LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
414 E	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.1	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 8/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
415 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
415 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.1	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/20/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
415 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
415 B	1	77.1	FTB-SE
	2	77.0	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee DK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 1:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
419 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
419 A	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	77.9	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1816

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
419 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
419 B	1	77.6	FTB-SE
	2	77.1	FTB-SE
	3	77.4	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1618

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
420 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
420 A	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.5	FTB-SE
	4	77.6	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1816

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

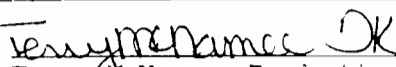
TIME: 3:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
420 E LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
420 E	1	77.4	FTB-SE
	2	77.3	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.9	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1816

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

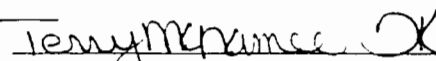
TIME: 4:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
421 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
421 A	1	77.3	FTB-SE
	2	77.0	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
421 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
421 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.3	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
422 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
422 A	1	77.4	FTB-SE
	2	77.7	FTB-SE
	3	77.6	FTB-SE
	4	77.2	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.4	

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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
422 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPI)	BREAK TYPE
422 B	1	77.5	FTB-SE
	2	77.1	FTB-SE
	3	77.3	FTB-SE
	4	77.1	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

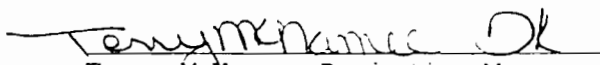
TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
423 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
423 A	1	77.6	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.0	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

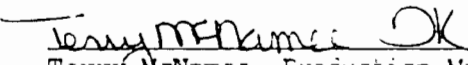
TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
423 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
423 B	1	77.7	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.4	


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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

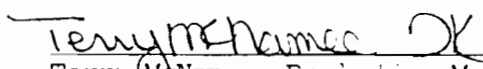
TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
424 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (PPi)	BREAK TYPE
424 A	1	77.0	FTB-SE
	2	77.1	FTB-SE
	3	77.3	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 11/12/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:30

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
424 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
424 B	1	77.4	FTB-SE
	2	77.6	FTB-SE
	3	77.7	FTB-SE
	4	77.9	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.5	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 8-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

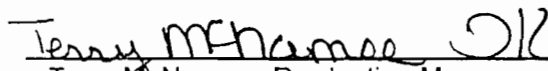
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
425 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
425 A	1	77.2	FTB-SE
	2	77.3	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 8-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED

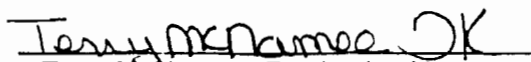
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
425 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
425 B	1	77	FTB-SE
	2	77.2	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 8-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

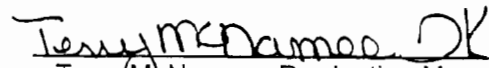
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
426 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
426 A	1	77.8	FTB-SE
	2	77.1	FTB-SE
	3	77	FTB-SE
	4	77.2	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 8-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED

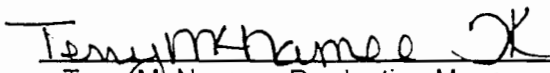
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
426 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
426 B	1	77	FTB-SE
	2	77.2	FTB-SE
	3	77.2	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 8-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

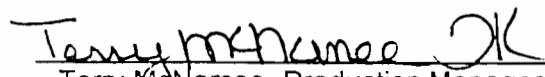
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
427 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
427 A	1	77.5	FTB-SE
	2	77.6	FTB-SE
	3	77.2	FTB-SE
	4	76.8	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 8-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

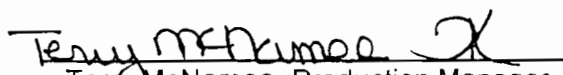
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
427 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
427 B	1	77.2	FTB-SE
	2	77.7	FTB-SE
	3	77.9	FTB-SE
	4	77.3	FTB-SE
	5	77.5	FTB-SE
AVERAGE		77.5	


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BONDED SEAM STRENGTH TEST RESULTS

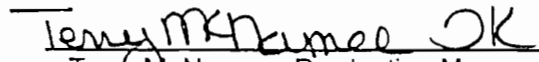
PROJECT NO.: 1818 DATE: 9-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
428 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
428 A	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.6	FTB-SE
	4	77	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 9-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED

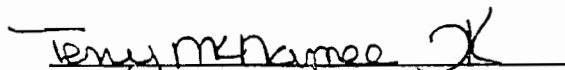
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
428 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
428 B	1	76.8	FTB-SE
	2	77.5	FTB-SE
	3	77.4	FTB-SE
	4	76.9	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 9-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED

SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
429 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
429 A	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77	FTB-SE
	4	77	FTB-SE
	5	77	FTB-SE
AVERAGE		77.1	

Terry McNamee JK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS

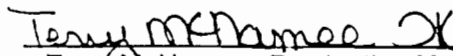
PROJECT NO.: 1818 DATE: 9-Jun-98
PROJECT NAME: CLARKSTOWN LANDFILL, NY
GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSSED
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
429 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
429 B	1	77.2	FTB-SE
	2	77.1	FTB-SE
	3	77.6	FTB-SE
	4	77.6	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.3	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

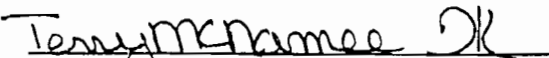
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 1ST		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
430 A	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
430 A	1	77	FTB-SE
	2	77.6	FTB-SE
	3	77.6	FTB-SE
	4	77	FTB-SE
	5	77	FTB-SE
AVERAGE		77.2	


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BONDED SEAM STRENGTH TEST RESULTS

PROJECT NO.: 1818 DATE: 10-Jun-98

PROJECT NAME: CLARKSTOWN LANDFILL, NY

GEOMEMBRANE TYPE: 40 MIL PVC EMBOSSED

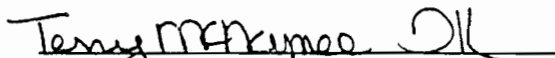
SEAM TYPE: DIELECTRIC FUSION - FACTORY

PEEL ADHESION - ASTM D 413

SEAM ID 3RD		SEAM PEEL ADHESION	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
430 B	1		FTB
AVERAGE			

BONDED SEAM (SHEAR) STRENGTH - ASTM D751

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
BLANKET NO.	SEAM NO.	PEAK LOAD (ppi)	BREAK TYPE
430 B	1	77.6	FTB-SE
	2	77.9	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	77	FTB-SE
AVERAGE		77.3	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1313

DATE: 6/08/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
129 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
129 A	1	76.8	FTB-SE
	2	77.5	FTB-SE
	3	77.2	FTB-SE
	4	77.0	FTB-SE
	5	76.7	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1313

DATE: 6/08/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
129 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
129 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	76.9	FTB-SE
	4	77.3	FTB-SE
	5	77.7	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/08/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
130 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
130 A	1	77.2	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
131 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
131 A	1	76.9	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 2:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
131 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
131 B	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.1	FTB-SE
	4	77.1	FTB-SE
	5	76.8	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 3:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
132 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
132 A	1	77.1	FTB-SE
	2	77.0	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
132 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
132 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.5	FTB-SE
	4	77.5	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 5:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
133 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
133 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.0	FTB-SE
	4	77.0	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
133 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
133 B	1	77.0	FTB-SE
	2	77.0	FTB-SE
	3	76.9	FTB-SE
	4	77.3	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.0	

Terry McNamee
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
134 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
134 A	1	77.2	FTB-SE
	2	77.6	FTB-SE
	3	77.5	FTB-SE
	4	77.2	FTB-SE
	5	76.7	FTB-SE
AVERAGE		77.2	

Terry McNamee *OK*
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
134 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
134 E	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.5	FTB-SE
	4	76.7	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.0	

Terry McNamee OK
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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
135 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
135 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.6	FTB-SE
	4	77.5	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.4	

Terry McNamee OK
Terry McNamee, Production Manager



ENVIRONMENTAL LINERS, INC.

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IN COLORADO (970) 565-9540 / 565-4221 / FAX (970) 565-8844

eliners@fone.net
www.fone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
135 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
135 B	1	77.0	FTB-SE
	2	76.9	FTB-SE
	3	77.0	FTB-SE
	4	77.4	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 10:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
136 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
136 A	1	77.2	FTB-SE
	2	77.5	FTB-SE
	3	77.6	FTB-SE
	4	77.0	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/09/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 11:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
136 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
136 B	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	76.9	FTB-SE
	4	76.9	FTB-SE
	5	77.4	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/10/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 7:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
137 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
137 A	1	77.2	FTB-SE
	2	77.2	FTB-SE
	3	77.5	FTB-SE
	4	77.7	FTB-SE
	5	77.0	FTB-SE
AVERAGE		77.3	

Terry McNamee JK
Terry McNamee, Production Manager



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www.fone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/10/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 8:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
137 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
137 B	1	77.0	FTB-SE
	2	77.6	FTB-SE
	3	77.4	FTB-SE
	4	77.4	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.3	

Terry McNamee JK
Terry McNamee, Production Manager



ENVIRONMENTAL LINERS, INC.

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IN COLORADO (970) 565-9540 / 565-4221 / FAX (970) 565-8844

eliners@fone.net
www.fone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083).

PROJECT NO.: 1818

DATE: 6/10/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
138 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
138 A	1	77.1	FTB-SE
	2	77.1	FTB-SE
	3	77.7	FTB-SE
	4	77.0	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/10/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 9:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
138 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
136 B	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.0	FTB-SE
	4	77.6	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee OK
Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

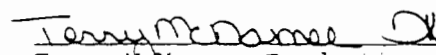
TIME: 6:00

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
139 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
139 A	1	77.3	FTB-SE
	2	77.1	FTB-SE
	3	77.2	FTB-SE
	4	77.2	FTB-SE
	5	77.6	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



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BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/11/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
139 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
139 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.6	FTB-SE
	4	77.1	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.2	

Terry McNamee *OK*
Terry McNamee, Production Manager



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eliners@tong.net
www.tong.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 4:30

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 1ST		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
152 A LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 1ST		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
152 A	1	77.0	FTB-SE
	2	77.2	FTB-SE
	3	77.1	FTB-SE
	4	77.4	FTB-SE
	5	77.1	FTB-SE
AVERAGE		77.1	

Terry McNamee
Terry McNamee, Production Manager



ENVIRONMENTAL LINERS, INC.

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eliners@elona.net
www.elona.net/liners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 6/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

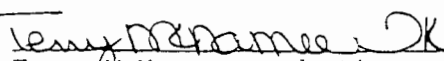
TIME: 5:15

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
152 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (psi)	BREAK TYPE
152 B	1	77.4	FTB-SE
	2	77.1	FTB-SE
	3	77.0	FTB-SE
	4	77.3	FTB-SE
	5	77.3	FTB-SE
AVERAGE		77.2	


Terry McNamee, Production Manager



ENVIRONMENTAL LINERS, INC.

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www.fone.net/eliners

BONDED SEAM STRENGTH TEST RESULTS (ASTM D3083)

PROJECT NO.: 1818

DATE: 7/17/97

PROJECT NAME: CLARKSTOWN LANDFILL

TIME: 6:45

GEOMEMBRANE TYPE: 40 MIL PVC SMOOTH

SEAM TYPE: DIELECTRIC FUSION - FACTORY

SEAM ID 3RD		SEAM PEEL ADHESION	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
179 B LONGITUDINAL	1		FTB
AVERAGE			

SEAM ID 3RD		BONDED SEAM STRENGTH (SHEAR)	
SAMPLE NO.	SEAM NO.	LOAD (ppi)	BREAK TYPE
179 B	1	77.0	FTB-SE
	2	77.4	FTB-SE
	3	77.4	FTB-SE
	4	77.2	FTB-SE
	5	77.2	FTB-SE
AVERAGE		77.2	

Terry McNamee DK
Terry McNamee, Production Manager

APPENDIX E4:

Geotextile Certified Test Reports

Nonwoven Waste Related Geotextiles



DISTRIBUTED BY:
A.H. HARRIS & SONS, INC.
65 SICKER ROAD
LATHAM, ALBANY, N.Y. 12110



Amoco Fabrics and Fibers Company

AMOCO WASTE RELATED GEOTEXTILES

MINIMUM PHYSICAL PROPERTIES (Minimum Average Roll Values)

Property	Test Method	Units	4504	4506	4508	4510	4512	4516
Unit Weight	ASTM D-3776	Oz./yd.	4.0	6.0	8.0	10.0	12.0	16.0
Grab Tensile	ASTM D-4632	lbs.	95	150	200	235	275	350
Grab Elongation	ASTM D-4632	%	50	50	50	50	50	50
Mullen Burst	ASTM D-3786	psi	225	350	450	550	650	750
Puncture	ASTM D-4833	lbs.	55	90	130	165	185	220
Trapezoid Tear	ASTM D-4533	lbs.	35	65	80	95	115	130
Apparent Opening Size	ASTM D-4751	US Sieve Number	70	70	100	100	100	100
Permittivity	ASTM D-4491	gal./min./ft. sec.	100 2.0	90 1.7	80 1.5	70 1.1	60 0.9	50 0.7
Permeability	ASTM D-4491	cm/sec	.2	.2	.2	.2	.2	.2
Thickness	ASTM D-1777	mils	40	65	90	110	130	175
U.V. Resistance	ASTM D-4355	%	70	70	70	70	70	70

1. Fabric conditioned per ASTM D-4355 2. Percent of minimum grab tensile after conditioning.

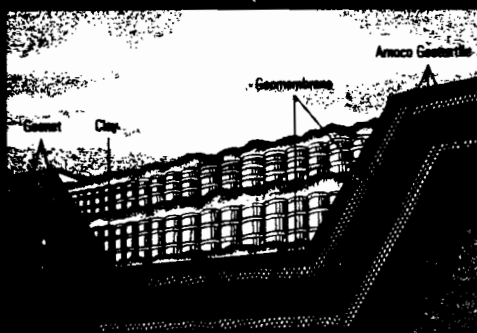
TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Units	4504	4506	4508	4510	4512	4516
Grab Tensile	ASTM D-4632	lbs.	130/115	225/200	275/270	315/310	410/370	510/470
Grab Elongation	ASTM D-4632	%	75	65	65	65	65	65
Mullen Burst	ASTM D-3786	psi	285	410	575	650	825	920
Puncture	ASTM D-4833	lbs.	75	120	170	190	210	270
Trapezoid Tear	ASTM D-4533	lbs.	60/50	100/80	140/120	160/140	185/155	220/180
Apparent Opening Size	ASTM D-4751	US Sieve Number	70/120	70/140	100/200	100+	100+	100+
Permittivity	ASTM D-4491	gal./min./ft. sec.	150 3.1	110 2.0	100 1.8	80 1.5	70 1.3	60 1.0
Permeability	ASTM D-4491	cm/sec	.35	.31	.27	.26	.25	.23
Thickness	ASTM D-1777	mils	50	75	115	130	150	195

PACKAGING

Dimensions		4504	4506	4508	4510	4512	4516
Roll Width	ft.	15	15	15	15	15	15
Roll Length	ft.	1200	900	600	600	450	300
Gross Weight	lbs.	500	550	500	600	550	500
Area	sq. yds.	2000	1500	1000	1000	750	500

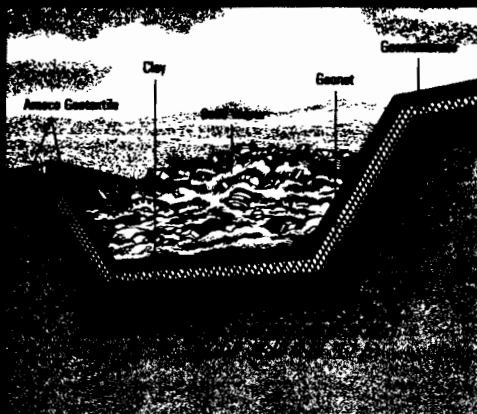
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HAZARDOUS WASTE LANDFILLS—Amoco Geotextiles provide a good working surface for Geomembrane installation.



MINING—"HEAP LEACHING"—Amoco Geotextiles provide protection against puncture and abrasion to the geomembrane.



SANITARY LANDFILLS—The use of Amoco Geotextiles provides separation and filtration to protect the leachate collection system.

Quality Geotextiles For:

1. Higher abrasion and puncture resistance to increase liner protection. Use fabric style 4510, 4512, or 4516.
2. A separation/filtration system to reduce clogging of filtering medium. Use fabric style 4504 or 4506.
3. Sufficient venting/transmissivity to provide lateral transmission of liquids and gases. Use fabric style 4508, 4510 or 4512.
4. A higher frictional surface to reduce liner slippage. Use any Amoco waste related geotextile.
5. A clean working surface to insure efficient seaming. Use fabric style 4504, 4506 or 4508.

POLYPROPYLENE—

One of the most INERT textile polymers available

Polypropylene is obtained from propylene gas, a by-product of oil refining. It is resistant to commonly encountered soil chemicals, mildew, and insects and is non-biodegradable. In fact, polypropylene is the polymer of choice for such commonly used products as synthetic grass for athletic fields, outdoor carpeting, battery cases, bleach bottles, antifreeze jugs, washing machine agitators, and thousands of other commonly used items that are routinely exposed to a broad range of chemical and environmental conditions. Polypropylene is stable within a pH range of 2 to 13 making it one of the most stable polymers available for fabrics. When treated against ultraviolet exposure (as all Amoco Civil Engineering Fabrics are) polypropylene is stable to UV degradation.



December 10, 1996

RECEIVED DEC 16 1996

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 102588
Shipper # 65173

We hereby certify that Amoco Fabrics and Fibers Style 4506 shipped to you on December 9, 1996 on AFFC order # 6-52-p2-110800 is a 100% polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew, and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13 making it one of the most stable polymers available for geotextiles today. The Amoco 4506 conforms to the physical property values listed below:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight 376	ASTM-D-5261	6 oz/yd ²	200 g/m ²
Grab Tensile ✓	ASTM-D-4632	150 lbs	670 N
Grab Elongation ✓	ASTM-D-4632	50 %	50 %
Mullen Burst ✓	ASTM-D-3786	350 psi	2410 kPa
Puncture ✓	ASTM-D-4833	90 lbs	400 N
Trapezoidal Tear ✓	ASTM-D-4533	65 lbs	290 N
UV Resistance ✓	ASTM-D-4355	70 % at 500 hrs	70 % at 500 hrs
AOS ✓	ASTM-D-4751	70+ sieve	0.212+ mm
Permittivity ✓	ASTM-D-4491	90 gal/min/ft ²	61 L/sec/m ²
Coefficient of Permeability	ASTM-D-4491	0.20 cm/sec	0.20 cm/sec
Thickness 1777	ASTM-D-5199	65 mils	1.65 mm

Required
60
50
210
40
70
75
1
65

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

B. Boutwell
Bernie J. Boutwell
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mom

Copies: J Beatty
PM
CLDL



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

December 10, 1996

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NJ 10994

Re: Purchase Order # 6-52-p2-110800
Shipping # 65173, dated December 9, 1996

Revised Order
Piece Weight Permittivity
Number Style Yd.2 Oz. Thickness Tensile Elong Burst Puncture Trap Tear A.O.S. Gal/Min/Ft2

2009765	4506	7.37	73	210	70	432	108	90	100+	110
2009766	4506	7.37	73	210	70	432	108	90	100+	110
2009767	4506	7.37	73	210	70	432	108	90	100+	110
2009772	4506	7.13	68	187	61	440	133	80	100+	110
2009866	4506	7.48	71	203	71	426	143	96	100+	110
2009867	4506	7.48	71	203	71	426	143	96	100+	110
2009909	4506	7.72	72	204	72	432	130	94	100+	110
2009910	4506	7.72	72	204	72	432	130	94	100+	110
2009911	4506	7.72	72	204	72	432	130	94	100+	110
2009941	4506	7.78	72	201	67	461	149	87	100+	110
2009942	4506	7.78	72	201	67	461	149	87	100+	110
2009993	4506	7.64	71	205	68	400	135	85	100+	110
2010361	4506	7.53	71	225	67	488	146	120	100+	110
2010381	4506	7.34	72	213	66	432	141	113	100+	110
2010382	4506	7.34	72	213	66	432	141	113	100+	110
2010383	4506	7.34	72	213	66	432	141	113	100+	110
2010449	4506	7.64	73	203	65	354	137	104	100+	110
2010450	4506	7.64	73	203	65	354	137	104	100+	110
2010451	4506	7.64	73	203	65	354	137	104	100+	110
2010489	4506	7.70	74	199	67	448	140	100	100+	110
2010490	4506	7.70	74	199	67	448	140	100	100+	110
2010491	4506	7.70	74	199	67	448	140	100	100+	110
2010567	4506	7.91	74	202	72	359	178	105	100+	110
2010568	4506	7.91	74	202	72	359	178	105	100+	110
2010569	4506	7.91	74	202	72	359	178	105	100+	110
2010639	4506	7.35	71	204	54	396	129	99	100+	110
2010640	4506	7.35	71	204	54	396	129	99	100+	110
2010641	4506	7.35	71	204	54	396	129	99	100+	110
2010668	4506	7.22	72	212	63	399	157	96	100+	110

THIS DOCUMENT CONTAINS
INFORMATION CLAIMED AS
TRADE SECRET-CONFIDENTIAL
BY AMOCO FABRICS COMPANY



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

December 10, 1996

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NJ 10994

Re: Purchase Order # 6-52-p2-110800
Shipping # 65173, dated December 9, 1996

Piece		Weight		Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Permittivity
Number	Style	Yd.	2 Oz.								Gal/Min/Ft2
2010670	4506	7.22	72	212	63	399	157	96	100+	110	
2010672	4506	7.22	72	212	63	399	157	96	100+	110	
2010716	4506	7.59	74	218	64	436	155	110	100+	110	
2010717	4506	7.59	74	218	64	436	155	110	100+	110	

THIS DOCUMENT CONTAINS
INFORMATION CLAIMED AS
TRADE SECRET-CONFIDENTIAL
BY AMOCO FABRICS COMPANY

PROGRAM: DE90129C
DATE: 12/09/96
TIME: 09:30

ANDCO FABRICS AND FIBERS COMPANY
PACKING LIST
HAZLEHURST MILLS DIVISION
P.O. BOX-836 PHONE 912-375-2561
HAZLEHURST GA. 31539

PAGE 1

SHIP TO: ODGEN REMEDIATION CO INC
166 RT 303
WEST NYACK NY

CUST NO: 09971
10994

GROSS WEIGHT: 22275
VIA: 0080011472-JERRY DICKS TRUCKING CO
TRAILER NO: F825016
E/L NO: 102588
DELIVERY NOTE: 0080065173
SHIP DATE: 96/12/09

WOLD TO: ODGEN REMEDIATION CO INC
166 RT 303
WEST NYACK NY

CUST NO: 09971
10994

ITEM #	PCCT	STYLE	WIDTH	GRD	COLOR	FB	BATCH	UNITS	F O NUMBER	YD	YD2	AFFC MATERIAL	LN SUI
10-2009765	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009766	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009767	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009772	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009866	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009867	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009909	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009910	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009911	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009941	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009942	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2009993	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010361	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010382	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010383	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010449	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010450	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010451	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010489	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010490	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010491	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010567	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010568	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010569	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010639	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010640	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010641	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010648	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010670	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010672	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010716	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
10-2010717	00.00	4506	180.0000	10	0007	00		300	6-52-P2-110800			42678	010-00
TOTALS								9,900		49,500	YD2		

33 ITEMS *

33 ITEMS

YD * 49,500 YD2 *

102588

Carrier

Carrier's No.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at HAZLEHURST, GA. 12-9 19 96 from AMOCO FABRICS AND FIBERS COMPANY

Shipment hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment; and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to COCCEN REMEDIATION CO., INC.

(Mail or street address of consignee — For purposes of notification only)

Destination 100 RT 303 State County

Delivery Address ★ 605TH AVE SW, N.Y. 10004

(* To be filled in only when shipper desires and governing tariffs provide for delivery thereat)

Route

Delivering Carrier

Car or Vehicle Initials

NO. PAY KEY 622

[illegible]

AMOCO FABRICS AND FIBERS COMPANY

Shipper. Per

Agent. Per

Permanent post-office address of shipper

ATLANTA, GA.

CORPORATE ACCOUNTING : 2nd Cap : Corp' s : 2nd Cap : Corporate : 4th Cap : Shipping



May 5, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 03099
Shipper # 138438

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on May 2, 1997, on AFFC order # 652p2110800 meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music

William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mom

*CPUs PHM
mjd
JEB*

RECEIVED MAY 13 1997

RECEIVED MAY 13 1997



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 5, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 652p2110800
Shipping # 138438, dated May 2, 1997

Piece	Weight									Permeability
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap	Tear	A.O.S. Gal/Mic/Ft2
2009468	4506	7.45	68	170	73	385	109	81	100+	110
2009469	4506	7.45	68	170	73	385	109	81	100+	110
2009470	4506	7.45	68	170	73	385	109	81	100+	110
2009495	4506	7.35	73	198	65	390	133	88	100+	110
2009496	4506	7.35	73	198	65	390	133	88	100+	110
2009497	4506	7.35	73	198	65	390	133	88	100+	110
2009519	4506	7.72	71	206	76	392	139	85	100+	110
2009700	4506	6.98	69	178	64	400	112	83	100+	110
2009701	4506	6.98	69	178	64	400	112	83	100+	110
2009702	4506	6.98	69	178	64	400	112	83	100+	110
2009771	4506	7.13	68	187	61	440	133	80	100+	110
2009773	4506	7.13	68	187	61	440	133	80	100+	110
2009805	4506	7.28	71	197	66	414	160	100	100+	110
2009806	4506	7.28	71	197	66	414	160	100	100+	110
2009829	4506	7.23	74	192	70	395	137	92	100+	110
2009845	4506	7.49	74	192	66	420	132	87	100+	110
2009955	4506	7.62	69	202	76	440	132	90	100+	110
2009956	4506	7.62	69	202	76	440	132	90	100+	110
2009957	4506	7.62	69	202	76	440	132	90	100+	110
2009994	4506	7.64	71	205	68	400	135	85	100+	110
2009995	4506	7.64	71	205	68	400	135	85	100+	110
2010016	4506	7.45	72	221	73	482	136	101	100+	110
2010098	4506	7.60	73	189	68	426	118	109	100+	110
2010116	4506	6.94	69	217	62	460	147	114	100+	110
2063535	4506	7.72	98	191	86	434	160	86	100+	110
2063587	4506	7.17	94	171	83	420	155	91	100+	110
2063671	4506	7.72	95	187	97	484	139	95	100+	110
2063709	4506	6.82	86	177	91	384	139	95	100+	110
2063720	4506	6.82	86	177	91	384	139	95	100+	110

THIS DOCUMENT CONTAINS
INFORMATION CLAIMED AS
TRADE SECRET-CONFIDENTIAL
BY AMOCO FABRICS COMPANY



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 5, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 652p2110800
Shipping # 138438, dated May 2, 1997

Piece		Weight		↓ Thickness							Permittivity	
Number	Style	Yd.	2 Oz.		Tensile	Elong	Burst	Puncture	Trap	Tear	A.O.S.	Gal/M.in/Ft-2
2063743	4506	7.93		99	181	99	468	160		105	100+	110
2063745	4506	7.93		99	181	99	468	160		105	100+	110
2063763	4506	7.93		99	181	99	468	160		105	100+	110
2063777	4506	7.79		101	198	97	490	164		96	100+	110
2063789	4506	7.79		101	198	97	490	164		96	100+	110
2065781	4506	7.17		96	187	98	424	124		81	100+	110
2065784	4506	7.17		96	187	98	424	124		81	100+	110
2090890	4506	7.42		103	203	96	374	121		83	100+	110
2091086	4506	7.60		95	189	79	494	142		111	100+	110

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TRADE SECRET-CONFIDENTIAL
BY AMOCO FABRICS COMPANY



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 5, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 03086
Shipper # 142267

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on May 2, 1997, on AFFC order # 652p2110800 meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mom

RECEIVED MAY 13 1997

capus: mjd
JEB
CCV *CLD*



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 5, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 652p2110800
Shipping # 142267, dated May 2, 1997

Piece		Weight		Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	Permittivity	
Number	Style	Yd.	2 Oz.							A.O.S.	Gal/Min/Ft ²
2090624	4506	7.38	101	188	91	395	123	98	100+	110	
2090663	4506	7.75	116	196	100	517	136	84	100+	110	
2090664	4506	7.75	116	196	100	517	136	84	100+	110	
2090686	4506	7.75	116	196	100	517	136	84	100+	110	
2090723	4506	8.09	121	182	94	467	137	104	100+	110	
2090724	4506	8.09	121	182	94	467	137	104	100+	110	
2090738	4506	8.09	121	182	94	467	137	104	100+	110	
2090771	4506	7.26	106	189	102	516	143	87	100+	110	
2090813	4506	7.26	106	189	102	516	143	87	100+	110	
2090823	4506	7.26	106	189	102	516	143	87	100+	110	
2090857	4506	7.93	116	201	94	494	137	108	100+	110	
2091715	4506	8.25	111	194	83	508	151	97	100+	110	
2091768	4506	8.25	111	194	83	508	151	97	100+	110	
2091789	4506	8.25	111	194	83	508	151	97	100+	110	
2091867	4506	8.94	115	188	81	479	135	111	100+	110	
2091979	4506	7.90	109	183	89	533	128	101	100+	110	
2092424	4506	8.28	113	264	95	488	151	94	100+	110	
2092454	4506	8.28	113	264	95	488	151	94	100+	110	
2092461	4506	8.28	113	264	95	488	151	94	100+	110	
2092523	4506	7.80	98	188	90	446	146	96	100+	110	
2092545	4506	7.80	98	188	90	446	146	96	100+	110	
2092553	4506	7.80	98	188	90	446	146	96	100+	110	
2092594	4506	7.65	87	170	91	448	142	83	100+	110	
2092616	4506	7.65	87	170	91	448	142	83	100+	110	
2092698	4506	7.82	100	169	97	395	139	93	100+	110	
2092920	4506	9.60	115	194	94	531	137	100	100+	110	
2093096	4506	8.55	112	212	96	465	157	87	100+	110	

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INFORMATION CLAIMED AS
TRADE SECRET-CONFIDENTIAL
BY AMOCO FABRICS COMPANY



May 7, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 03175
Shipper # 145577

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on May 6, 1997, on AFFC order # 652p2110800 meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a ph range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	85 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

Ronnie Rewis
Quality Assurance Supervisor
Amoco Fabrics and Fibers Company

mom

RECEIVED MAY 10 1997



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 7, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 652p2110800
Shipping # 145577, dated May 6, 1997

Piece	Weight									Permeability
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal/Min/Ft2
2009520	4506	7.72	71	206	76	392	139	85	100+	110
2009521	4506	7.72	71	206	76	392	139	85	100+	110
2009608	4506	7.43	73	197	70	393	125	98	100+	110
2009639	4506	7.60	72	207	67	416	136	94	100+	110
2009677	4506	7.37	68	201	73	390	119	83	100+	110
2010064	4506	7.36	72	203	68	445	131	105	100+	110
2063424	4506	7.24	92	178	92	448	141	93	100+	110
2063425	4506	7.24	92	178	92	448	141	93	100+	110
2063426	4506	7.24	92	178	92	448	141	93	100+	110
2063446	4506	6.51	78	162	97	404	117	77	100+	110
2063461	4506	6.51	78	162	97	404	117	77	100+	110
2063469	4506	6.51	78	162	97	404	117	77	100+	110
2063494	4506	8.03	103	207	92	512	136	89	100+	110
2063517	4506	8.03	103	207	92	512	136	89	100+	110
2063536	4506	7.72	98	191	86	434	160	86	100+	110
2063560	4506	7.17	94	171	83	420	155	91	100+	110
2063562	4506	7.17	94	171	83	420	155	91	100+	110
2063614	4506	7.68	99	190	88	507	146	84	100+	110
2063615	4506	7.68	99	190	88	507	146	84	100+	110
2063647	4506	7.68	99	190	88	507	146	84	100+	110
2063668	4506	7.72	95	187	97	484	139	96	100+	110
2063676	4506	7.72	95	187	97	484	139	96	100+	110
2063834	4506	7.79	101	198	97	490	164	96	100+	110
2063846	4506	7.57	100	188	99	474	151	104	100+	110
2090860	4506	7.93	116	201	94	494	137	108	100+	110
2090892	4506	7.42	103	203	96	374	121	83	100+	110
2090893	4506	7.42	103	203	96	374	121	83	100+	110

THIS DOCUMENT CONTAINS
INFORMATION CLAIMED AS
TRADE SECRET-CONFIDENTIAL
BY AMOCO FABRICS COMPANY



May 12, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 03277
Shipper # 146284

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on May 9, 1997, on AFFC order # 92446 meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a ph range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	.55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

Ronnie Lewis
Quality Assurance Supervisor
Amoco Fabrics and Fibers Company

mom

RECEIVED MAY 16 1997



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 12, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 92446
Shipping # 146284, dated May 9, 1997

Piece		Weight									Permittivity
Number	Style	Yd. 2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.C.S.	Gal/Min/Ft2	
2009298	4506	7.46	77	198	79	412	145	98	100+	110	
2009299	4506	7.46	77	198	79	412	145	98	100+	110	
2009327	4506	7.71	74	221	73	448	139	94	100+	110	
2009328	4506	7.71	74	221	73	448	139	94	100+	110	
2009329	4506	7.71	74	221	73	448	139	94	100+	110	
2009360	4506	6.95	66	191	71	380	126	73	100+	110	
2009361	4506	6.95	66	191	71	380	126	73	100+	110	
2009401	4506	7.03	70	186	67	366	129	82	100+	110	
2009402	4506	7.03	70	186	67	366	129	82	100+	110	
2009436	4506	7.63	77	212	77	403	124	90	100+	110	
2009437	4506	7.63	77	212	77	403	124	90	100+	110	
2009553	4506	7.60	76	207	72	390	151	88	100+	110	
2009554	4506	7.60	76	207	72	390	151	88	100+	110	
2009555	4506	7.60	76	207	72	390	151	88	100+	110	
2009570	4506	7.53	70	200	77	404	138	91	100+	110	
2009571	4506	7.53	70	200	77	404	138	91	100+	110	
2009572	4506	7.53	70	200	77	404	138	91	100+	110	
2009638	4506	7.60	72	207	67	416	136	94	100+	110	
2009640	4506	7.60	72	207	67	416	136	94	100+	110	
2009654	4506	7.45	69	207	71	366	143	90	100+	110	
2009655	4506	7.45	69	207	71	366	143	90	100+	110	
2009656	4506	7.45	69	207	71	366	143	90	100+	110	
2009673	4506	7.37	68	201	73	390	118	83	100+	110	
2009674	4506	7.37	68	201	73	390	118	83	100+	110	
2009725	4506	7.41	75	210	67	424	137	84	100+	110	
2009726	4506	7.41	75	210	67	424	137	84	100+	110	
2009727	4506	7.41	75	210	67	424	137	84	100+	110	
2009760	4506	7.42	73	202	69	382	147	84	100+	110	
2009761	4506	7.42	73	202	69	382	147	84	100+	110	

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BY AMOCO FABRICS COMPANY



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

May 12, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 92446
Shipping # 146284, dated May 9, 1997

Piece	Weight									Permittivity
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal/Min./Ft2
2009762	4506	7.42	73	202	69	382	147	84	100+	110

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BY AMOCO FABRICS COMPANY



July 21, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 05444
Shipper # 187211

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on July 17, 1997, on AFFC order # 652p2110800, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

RECEIVED AUG 0 1 1997

mom

Copies: PHM
JEB
MJD
TAP
CIDL



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

July 21, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 652p2110800
Shipping # 187211, dated July 17, 1997

Piece	Weight									Permittivity
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal/Min/Ft2
1532003	4506	7.34	90	198	76	447	162	116	100+	110
1741728	4506	7.63	125	213	72	451	160	110	100+	110
1741894	4506	6.79	107	185	78	503	141	104	100+	110
1742103	4506	7.12	111	185	79	410	131	86	100+	110
2008932	4506	7.31	75	215	62	371	152	83	100+	110
2066291	4506	7.39	96	192	100	402	130	91	100+	110
2066300	4506	7.42	100	194	98	391	128	89	100+	110
2085958	4506	6.85	86	168	101	410	142	73	100+	110
2086001	4506	7.22	93	187	100	456	132	88	100+	110
2086033	4506	7.07	90	176	97	466	152	91	100+	110
2086052	4506	6.86	85	181	97	418	140	83	100+	110
2086194	4506	7.53	102	163	92	452	153	66	100+	110
2086195	4506	7.53	102	163	92	451	153	68	100+	110
2086245	4506	7.68	106	196	91	466	140	88	100+	110
2086273	4506	7.52	109	176	89	445	148	87	100+	110
2086321	4506	7.52	109	176	89	445	148	87	100+	110
2086340	4506	8.34	106	182	87	445	133	85	100+	110
2086915	4506	7.89	98	189	90	464	154	98	100+	110
2086920	4506	7.89	98	189	90	484	154	98	100+	110
2086673	4506	7.80	104	199	98	501	146	86	100+	110
2086975	4506	7.80	104	199	98	501	146	86	100+	110
2086553	4506	7.80	104	199	98	501	146	86	100+	110
2177999	4506	7.20	102	161	95	451	132	96	100+	110
2178039	4506	7.20	102	161	95	451	132	96	100+	110

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BY AMOCO FABRICS COMPANY



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

August 18, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 652p2110800
Shipping # 205256, dated August 16, 1997

Piece	Weight								Permittivity	
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal/Min/Ft2
2065512	4506	7.00	89	162	97	434	141	79	100+	110
2065603	4506	7.25	93	191	103	436	135	84	100+	110
2065637	4506	7.80	100	185	91	475	150	96	100+	110
2066025	4506	7.47	94	189	97	406	103	102	100+	110
2066039	4506	7.32	88	190	92	383	138	94	100+	110
2066427	4506	7.16	94	205	104	410	136	103	100+	110
2066429	4506	7.16	94	205	104	410	136	103	100+	110
2066435	4506	7.16	94	205	104	410	136	103	100+	110
2066457	4506	7.18	94	182	98	406	149	83	100+	110
2066482	4506	7.11	86	191	97	398	129	74	100+	110
2066589	4506	7.25	92	194	103	448	141	90	100+	110
2066598	4506	7.25	92	194	103	448	141	90	100+	110
2066613	4506	7.25	92	194	103	448	141	90	100+	110
2066661	4506	7.58	98	188	88	486	140	97	100+	110
2066672	4506	7.58	98	188	88	486	140	97	100+	110
2066690	4506	7.25	87	181	89	403	136	96	100+	110
2066752	4506	7.59	96	195	99	456	173	88	100+	110
2066804	4506	7.21	92	169	96	359	102	96	100+	110
2066923	4506	7.64	102	175	95	408	125	91	100+	110
2091193	4506	7.00	86	188	84	392	130	95	100+	110
2091235	4506	7.17	89	178	78	436	120	88	100+	110
2091237	4506	7.17	89	178	78	436	120	88	100+	110
2091285	4506	7.59	97	192	82	417	141	98	100+	110
2091287	4506	7.59	97	192	82	417	141	98	100+	110
2091346	4506	7.86	96	223	85	395	157	106	100+	110
2092689	4506	7.82	100	169	97	395	139	93	100+	110
2092733	4506	7.75	92	164	97	403	140	85	100+	110

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BY AMOCO FABRICS COMPANY



September 15, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

RECEIVED SEP 13 1997

B L = 07200
Shipper # 220055

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on September 13, 1997, on AFFC order # 652P2110800, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a ph range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	9 gal min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	730 cm/sec	0.30 cm sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mom

mb
CL
POMC



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

September 15, 1997

Ogden Remediation Company Incorporated
166 Route 301
West Nyack, NY 10994

Re: Purchase Order # 652P2110800

Shipping # 220055, dated September 13, 1997

Piece		Weight									Permeability	
Number	Style	Yd	2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap	Tear	A.O.S.	Gal/Min/Ft2
2085643	4516	7.53	87	166	103	424	135	92	100+	111		
9467862	4516	9.14	146	228	101	483	168	101	100+	111		
9467863	4516	9.14	146	228	101	488	168	102	110+	111		
9467864	4516	9.14	146	228	101	468	168	102	100+	111		
9467875	4516	7.66	137	157	101	455	141	72	100+	111		
9468061	4516	8.52	137	199	92	442	159	105	100+	111		
9468061	4516	8.52	137	199	92	442	159	105	100+	111		
9468109	4516	8.26	146	195	91	481	161	95	100+	111		
9468111	4516	8.26	146	195	91	481	161	95	100+	111		
9468156	4516	7.81	136	164	102	466	158	85	100+	111		
9468210	4516	8.21	136	193	103	509	162	90	100+	111		
9468211	4516	8.21	136	193	103	509	162	90	100+	111		
9468255	4516	8.13	142	203	103	488	142	98	100+	111		
9468353	4516	7.26	129	160	102	438	122	94	100+	111		
9468391	4516	7.17	124	169	117	446	114	72	100+	111		
9468376	4516	7.11	121	174	113	407	113	86	100+	111		
9468640	4516	7.14	143	188	110	443	135	94	100+	111		
9468647	4516	7.14	143	188	110	443	135	94	100+	111		
9468648	4516	7.14	143	188	110	443	135	94	100+	111		
9468781	4516	7.33	124	179	118	401	148	77	100+	111		
9468777	4516	7.30	126	188	95	477	144	83	100+	111		
9468773	4516	7.36	126	188	95	477	144	83	110+	111		
9468817	4516	7.52	128	176	94	391	137	60	100+	111		
9468877	4516	7.31	118	180	96	370	153	72	100+	111		
9468978	4516	7.37	118	180	96	370	153	72	100+	111		
9468933	4516	7.31	134	197	99	484	151	85	100+	111		
9469427	4516	8.33	139	155	104	470	147	75	100+	111		

THIS DOCUMENT CONTAINS
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BY AMOCO FABRICS COMPANY



September 18, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

RECEIVED SEP 22 1997

Job Reference:

B L = 07293
Shipper = 224716

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on September 17, 1997, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g m ⁻²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	.30 cm/sec
Thickness	ASTM-D-5199	.55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mm

CEB
MD
PHM



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

September 16, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Shipping # 224716, dated September 17, 1997

Piece	Weight									Permittivity
Number	Style	Yd. 2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal./Min./Ft2
2198438	45063	7.82	91	202	104	380	170	96	100+	111
2198609	45063	7.61	93	199	83	450	152	99	100+	111
2198674	45063	7.70	84	206	80	466	168	121	100+	111
2198784	45063	8.07	93	230	80	437	182	129	100+	111
2198844	45063	7.13	82	204	82	454	162	111	100+	111
2198875	45063	7.31	84	200	84	467	141	113	100+	111
2198879	45063	7.31	84	200	84	467	141	113	100+	111
2198997	45063	7.12	86	242	77	503	141	117	100+	111
2199133	45063	7.76	91	211	83	433	187	11	100+	11
2200001	45063	8.03	106	203	90	439	147	114	100+	111
2200453	45063	7.17	87	211	77	436	157	111	100+	111
2200464	45063	8.01	92	203	81	476	131	111	100+	11
2200475	45063	7.70	85	207	84	431	151	113	100+	11
2200476	45063	7.70	85	207	84	431	151	113	100+	111
2200486	45063	7.41	83	207	66	508	164	116	100+	11
2200517	45063	7.37	88	160	92	410	136	91	100+	11
2200518	45063	7.57	88	160	92	416	136	93	100+	111
2200519	45063	7.57	88	162	92	416	136	94	100+	111
2200574	45063	7.41	87	160	89	437	118	11	100+	11
2200575	45063	7.41	87	163	89	437	118	11	100+	111
2200576	45063	7.84	91	169	96	411	110	11	100+	11
2200577	45063	7.51	83	174	91	367	141	97	100+	11
2200578	45063	7.51	83	174	91	367	141	97	100+	11
2200579	45063	7.65	89	180	90	410	143	97	100+	111
2200574	45063	7.65	89	180	90	410	143	97	100+	111
2200567	45063	7.63	90	188	88	442	147	11	100+	111
2200553	45063	7.48	85	169	80	445	143	99	100+	111
2200542	45063	7.72	92	192	79	422	148	126	100+	111

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BY AMOCO FABRICS COMPANY



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

September 16, 1997

Ogden Remediation Company Incorporated
106 Route 303
West Nyack, NY 10994

Re: Shipping # 224716, dated September 17, 1997

Piece		Weight									Permittivity	
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap	Tear	A.O.S.	Gal/Min/Ft2	
2209214	4506C	7.17	81	172	82	438	134	112		100+	110	
2209215	4506C	7.17	81	172	82	438	134	112		100+	110	
2209263	4506C	6.91	85	158	67	408	111	108		100+	110	
2209292	4506C	7.28	92	178	95	435	129	128		100+	110	
2209348	4506C	7.61	90	177	86	411	129	110		100+	110	

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BY AMOCO FABRICS COMPANY



RECEIVED OCT 20 1997

Amoco Fabrics and Fibers Company

October 14, 1997

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 08097
Shipper # 240510

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on October 13, 1997, on AFFC order # 65292110800, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz./yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal./min./ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	.25 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mon

MD.



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

October 14, 1997

Cgden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 65292110800
Shipping # 240510, dated October 13, 1997

Piece		Weight									Permittivity
Number	Style	Yd. 2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap	Tear	A.O.S.	Gals/Min/Ft2
2284091	4506	8.13	96	199	95	404	143	112	100-	100	
2284111	4506	8.13	96	199	95	404	143	112	100-	100	
2284238	4506	8.41	95	196	95	409	151	128	100-	100	
2284337	4506	7.66	103	181	98	390	146	118	100-	100	
2284338	4506	7.66	103	181	98	390	146	118	100-	100	
2284464	4506	8.06	108	177	108	434	124	110	100-	100	
2284470	4506	8.06	108	177	108	434	124	110	100-	100	
2284493	4506	8.03	93	185	100	440	130	124	100-	100	
2284495	4506	8.03	93	185	100	440	130	124	100-	100	
2284660	4506	7.48	88	197	106	361	147	129	100-	100	
2284667	4506	7.48	88	197	106	361	147	129	100-	100	
2284669	4506	7.48	88	197	106	361	147	129	100-	100	
2284693	4506	7.72	92	198	93	439	141	129	100-	100	
2284694	4506	7.72	92	198	93	439	141	129	100-	100	
2284698	4506	7.72	92	198	93	439	141	129	100-	100	
2284714	4506	7.67	84	189	94	419	145	104	100-	100	
2284720	4506	7.67	84	189	94	419	145	104	100-	100	
2284736	4506	7.67	84	189	94	419	145	104	100-	100	
2284758	4506	7.46	86	199	94	440	144	138	100-	100	
2284758	4506	7.46	86	199	94	440	144	138	100-	100	
2284758	4506	7.46	86	199	94	440	144	138	100-	100	
2284787	4506	7.46	79	186	93	399	129	113	100-	100	
2284788	4506	7.46	79	186	93	399	129	113	100-	100	
2284789	4506	7.46	79	186	93	399	129	113	100-	100	
2284818	4506	7.33	86	173	108	384	112	113	100-	100	
2284819	4506	7.33	86	173	108	384	112	113	100-	100	
2284833	4506	7.33	86	173	108	384	112	113	100-	100	

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RECEIVED NOV 18 1997



November 10, 1997

Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

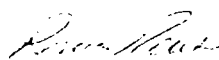
B/L # 08969
Shipper # 258242

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on November 8, 1997, on AFFC order # 65292110800, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz/yd ²	200 g m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.


Ronnie Lewis
Quality Assurance Supervisor
Amoco Fabrics and Fibers Company

mom

MD
R. Lewis



Amoco Fabrics and Fibers Company

Quality Assurance Department
P. O. Box 836
Hazlehurst, Georgia 31539-0451

November 10, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 65292110800

Shipping # 258242, dated November 8, 1997

Piece	Weight									Permittivity
Number	Style	Yd. 2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal/M.in/F=2

2284408	4506	7.63	106	204	107	464	144	124	100+	110
2284435	4506	7.45	100	187	103	434	113	94	100+	110
2284453	4506	7.55	104	176	103	462	141	109	100+	110
2297797	4506	7.35	90	206	105	459	120	93	100+	110
2298493	4506	7.58	102	200	91	495	154	117	100+	110
2298534	4506	7.32	93	194	98	392	152	102	100+	110
2298675	4506	8.08	96	194	96	460	137	123	100+	110
2298677	4506	8.08	96	194	96	460	137	123	100+	110
2299084	4506	7.66	92	190	86	372	134	104	100+	110
2299094	4506	7.58	94	190	85	425	151	97	100+	110
2299095	4506	7.58	94	190	85	425	151	97	100+	110
2299554	4506	7.52	94	181	96	471	133	102	100+	110
2299568	4506	7.58	96	187	101	446	159	111	100+	110
2299569	4506	7.58	96	187	101	446	159	111	100+	110
2299574	4506	7.58	96	187	101	446	159	111	100+	110
2299723	4506	7.39	99	184	96	356	129	112	100+	110
2299741	4506	7.39	99	184	96	356	129	112	100+	110
2299744	4506	7.39	99	184	96	356	129	112	100+	110
2299806	4506	7.12	90	191	89	427	148	116	100+	110
2299808	4506	7.12	90	191	89	427	148	116	100+	110
2299809	4506	7.12	90	191	89	427	148	116	100+	110
2299852	4506	7.89	94	205	80	380	137	109	100+	110
2299857	4506	7.89	94	205	80	380	137	109	100+	110
2299858	4506	7.89	94	205	80	380	137	109	100+	110
2299904	4506	7.64	91	196	85	453	142	104	100+	110
2299905	4506	7.64	91	196	85	453	142	104	100+	110
2299906	4506	7.64	91	196	85	453	142	104	100+	110

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BY AMOCO FABRICS & FIBERS COMPANY



November 24, 1997

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Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 09374
Shipper # 265529

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on November 21 1997, on AFFC order # 6529211080, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz./yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	.665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	.285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal./min./ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm ³ /sec	0.30 cm ³ /sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music

William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mom



Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

November 24, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 6529211080
Shipping # 265529, dated November 21, 1997

Piece		Weight									Permittivity
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong	Burst	Puncture	Trap Tear	A.O.S.	Gal/Min/Ft2	
2280411	4506	7.62	83	162	101	431	92	92	100+	111	
2280558	4506	7.96	92	183	111	389	135	102	100+	111	
2280815	4506	8.06	98	193	100	481	154	104	100+	111	
2291326	4506	7.60	95	175	92	426	116	109	100+	111	
2291328	4506	7.60	95	175	92	426	116	109	100+	111	
2291359	4506	8.13	103	199	90	412	159	128	100+	111	
2291398	4506	7.60	93	180	102	427	130	113	100+	111	
2291460	4506	7.32	89	165	101	362	108	112	100+	111	
2291613	4506	7.93	93	206	81	497	156	104	100+	111	
2291614	4506	7.93	93	206	81	497	156	104	100+	111	
2291922	4506	7.57	90	184	90	392	128	101	100+	111	
2292205	4506	8.65	86	203	85	450	161	111	100+	111	
2292221	4506	8.65	86	203	85	450	161	111	100+	111	
2292336	4506	8.01	83	216	78	404	160	93	100+	111	
2292343	4506	8.01	83	216	78	404	160	93	100+	111	
2292447	4506	8.01	83	216	78	404	160	93	100+	111	
2292514	4506	8.69	82	208	83	487	156	120	100+	111	
2295025	4506	7.65	84	182	92	379	132	106	100+	111	

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BY AMOCO FABRICS & FIBERS COMPANY



December 9, 1997

Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

Ogden Remediation Company Incorporated
166 Rt 303
West Nyack, NY 10994

Job Reference:

B/L # 09980
Shipper # 273383

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on December 8, 1997, on AFFC order # 6529211080, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 12, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6.07 yd ²	206 g m ²
Grab Tensile	ASTM-D-4632	150 lb	665 kN
Grab Elongation	ASTM-D-4632	50%	5.2%
Mullen Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	4.0 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	2.9 kN
UV Resistance	ASTM-D-4355	70% at 500 hr	70% at 500 hr
AOS	ASTM-D-4751	70 sieve	2.0 mm
Permittivity	ASTM-D-4491	90 gal min ft ²	3635 L min m ²
Coefficient of Permeability	ASTM-D-4491	0.35 cm sec	30 cm sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mon

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Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 955-9025

December 9, 1997

Ogden Remediation Company Incorporated
166 RT 303
West Nyack, NY 10994

Re: Purchase Order # 6529211080

Shipping # 273333, dated December 8, 1997

Piece		Weight									Permeability	
Number	Style	Yd. & Co.	Thickness	Tensile	Elong	Burst	Puncture	Trap	Tear	A/C S	Gal./Sq Ft/2	
2329175	4806	8.13	107	206	103	481	151	117	101	101	101	
2329177	4806	8.13	107	206	103	481	151	117	101	101	101	
2329228	4806	7.99	99	193	106	464	146	113	101	101	101	
2329232	4806	7.99	99	193	106	464	146	113	101	101	101	
2329381	4806	7.87	97	217	96	413	128	91	101	101	101	
2329412	4806	7.63	100	210	101	469	146	100	101	101	101	
2329421	4806	7.63	100	210	101	469	146	100	101	101	101	
2329438	4806	7.61	100	193	104	416	150	98	101	101	101	
2329439	4806	7.61	100	193	104	416	150	98	101	101	101	
2329447	4806	7.61	100	193	104	416	150	98	101	101	101	
2329480	4806	7.61	104	211	97	411	151	111	101	101	101	
2329481	4806	7.61	104	211	97	411	151	111	101	101	101	
2329482	4806	7.61	104	211	97	411	151	111	101	101	101	
2329493	4806	7.61	91	181	104	406	143	67	101	101	101	
2329511	4806	7.61	99	183	104	406	143	87	101	101	101	
2329517	4806	7.61	99	183	104	406	143	87	101	101	101	
2329646	4806	7.13	99	183	107	386	146	96	101	101	101	
2329716	4806	7.11	91	183	90	446	146	81	101	101	101	
2329716	4806	7.11	91	183	90	446	146	81	101	101	101	
2329717	4806	7.11	90	180	91	446	147	81	101	101	101	
2329718	4806	7.11	91	178	91	439	121	91	101	101	101	
2329733	4806	6.11	91	178	91	423	121	90	101	101	101	
2329911	4806	7.03	107	184	91	449	146	92	101	101	101	
2329912	4806	7.03	103	184	91	449	146	92	101	101	101	
2329913	4806	7.03	103	184	91	449	146	92	101	101	101	
2329923	4806	7.01	101	193	88	444	154	86	101	101	101	
2329931	4806	7.01	103	193	88	444	161	86	101	101	101	

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BY AMOCO FABRICS & FIBERS COMPANY



December 17, 1997

Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 955-9025

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Job Reference:

B/L # 32236
Shipper # 277897

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on December 16, 1997, on AFCC order # 6529211080, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz yd ²	200 g m ²
Grab Tensile	ASTM-D-4632	150 lb	665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Moisture Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	285 kN
UV Resistance	ASTM-D-4355	700 hr at 500 hr	700 hr at 500 hr
AOS	ASTM-D-4751	70 sieve	212 mm
Permeability	ASTM-D-4491	9.1 gal min ft ²	365 L min m ²
Coefficient of Permeability	ASTM-D-4491	0.30 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextiles certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

William L. Music
Quality Assurance Manager
Amoco Fabrics and Fibers Company

mm

RECEIVED DEC 17 1997

IND. PROD. CO.



Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

December 17, 1997

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

Re: Purchase Order # 6529211080

Shipping # 277897, dated December 16, 1997

Piece	Weight	Permittivity									
Number	Style	Yd.2 Oz.	Thickness	Tensile	Elong.	Perst	Puncture	Trap	Tear	A.O.S.	Gal/Min Ft2

2327874	4806	8.20	100	223	86	454	145	125	100+	111	
2327881	4806	7.51	85	205	99	465	149	104	100+	111	
2327893	4806	7.51	85	205	99	465	149	104	100+	111	
2328044	4806	7.78	100	235	89	573	189	121	100+	111	
2328074	4806	7.56	93	215	91	465	141	101	100+	111	
2328101	4806	8.04	116	224	91	502	164	99	101+	111	
2328167	4806	8.08	111	198	87	427	123	125	100+	111	
2328469	4806	7.61	113	191	91	448	122	110	101+	111	
2328817	4806	7.60	98	181	87	492	171	106	101+	111	
2328818	4806	7.81	90	171	87	481	171	101	101+	111	
2328881	4806	7.61	111	187	89	427	131	101	100+	111	
2328914	4806	8.49	83	149	94	376	121	93	100+	111	
2328971	4806	6.27	85	166	91	399	114	87	101+	111	
2328986	4806	6.81	87	166	91	430	132	104	100+	111	
2328991	4806	6.08	96	207	97	511	149	116	100+	111	
2329061	4806	6.08	96	207	97	511	149	116	100+	111	
2329098	4806	6.18	114	216	91	479	182	109	100+	111	
2329113	4806	6.18	114	216	91	479	182	109	100+	111	
2329114	4806	6.18	114	216	91	479	182	109	100+	111	
2329118	4806	7.09	114	216	111	486	188	117	100+	111	
2329181	4806	7.11	98	211	94	481	123	96	100+	111	
2329181	4806	7.31	98	211	94	481	123	96	100+	111	
2329181	4806	7.31	98	211	94	481	123	96	100+	111	
2329178	4806	7.60	96	194	111	470	165	131	100+	111	
2329177	4806	7.66	96	194	110	470	165	131	100+	111	
2329119	4806	7.62	97	185	107	501	146	107	100+	111	
2329119	4806	7.62	97	185	107	501	146	107	100+	111	



May 14, 1998

Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway,
Atlanta, Georgia 30339
(770) 956-9025

Ogden Remediation Company Incorporated
166 Route 303
West Nyack, NY 10994

RECEIVED MAY 20 1998

Job Reference:

B/L # 36128
Shipper # 361277

Amoco Fabrics and Fibers Company hereby certifies that CEF Style 4506 shipped to you on May 13, 1998, on AFFC order # 3529211080, meets the minimum average roll values listed below:

Amoco Style 4506 is a polypropylene nonwoven needlepunched fabric. This engineered geotextile is stabilized to resist degradation due to ultraviolet exposure. It is resistant to commonly encountered soil chemicals, mildew and insects, and is non-biodegradable. Polypropylene is stable within a pH range of 2 to 13, making it one of the most stable polymers available for geotextiles today.

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Unit Weight	ASTM-D-5261	6 oz yd ²	200 g/m ²
Grab Tensile	ASTM-D-4632	150 lb	665 kN
Grab Elongation	ASTM-D-4632	50 %	50 %
Mat Burst	ASTM-D-3786	350 psi	2410 kPa
Puncture	ASTM-D-4833	90 lb	400 kN
Trapezoidal Tear	ASTM-D-4533	65 lb	285 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AGS	ASTM-D-4751	70 sieve	0.212 mm
Permittivity	ASTM-D-4491	90 gal/min/ft ²	3665 L/min/m ²
Coefficient of Permeability	ASTM-D-4491	0.32 cm/sec	0.30 cm/sec
Thickness	ASTM-D-5199	55 mil	1.35 mm

Amoco Fabrics and Fibers Company manufactures all the nonwoven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is attached.

Ronnie Rewis
Quality Assurance Supervisor
Amoco Fabrics and Fibers Company

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1000 1000 1000

Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

May 14, 1998

Ouden Perfection Company Incorporated
106 Route 313
West Nyack, NY 10994

Re: Purchase Order # 3529111080
Shipping # 361277, dated May 13, 1998

Piece	Weight	Permittivity										
Number	Style	Yd 2 Cr	Thickness	Tensile	Elong	Burst	Pressure	Trap	Tear	A.O.S.	Gal/Min	Fill

1363492	4516	7.27	75	195	40	403	196	108	100+	110		
1363493	4516	7.27	75	195	40	403	196	108	100+	110		
1363494	4516	7.27	75	195	40	403	196	108	100+	110		
1363495	4516	7.27	75	195	40	403	196	108	100+	110		
1363496	4516	7.27	75	195	40	403	196	108	100+	110		
1363497	4516	7.27	75	195	40	403	196	108	100+	110		
1363498	4516	7.27	75	195	40	403	196	108	100+	110		
1363499	4516	7.27	75	195	40	403	196	108	100+	110		
1363500	4516	7.27	75	195	40	403	196	108	100+	110		
1363501	4516	7.27	75	195	40	403	196	108	100+	110		
1363502	4516	7.27	75	195	40	403	196	108	100+	110		
1363503	4516	7.27	75	195	40	403	196	108	100+	110		
1363504	4516	7.27	75	195	40	403	196	108	100+	110		
1363505	4516	7.27	75	195	40	403	196	108	100+	110		
1363506	4516	7.27	75	195	40	403	196	108	100+	110		
1363507	4516	7.27	75	195	40	403	196	108	100+	110		
1363508	4516	7.27	75	195	40	403	196	108	100+	110		
1363509	4516	7.27	75	195	40	403	196	108	100+	110		
1363510	4516	7.27	75	195	40	403	196	108	100+	110		
1363511	4516	7.27	75	195	40	403	196	108	100+	110		
1363512	4516	7.27	75	195	40	403	196	108	100+	110		
1363513	4516	7.27	75	195	40	403	196	108	100+	110		
1363514	4516	7.27	75	195	40	403	196	108	100+	110		
1363515	4516	7.27	75	195	40	403	196	108	100+	110		
1363516	4516	7.27	75	195	40	403	196	108	100+	110		
1363517	4516	7.27	75	195	40	403	196	108	100+	110		
1363518	4516	7.27	75	195	40	403	196	108	100+	110		
1363519	4516	7.27	75	195	40	403	196	108	100+	110		
1363520	4516	7.27	75	195	40	403	196	108	100+	110		
1363521	4516	7.27	75	195	40	403	196	108	100+	110		
1363522	4516	7.27	75	195	40	403	196	108	100+	110		
1363523	4516	7.27	75	195	40	403	196	108	100+	110		
1363524	4516	7.27	75	195	40	403	196	108	100+	110		
1363525	4516	7.27	75	195	40	403	196	108	100+	110		
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1363539	4516	7.27	75	195	40	403	196	108	100+	110		
1363540	4516	7.27	75	195	40	403	196	108	100+	110		
1363541	4516	7.27	75	195	40	403	196	108	100+	110		
1363542	4516	7.27	75	195	40	403	196	108	100+	110		
1363543	4516	7.27	75	195	40	403	196	108	100+	110		
1363544	4516	7.27	75	195	40	403	196	108	100+	110		
1363545	4516	7.27	75	195	40	403	196	108	100+	110		
1363546	4516	7.27	75	195	40	403	196	108	100+	110		
1363547	4516	7.27	75	195	40	403	196	108	100+	110		
1363548	4516	7.27	75	195	40	403	196	108	100+	110		
1363549	4516	7.27	75	195	40	403	196	108	100+	110		
1363550	4516	7.27	75	195	40	403	196	108	100+	110		
1363551	4516	7.27	75	195	40	403	196	108	100+	110		
1363552	4516	7.27	75	195	40	403	196	108	100+	110		
1363553	4516	7.27	75	195	40	403	196	108	100+	110		
1363554	4516	7.27	75	195	40	403	196	108	100+	110		
1363555	4516	7.27	75	195	40	403	196	108	100+	110		
1363556	4516	7.27	75	195	40	403	196	108	100+	110		
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1363559	4516	7.27	75	195	40	403	196	108	100+	110		
1363560	4516	7.27	75	195	40	403	196	108	100+	110		
1363561	4516	7.27	75	195	40	403	196	108	100+	110		
1363562	4516	7.27	75	195	40	403	196	108	100+	110		
1363563	4516	7.27	75	195	40	403	196	108	100+	110		
1363564	4516	7.27	75	195	40	403	196	108	100+	110		
1363565	4516	7.27	75	195	40	403	196	108	100+	110		
1363566	4516	7.27	75	195	40	403	196	108	100+	110		
1363567	4516	7.27	75	195	40	403	196	108	100+	110		
1363568	4516	7.27	75	195	40	403	196	108	100+	110		
1363569	4516	7.27	75	195	40	403	196	108	100+	110		
1363570	4516	7.27	75	195	40	403	196	108	100+	110		
1363571	4516	7.27	75	195	40	403	196	108	100+	110		
1363572	4516	7.27	75	195	40	403	196	108	100+	110		
1363573	4516	7.27	75	195	40	403	196	108	100+	110		
1363574	4516	7.27	75	195	40	403	196	108	100+	110		
1363575	4516	7.27	75	195	40	403	196	108	100+	110		
1363576	4516	7.27	75	195	40	403	196	108	100+	110		
1363577	4516	7.27	75	195	40	403	196	108	100+	110		
1363578	4516	7.27	75	195	40	403	196	108	100+	110		
1363579	4516	7.27	75	195	40	403	196	108	100+	110		
1363580	4516	7.27	75	195	40	403	196	108	100+	110		
1363581	4516	7.27	75	195	40	403	196	108	100+	110		
1363582	4516	7.27	75	195	40	403	196	108	100+	110		
1363583	4516	7.27	75	195	40	403	196	108	100+	110		
1363584	4516	7.27	75	195	40	403	196	108	100+	110		
1363585	4516	7.27	75	195	40	403	196	108	100+	110		
1363586	4516	7.27	75	195	40	403	196	108	100+	110		
1363587	4516	7.27	75	195	40	403	196	108	100+	110		
1363588	4516	7.27	75	195	40	403	196	108	100+	110		
1363589	4516	7.27	75	195	40	403	196	108	100+	110		
1363590	4516	7.27	75	195	40	403	196	108	100+	110		
1363591	4516	7.27	75	195	40	403	196	108	100+	110		
1363592	4516	7.27	75	195	40	403	196	108	100+	110		
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1363596	4516	7.27	75	195	40	403	196	108	100+	110		
1363597	4516	7.27	75	195	40	403	196	108	100+	110		
1363598	4516	7.27	75	195	40	403	196	108	100+	110		
1363599	4516	7.27	75	195	40	403	196	108	100+	110		
1363600	4516	7.27	75	195	40	403	196	108	100+	110		

Woven Geotextiles



DISTRIBUTED BY:
A.H. HARRIS & SONS, INC.
100 SICKER ROAD
LATHAM (ALBANY) N.Y. 12110
TEL. 518/755-5276
NYS 800/342-4005

The Source For Geotextile Solutions™



Amoco Fabrics and Fibers Company

A Complete Line Of Woven Geotextiles That Help You Design With Confidence



AMOCO WOVEN GEOTEXTILES

Properties*	Test Method	Units	1198	1199	2000	2002	2006	2016	2019	2044
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PHYSICAL

Grab Tensile Strength	ASTM-D-4632	lbs.	300/200**	350/250**	140	200	300	300	350/250**	600/500**
Grab Tensile Elongation	ASTM-D-4632	%	15	15	15	15	15	15	15	15
Wide Width Tensile	ASTM-D-4595	lbs./ft						2400		4800
Wide Width Elongation	ASTM-D-4595	%						15/7		18/8
Mullen Burst	ASTM-D-3786	psi	450	480	325	400	600	800	510	1350
Puncture	ASTM-D-4833	lbs.	120	135	65	90	120	120	140	140
Trapezoid Tear	ASTM-D-4533	lbs.	65	95/55	45	75	120	120	65	250
UV Resistance	ASTM-D-4355 ¹	% ²	90	90	70	70	70	80	90	80

HYDRAULIC

Apparent Opening Size (AOS)	ASTM-D-4751	US Sieve	40	70	30	50	40	40	70	30
Permittivity	ASTM-D-4491	sec -1	0.5	0.01	0.04	0.04	0.02	0.55	0.04	0.15
Flow Rate	ASTM-D-4491	gal./min./ft ²	50	18	4	4	2	40	5	10

PACKAGING

Roll Width		ft	6 or 12	6 or 12	12.5 or 18	12.5 or 18	12.5 or 18	15	15	18
Roll Length		ft	450 or 225	450 or 225	504 or 350	504 or 350	360 or 250	300	300	150
Gross Weight		lbs	140	140	140	220	220	250	265	250
Area		sq.yds	300	300	700	700	500	500	500	300

SUGGESTED APPLICATIONS

Stabilization					x	x	x	x		x
Separation					x	x	x	x		x
Reinforcement							x	x		x
Erosion Control			x	x				x	x	
Drainage			x	x				x	x	

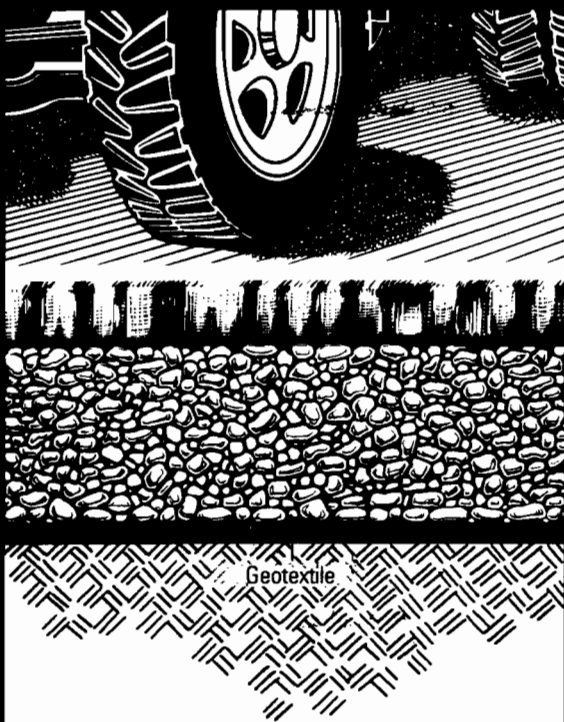
* MINIMUM AVERAGE ROLL VALUES

** WARP/FILL

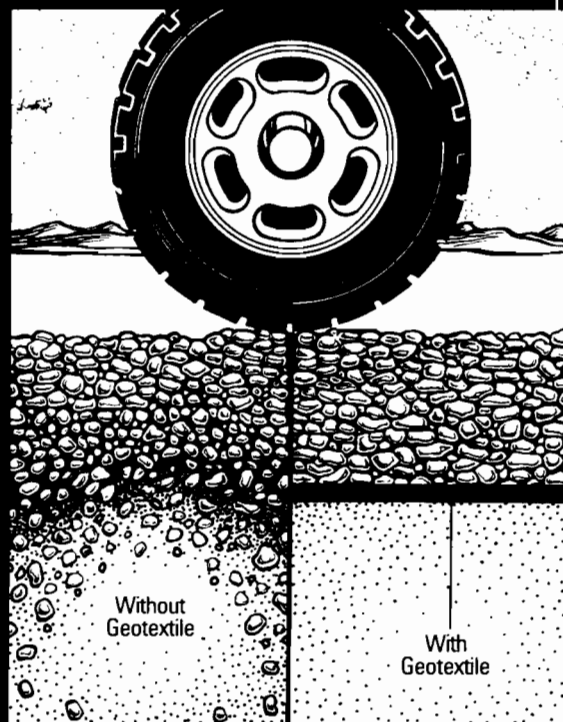
¹ Fabric conditioned as per ASTM D-4355

² Percent of minimum grab tensile after conditioning

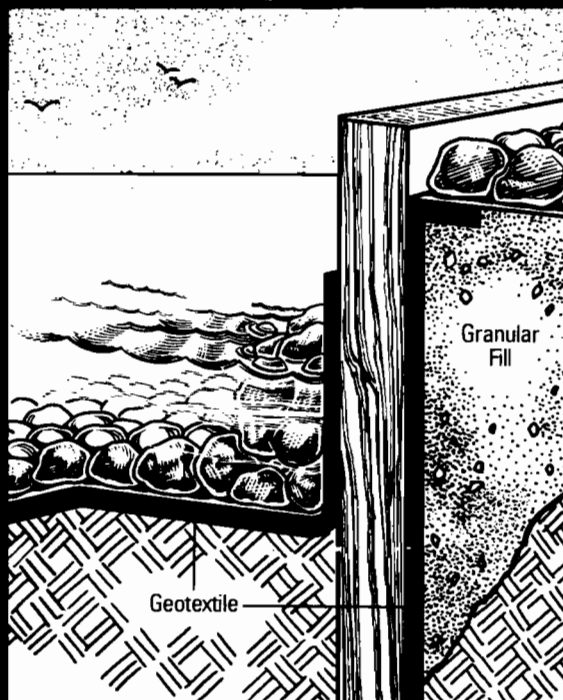
The information contained herein is furnished without charge or obligation and the recipient assumes all responsibility for its use. Because conditions of use and handling may vary and are beyond our control, we make no representation about, and are not responsible or liable for, the accuracy or reliability of said information or the performance of any product. Any specifications, properties or applications listed herein are provided as information only and in no way modify, amend, enlarge or create any warranty. Nothing contained herein is to be construed as permission or as a recommendation to infringe any patent.



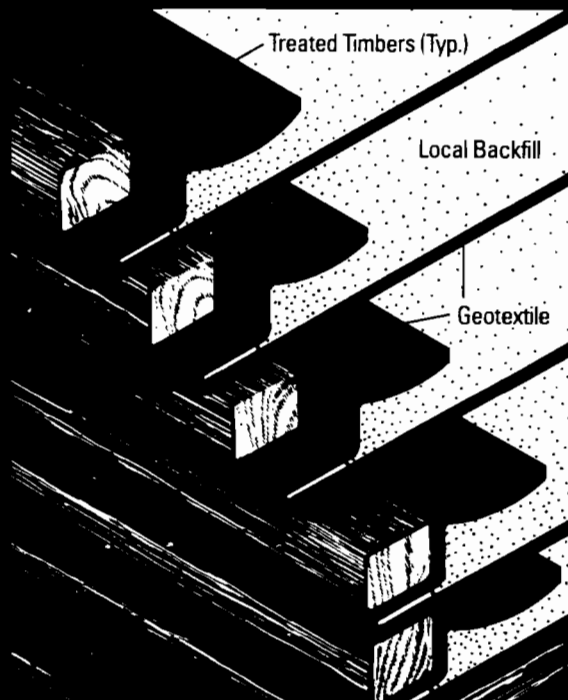
STABILIZATION FOR PAVED SURFACES—Amoco's 2000 series provides effective stabilization and critical subsoil base course separation for paved surfaces such as parking lots and streets. The 2000 series includes fabrics for every strength requirement from low and medium to high and very high.



STABILIZATION FOR UNPAVED SURFACES—Amoco's 2000 series fabrics also stabilize and retain aggregate for unpaved surfaces. The high modulus fabrics cover all applications for unpaved roads and parking/loading lots, especially lots constructed on moisture-weakened soil.



EMBANKMENT EROSION CONTROL—Amoco's polypropylene erosion control fabrics help preserve nearly any embankment under attack by the elements. All meet or exceed exacting federal requirements, and are non-biodegradable.



VERTICAL RETAINING WALLS—Amoco's high strength and high modulus woven fabrics are ideally suited for vertical wall and steep sloped wall applications that require simple construction techniques.

**AMOCO FABRICS AND FIBERS COMPANY**

NASHVILLE MILLS
P.O. BOX 477
NASHVILLE, GEORGIA 31639

September 17, 1996

SEP 20 1996

A H Harris & Sons
P. O. Box 2
New Britain, CT 06050

Dear Sir:

We hereby certify that Amoco Fabrics and Fibers Style 2002 shipped to you under B/L #70135, & P. O. #39855, dated 9-13-96, meets the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Grab Tensile	ASTM-D-4632 ✓	200 lbs	900 N
Grab Elongation	ASTM-D-4632 ✓	15 %	15 %
Mullen Burst	ASTM-D-3786 ✓	400 psi	2750 kPa
Puncture	ASTM-D-4833 ✓	90 lbs	400 N
Trapezoidal Tear	ASTM-D-4533 ✓	75 lbs	330 N
UV Resistance	ASTM-D-4355 ✓	70 % at 500 hrs	70 % at 500 hrs
AOS	ASTM-D-4751 ✓	50 sieve	0.300 mm
Permittivity	ASTM-D-4491 ✓	0.04 sec ⁻¹	0.04 sec ⁻¹
Permittivity	ASTM-D-4491 ✓	4 gal/min/ft ²	2.7 L/sec/m ²

Amoco Fabrics and Fibers Company manufactures all the woven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is retained in the Quality Control files at Amoco's production facility.

Tim Smith
Tim Smith
Quality Assurance Manager

*15 lbs
bridge 1476
original recd*

*160 180
1476 12
200
25
50
20
—
—*

small roll



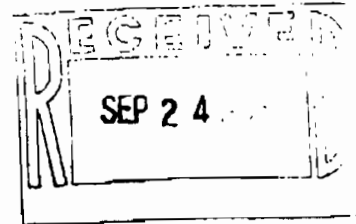
SEP 20 1996

AMOCO FABRICS AND FIBERS COMPANY

NASHVILLE MILLS
P.O. BOX 477
NASHVILLE, GEORGIA 31639

September 17, 1996

A H Harris & Sons
P. O. Box 2
New Britain, CT 06050



Dear Sir:

We hereby certify that Amoco Fabrics and Fibers Style 2006 shipped to you under B/L #70135, & P. O. #39855, dated 9-13-96, meets the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Grab Tensile	ASTM-D-4632	300 lbs	1340 N
Grab Elongation	ASTM-D-4632	15 %	15 %
Wide Width Tensile	ASTM-D-4595	2100 lbs/ft	31000 N/m
Wide Width Elongation	ASTM-D-4595	15 %	15 %
Mullen Burst	ASTM-D-3786	600 psi	4130 kPa
Puncture	ASTM-D-4833	120 lbs	530 N
Trapezoidal Tear	ASTM-D-4533	120 lbs	530 N
UV Resistance	ASTM-D-4355	70 % at 500 hrs	70 % at 500 hrs
AOS	ASTM-D-4751	40 sieve	0.43 mm
Permittivity	ASTM-D-4491	0.02 sec ⁻¹	0.02 sec ⁻¹
Permittivity	ASTM-D-4491	2 gal/min/ft ²	1.4 L/sec/m ²

Amoco Fabrics and Fibers Company manufactures all the woven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is retained in the Quality Control files at Amoco's production facility.

Tim Smith
Tim Smith
Quality Assurance Manager



Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

April 29, 1997

Ogden Remediation Co., Inc.
166 Rt. 303
West Nyack, NY 10994

Dear Sir:

We hereby certify that Amoco Fabrics and Fibers Style 2002 shipped to you under B/L #15145, & P. O. #652P2110800, dated 4-24-97, meets the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Grab Tensile	ASTM-D-4632	200 lb	.890 kN
Grab Elongation	ASTM-D-4632	15 %	15 %
Mullen Burst	ASTM-D-3786	400 psi	2750 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	75 lb	.330 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	50 sieve	0.300 mm
Permittivity	ASTM-D-4491	0.05 sec ⁻¹	0.05 sec ⁻¹
Flow Rate	ASTM-D-4491	5 gal/min/ft ²	200 L/min/m ²

Amoco Fabrics and Fibers Company manufactures all the woven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is retained in the Quality Control files at Amoco's production facility.

Tim Smith
Quality Assurance Manager

RECEIVED MAY 05 1997

ccpus: PO file
Fairfax
P. McQuiston
J. Beatty



RECEIVED JUL 25 1997

Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

July 21, 1997

Ogden remediation Co., Inc.
166 Rt. 303
West Nyack, NY 10994

Dear Sir:

We hereby certify that Amoco Fabrics and Fibers Style 2002 shipped to you under B/L #16778, & P. O. #92466, dated 7-16-97, meets the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Grab Tensile	ASTM-D-4632	200 lb	.890 kN
Grab Elongation	ASTM-D-4632	15 %	15 %
Mullen Burst	ASTM-D-3786	400 psi	2750 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	75 lb	.330 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	50 sieve	0.300 mm
Permittivity	ASTM-D-4491	0.05 sec ⁻¹	0.05 sec ⁻¹
Flow Rate	ASTM-D-4491	5 gal/min/ft ²	200 L/min/m ²

Amoco Fabrics and Fibers Company manufactures all the woven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is retained in the Quality Control files at Amoco's production facility.

Tim Smith
Quality Assurance Manager

MJD
PHM
JEB
FFX
C/DL



RECEIVED DEC 6 1 1997

AMOCO FABRICS AND FIBERS COMPANY

NASHVILLE MILLS DIVISION

#1 Nashville Mills Road
Nashville, Georgia 31639
(912) 686-5511

November 25, 1997

Ogden Remediation Co., Inc.
166 Rt 303
West Nyack, NY 10994

Dear Sir:

We hereby certify that Amoco Fabrics and Fibers Style 2002 shipped to you under B/L #45046, & P. O. #6529211080, dated 11-21-97, meets the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Grab Tensile	ASTM-D-4632	200 lb	.890 kN
Grab Elongation	ASTM-D-4632	15 %	15 %
Mullen Burst	ASTM-D-3786	400 psi	2750 kPa
Puncture	ASTM-D-4833	90 lb	.400 kN
Trapezoidal Tear	ASTM-D-4533	75 lb	.330 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	50 sieve	6.300 mm
Permittivity	ASTM-D-4491	0.05 sec ⁻¹	0.05 sec ⁻¹
Flow Rate	ASTM-D-4491	5 gal/min/ft ²	260 L/min/m ²

Amoco Fabrics and Fibers Company manufactures all the woven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is retained in the Quality Control files at Amoco's production facility.

Tim Smith
Quality Assurance Manager



Amoco Fabrics and Fibers Company

Suite 550
900 Circle 75 Parkway
Atlanta, Georgia 30339
(770) 956-9025

May 14, 1998

Ogden Remediation Co., Inc.
166 Rt. 303
West Nyack, NY 10994

GL

Dear Sir:

We hereby certify that Amoco Fabrics and Fibers Style 2002 shipped to you under B/L #47730, & P. O. #6529211080, dated 5-12-98, meets the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value (English)	Minimum Average Roll Value (Metric)
Grab Tensile	ASTM-D-4632	200 lb	.890 kN
Grab Elongation	ASTM-D-4632	15 %	15 %
Mullen Burst	ASTM-D-3786	400 psi	2750 kPa
Puncture	ASTM-D-4833	90 lb	400 kN
Trapezoidal Tear	ASTM-D-4533	75 lb	330 kN
UV Resistance	ASTM-D-4355	70 % at 500 hr	70 % at 500 hr
AOS	ASTM-D-4751	50 sieve	0.300 mm
Permittivity	ASTM-D-4491	0.05 sec	0.05 sec
Flow Rate	ASTM-D-4491	5 gal/min ft ²	200 L/min m ²

Amoco Fabrics and Fibers Company manufactures all the woven geotextile fabric certified above. The values are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards. Test data is retained in the Quality Control files at Amoco's production facility.

RECEIVED
MAY 14 1998

Tim Smith
Quality Assurance Manager

A 120 Day Final Report:

**Laboratory Testing of Geosynthetics
for Waste Containment
EPA Method 9090**

June 1997

Submitted to:
Barbella Environmental Technology, Inc.
24 Tannery Road
Somerville, New Jersey 08876

Attn: **Mr. Joseph Dolan**

Submitted by:

TRI/Environmental, Inc.
9063 Bee Caves Rd.
Austin, Texas 78733



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

June 21, 1997

Mr. Joseph Dolan
Barbella Environmental Technology, Inc.
24 Tannery Road
Somerville, New Jersey 08876

Dear Mr. Dolan:

TRI/Environmental, Inc. (TRI) is pleased to present this 120 Day Final Report for geosynthetic chemical compatibility studies via EPA Method performed on Amoco 4506 6 oz. nonwoven filter geotextile in support of the Clarkstown Landfill project.

TRI would like to thank Barbella Environmental Technology, Inc. for the opportunity to participate and provide support on this project. Please call me if you have any questions or require any additional information.

Respectfully submitted,

Martin D. Nelson
Project Manager: Geosynthetic Technologies

cc: Mr. Sam R. Allen
Program Manager

FOREWORD

The testing reported herein is based upon accepted industry practice as well as the test method listed. TRI/Environmental Inc. (TRI) neither accepts responsibility for nor makes claim as to the final use and purpose of the materials tested.

Tests were performed under laboratory conditions and not under actual usage conditions. TRI can give no conclusions as to the serviceability, life expectancy or general durability of the products tested when used in a lining and/or leachate collection system.

1.0 INTRODUCTION

This report describes the work performed by TRI/Environmental, Inc. (TRI) to determine the chemical compatibility of one geotextile product with one waste leachate. The objective was to determine the resistance of the geotextile to changes caused by exposure to leachate. Changes in physical and mechanical properties were measured after exposure to the leachate at 23°C and 50°C for 30, 60, 90 and 120 days. Exposures were performed in accordance with the exposure regimen specified in United States Environmental Protection Agency (EPA) Method 9090A.

Methods, results and discussion are provided in the sections which follow. Test results are provided in the Tables of Results which accompany this report.

2.0 METHODS

2.1 Materials

The material selected for evaluation in this chemical compatibility study was Amoco style 4506 nonwoven 6 oz. filter geotextile.

2.2 Leachate

The exposure leachate used during the testing was a Municipal Solid Waste (MSW) leachate provided to TRI by Barbella Environmental Technology, Inc.

2.3 Exposure Conditions

Geotextile specimens were exposed to the waste leachate following the specifications of EPA Method 9090A as they relate to exposure to waste fluids. The tanks used for these exposures were maintained at $23 \pm 2^\circ\text{C}$ and $50 \pm 2^\circ\text{C}$ throughout the 120-day exposure period. Tanks were constructed from chemically resistant glass, fitted with stirrers and heated with a circulating hot water heat exchanger system. The 50°C tanks were sealed with a lid, and a reflux condenser was installed to minimize loss of volatile leachate components.

2.4 Testing Procedures

Table 2 lists tests performed on the geotextile. The number of test replicates was doubled for baseline determinations on unexposed material.

Table 2. Tests performed on Amoco 4506 nonwoven 6 oz.geotextile		
Test or Physical Property	Method	Number of replicate specimens
Dimensions and weight	EPA 9090	2 readings
Grab Tensile Strength	ASTM D 4632	5 Machine Direction readings
Grab Tensile Elongation	ASTM D 4632	5 Machine Direction readings
Trapezoidal Tear Resistance	ASTM D 4533	5 Machine Direction readings
Puncture Resistance	ASTM D 4833	5
Mullen Burst Strength	ASTM D 3786	5
Permittivity	ASTM D 4491	5

3.0 Results and Discussion

Test results are presented in the Test Results section which is included with this report. Test results are presented in tabular form as well as graphical form.

In considering these results, it must be determined through engineering judgment whether observed differences in the value of test results measured before and after immersion are due to product variability, unidentified factors relating to the test procedure, or leachate interaction with the products. Any significant chemical interaction with leachate would be expected to result in degradation trends which are consistent across the various properties being evaluated, and not isolated to one set of test results only. However, with each type of material there may be specific properties which are highly sensitive to leachate-induced effects. These factors must be considered in evaluating the various test results for a given product.

Also of critical importance is the issue of product variability. With geotextiles, a range of physical and mechanical index test values covering 15% or more of the average is not uncommon. This can be traced to variability inherent in the product, and the randomness associated with the onset of failure under the specified testing conditions. However, in chemical compatibility testing the statistical sampling of a broad range of manufactured product is not possible. Therefore, the small size of the sample population tested at each time point must be taken into consideration. The

criteria to be applied in evaluating data measured before and after leachate immersion should be that property changes, if observed, are consistent and so great that product variability and experimental factors can be ruled out.

In this report, standard deviations (STD) are reported for most measurements involving three or more replicate specimens. In statistics, the standard deviation is defined as root of the mean squared deviations of individual test results about the mean value. The standard deviation is a quantitative measure of variability within a group of measurements.

One related measure of variability observed within a sample set, relative to the magnitude of the mean value itself, is the *coefficient of variation or variance* (COV). The coefficient of variance is defined as the standard deviation divided by the mean associated with a group of specimens, and may be expressed as a percentage. The COV provides an indication of what proportion of the mean value may be attributable to random experimental factors or product variability. It is useful to consider apparent changes in property values against the criterion of COV since observed changes which fall below the COV may not be significant. This approach was used in preparing the tables in the next sections.

The term *range* refers to the difference between the extreme highest and lowest points within a group of measured values. Considering range as a percentage of the mean values provides another measure of variability within a dataset.

In the tables, the high and low extremes for percentage change in mean values are listed for comparison against COV and range as a percentage of mean from the baseline sample group. The high and low percentage changes are the extremes from data measured at 30, 60, 90 and 120 days.

Amoco 4506 nonwoven 6 oz. filter geotextile

Table 3 illustrates the range of variability in baseline data compared with some of the observed changes in average test values measured after immersion for the HDPE geotextile.

Table 3. Baseline coefficients of variation and range of percentage change results for Amoco 4506 nonwoven 6 oz. filter geotextile				
Test	Baseline COV (%)*	Baseline Range as % of Mean*	High Observed % Change	Low Observed % Change
Grab Tensile Strength (MD)	13	53	+ 16	-11
Grab Tensile Elongation @ Maximum Load (MD)	13	47	+ 8	-18
Trapezoidal Tear Strength (MD)	19	52	+ 8	-24
Puncture Resistance	16	49	+ 39	-15
Mullen Burst Strength	18	56	+ 24	0
Permittivity	20	63	+ 6	-12

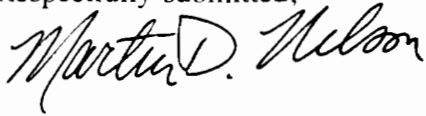
* Note that the greatest baseline change for the four exposure periods was reported.

4.0 CONCLUSION

Changes in certain measured physical and mechanical properties were noted for the geomembrane. However, the observed changes were random and are believed to be the effects of product variability and experimental factors. In the opinion of the authors, the data, considered together, support the conclusion that observed changes were not caused by exposure to the test leachate.

TRI/Environmental, Inc. is pleased to have been selected to participate in this project. We trust that the information provided in this report meets your requirements for technical documentation of this chemical compatibility study. Please do not hesitate to call if you have any questions or require any additional information.

Respectfully submitted,

A handwritten signature in black ink that reads "Martin D. Nelson". The signature is written in a cursive style with a large, stylized "M" and "N".

Martin D. Nelson
Project Manager: Geosynthetics Technologies

TRI/Environmental, Inc.

cc: Sam R. Allen: Program Manager

TEST RESULTS

This section includes generated test data provided in both tabular and graphical form. Each graph is represented by a series of "I" beam plots. Each "I" beam represents a single test population and illustrates the high and low value as the end points, and the mean as a central box on the beam.

At each testing period, three "I" beams are shown. The left beam represents the 23°C exposed specimens, the center beam represents unexposed baseline specimens, and the right beam represents the 50°C specimens.

EPA METHOD 9090 TEST RESULTS

AMOCO 4506 6 oz. NONWOVEN FILTER GEOTEXTILE

TABLE OF CHEMICAL COMPATIBILITY TEST RESULTS
Exposed to MSW Leachate

Report Date: June 21, 1997

Exposure Time and Temperature

Test Parameters	30 Day			60 Day			90 Day			120 Day		
	Baseline	23C	50C	Baseline	23C	50C	Baseline	23C	50C	Baseline	23C	50C
GEOTEXTILE: Amoco 4506 6oz. nonwoven filter												
Grab Tensile Properties:	159	263	229	194	204	191	221	207	159	149	207	188
Maximum Strength (lbs)	199	247	214	224	231	155	224	229	194	226	194	228
ASTM D4632	193	190	232	245	190	223	163	220	203	220	209	162
Machine Direction	242	249	118	228	254	164	238	228	227	229	199	184
	170	227	199	185	231	258	190	253	194	206	220	214
	241			169			224			264		
	202			253			198			211		
	231			227			213			222		
	211			247			274			220		
	181			220			247			241		
Average	203	235	198	219	222	198	219	227	195	219	206	195
STD	27	25	42	27	23	38	29	15	22	28	9	23
Coefficient of Variation	13	11	21	12	10	19	13	7	11	13	4	12
% Change		16	-2		1	-10		4	-11		-6	-11
Grab Tensile Properties:	80	64	64	55	55	57	60	77	75	56	64	60
Elongation @ Max. Strength (%)	81	62	72	66	55	46	65	70	50	70	72	65
ASTM D4632	56	72	67	66	48	54	56	57	50	65	79	63
Machine Direction	68	81	53	69	55	44	69	75	71	74	75	53
	70	74	60	56	57	57	72	73	63	70	77	57
	86			66			83			72		
	83			63			67			76		
	92			51			53			63		
	73			63			77			66		
	82			46			75			67		
Average	77	71	63	60	56	52	68	70	62	68	73	60
STD	10	7	6	7	6	6	9	7	10	6	5	4
Coefficient of Variation	13	10	10	12	11	11	13	10	17	8	7	7
% Change		-8	-18		-7	-14		4	-9		8	-11
Tear Resistance:	116	113	106	85	116	87	138	88	99	88	120	83
Trapezoidal Tear Strength (lbs)	82	94	103	96	126	81	109	105	75	96	100	95
ASTM D4533	125	124	103	103	121	104	98	87	72	73	113	93
Machine Direction	106	65	131	122	76	85	85	98	88	96	83	74
	161	114	95	93	125	95	91	90	74	98	84	105
	120			134			108			97		
	116			79			106			110		
	121			103			98			79		
	88			116			127			109		
	95			114			113			93		
Average	113	102	108	105	113	90	107	94	82	94	100	90
STD	21	21	12	16	19	8	15	7	10	11	15	11
Coefficient of Variation	19	20	11	16	17	9	14	7	13	12	15	12
% Change		-10	-5		8	-13		-13	-24		6	-4

TABLE OF CHEMICAL COMPATIBILITY TEST RESULTS
Exposed to MSW Leachate

Report Date: June 21, 1997

Exposure Time and Temperature

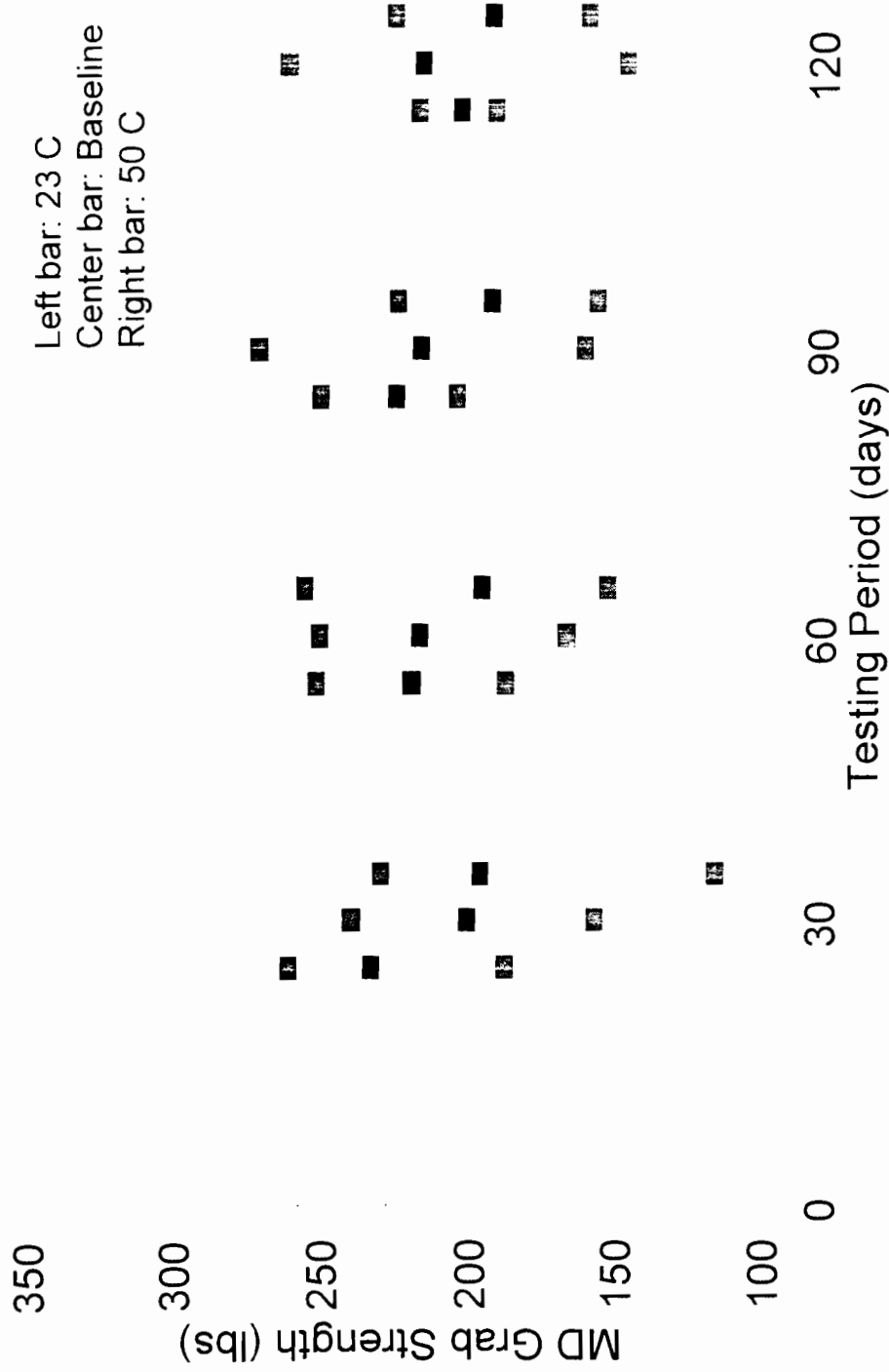
Test Parameters	30 Day			60 Day			90 Day			120 Day		
	Baseline	23C	50C	Baseline	23C	50C	Baseline	23C	50C	Baseline	23C	50C

GEOTEXTILE: Amoco 4506 6oz. nonwoven filter

Puncture Resistance:	106	155	179	106	112	113	156	172	173	139	167	126
Load @ Rupture (lb)	108	117	198	108	123	106	120	179	141	126	169	145
ASTM D4833	135	116	181	135	136	113	194	128	155	111	182	138
	167	106	229	167	122	134	148	175	162	176	148	185
	171	147	145	171	79	125	157	130	141	159	148	190
	117			117			164			145		
	128			128			140			160		
	128			128			133			168		
	140			140			154			146		
	144			144			158			110		
Average	134	128	186	134	114	118	152	157	154	144	163	157
STD	21	19	27	21	19	10	19	23	12	22	13	26
Coefficient of Variation	16	15	15	16	17	8	12	15	8	15	8	16
% Change		-5	39		-15	-12		3	1		13	9
Mullen Burst Strength:	290	260	390	280	270	400	285	350	300	450	545	495
Burst Strength (psi)	380	355	380	360	290	310	320	355	385	505	500	535
ASTM D3786	380	340	480	320	320	335	330	315	340	495	580	520
	255	365	385	365	300	450	435	390	405	485	520	425
	320	405	350	365	400	470	435	495	360	450	350	460
	270			270			255			440		
	440			370			350			440		
	380			270			290			515		
	270			265			430			400		
	290			300			365			420		
Average	328	345	397	317	316	393	350	381	358	460	499	487
STD	60	48	44	42	45	62	63	62	36	36	79	40
Coefficient of Variation	18	14	11	13	14	16	18	16	10	8	16	8
% Change		5	21		-0	24		9	2		8	6
Permittivity:	1.69	1.87	1.88	1.81	1.84	1.84	2.12	1.63	1.61	1.58	1.20	0.89
(sec -1)	1.74	1.89	1.87	1.75	1.81	1.87	2.37	1.86	1.61	1.21	0.95	1.25
ASTM D4491	1.64	1.89	1.84	1.66	1.84	1.89	1.99	1.82	1.67	1.14	1.41	1.22
	1.61	1.78	1.78	1.69	1.78	1.78	2.33	1.77	2.34	1.21	1.38	1.58
	1.66	1.82	1.84	1.69	1.78	1.84	1.94	1.82	1.96	1.03	1.34	1.50
	1.78			1.75			1.73			1.92		
	1.84			1.72			1.83			1.43		
	1.89			1.69			1.64			1.79		
	1.75			1.72			2.31			1.66		
	1.81			1.72			1.66			1.24		
Average	1.74	1.85	1.84	1.72	1.81	1.84	1.99	1.78	1.84	1.42	1.26	1.29
STD	0.09	0.04	0.03	0.04	0.03	0.04	0.27	0.08	0.28	0.29	0.17	0.24
Coefficient of Variation	5	2	2	2	1	2	13	5	15	20	13	19
% Change		6	6		5	7		-11	-8		-12	-9

BARBELLA ENVIRONMENTAL EPA METHOD 9090

Amoco 4506 nonwoven GT vs MSW Leachate

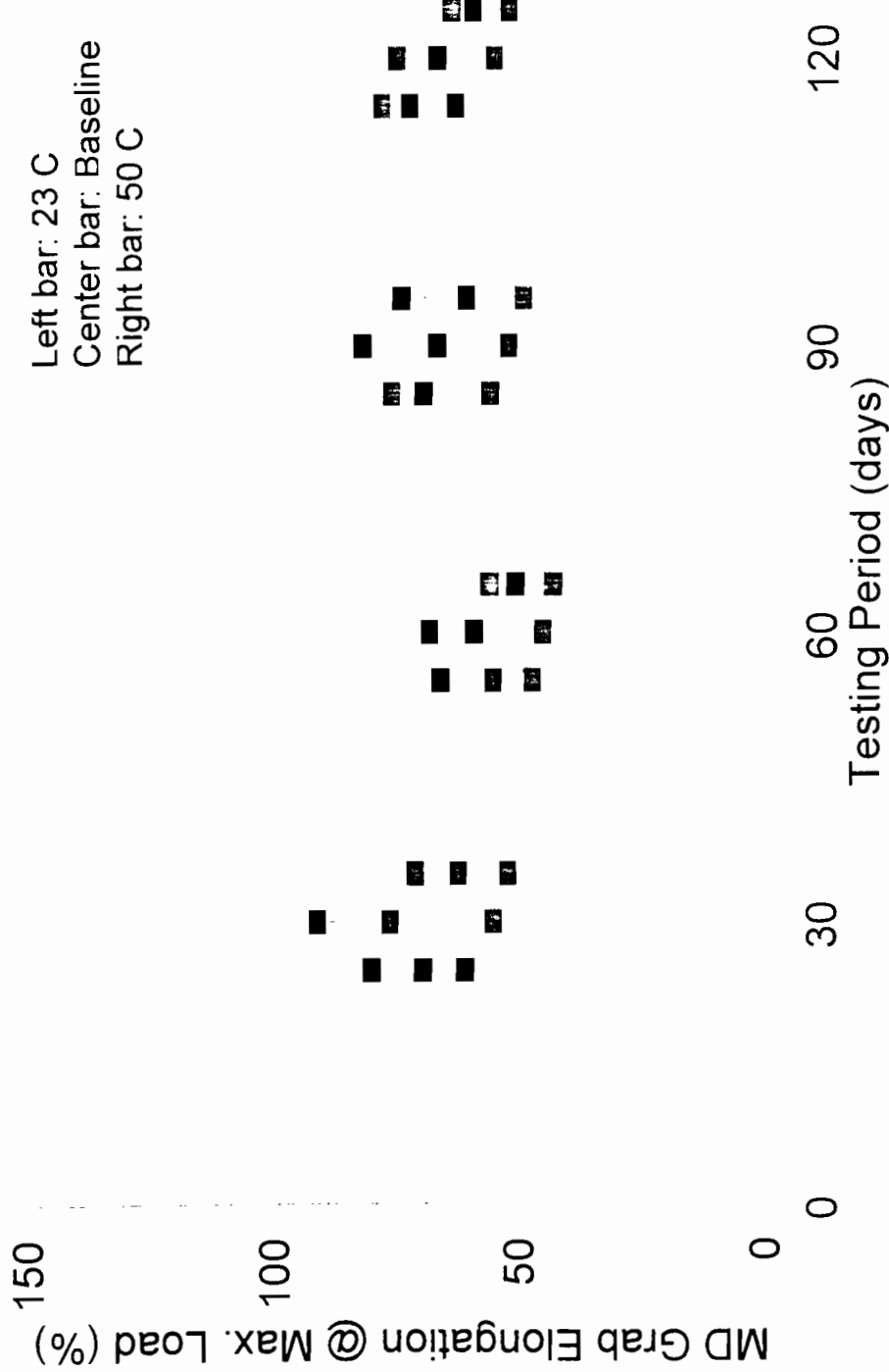




TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

BARBELLA ENVIRONMENTAL EPA METHOD 9090

Amoco 4506 nonwoven GT vs MSW Leachate



1200
1000
800
600
400
200
0

0 30 60 90 120

Left bar: 23 C
Center bar: Baseline
Right bar: 50 C

MD Grab Elongation @ Max. Load (%)

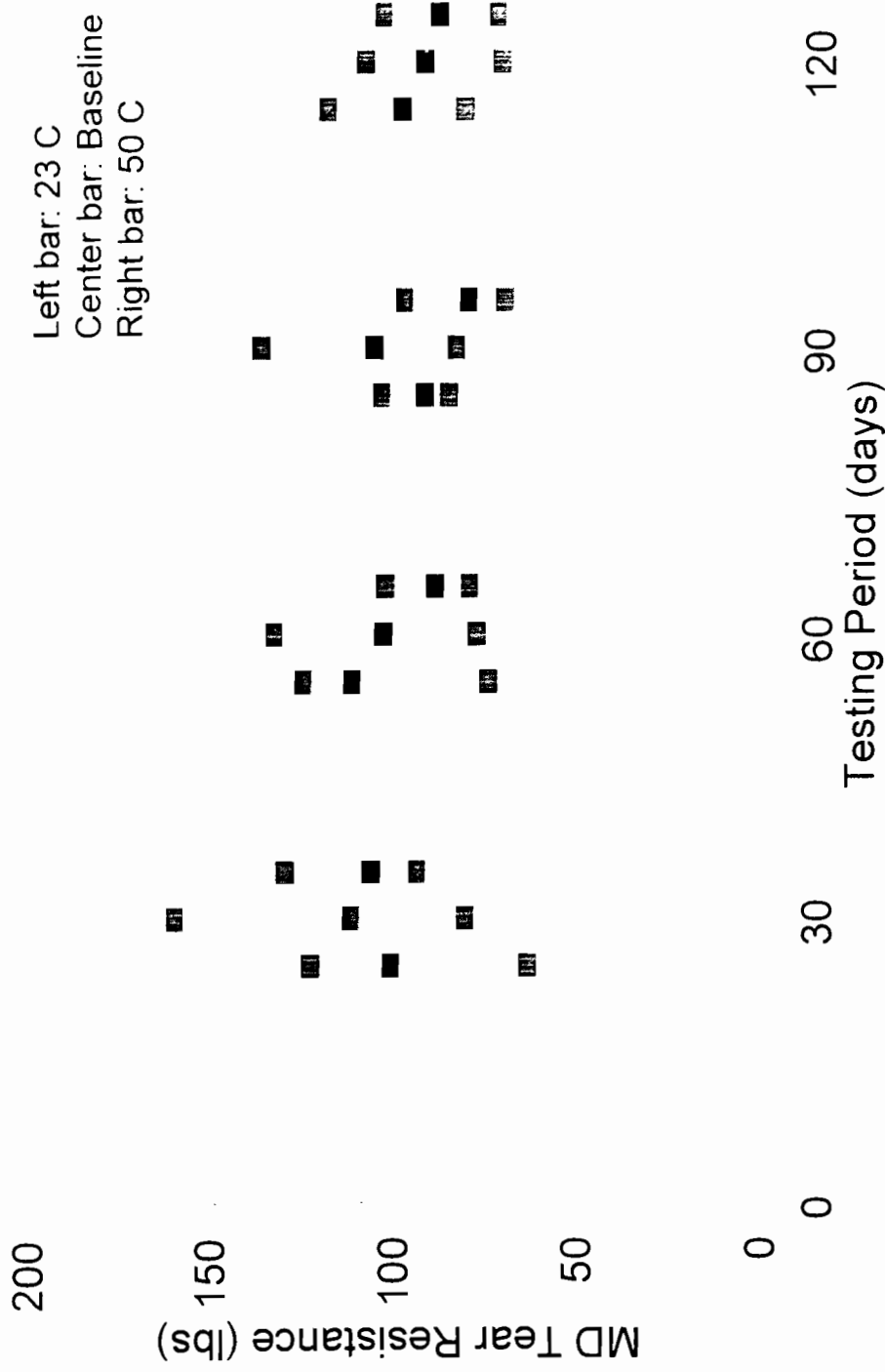
Testing Period (days)

Amoco 4506 nonwoven GT vs MSW Leachate

BARBELLA ENVIRONMENTAL EPA METHOD 9090

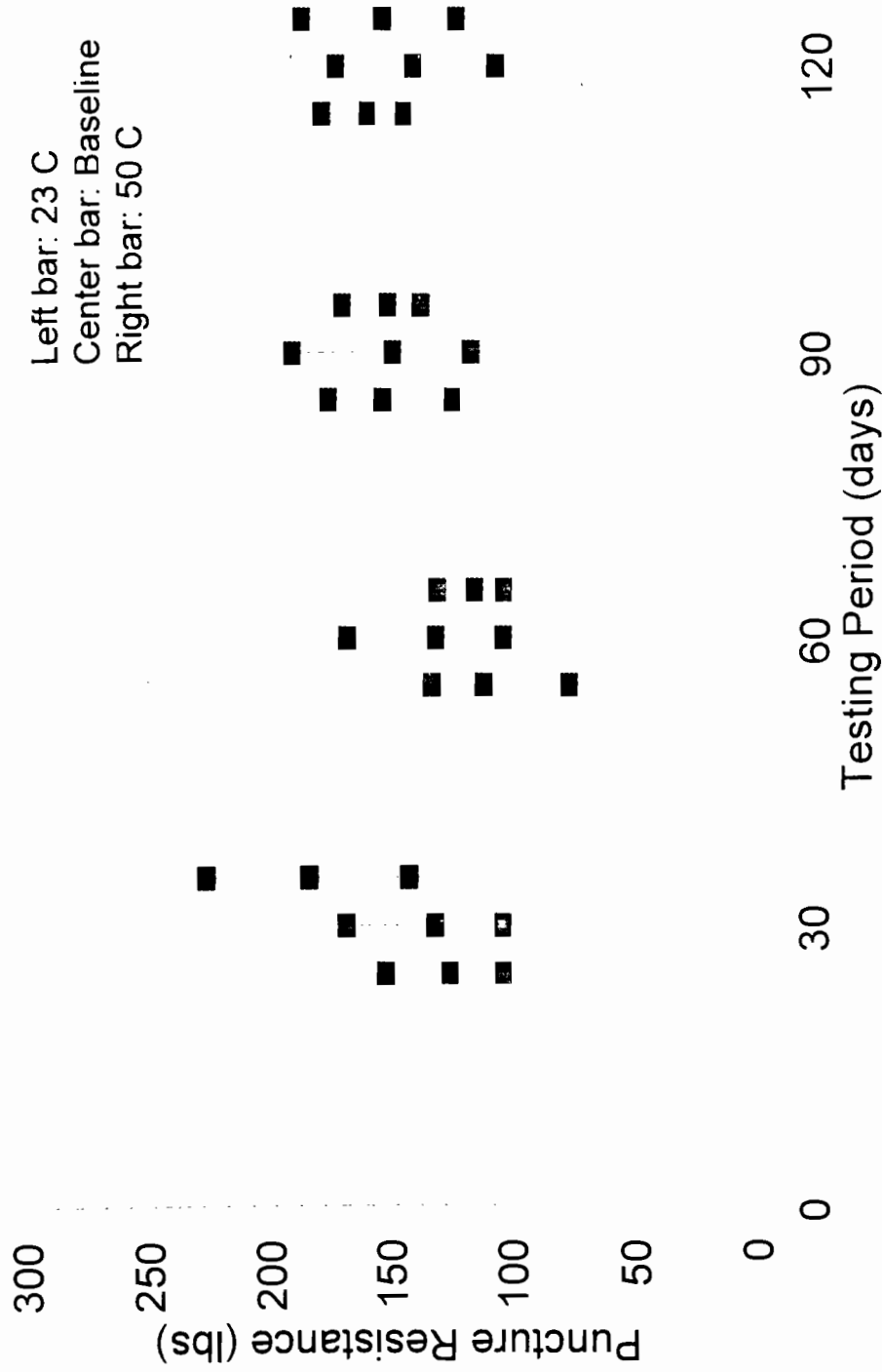
BARBELLA ENVIRONMENTAL EPA METHOD 9090

Amoco 4506 nonwoven GT vs MSW Leachate



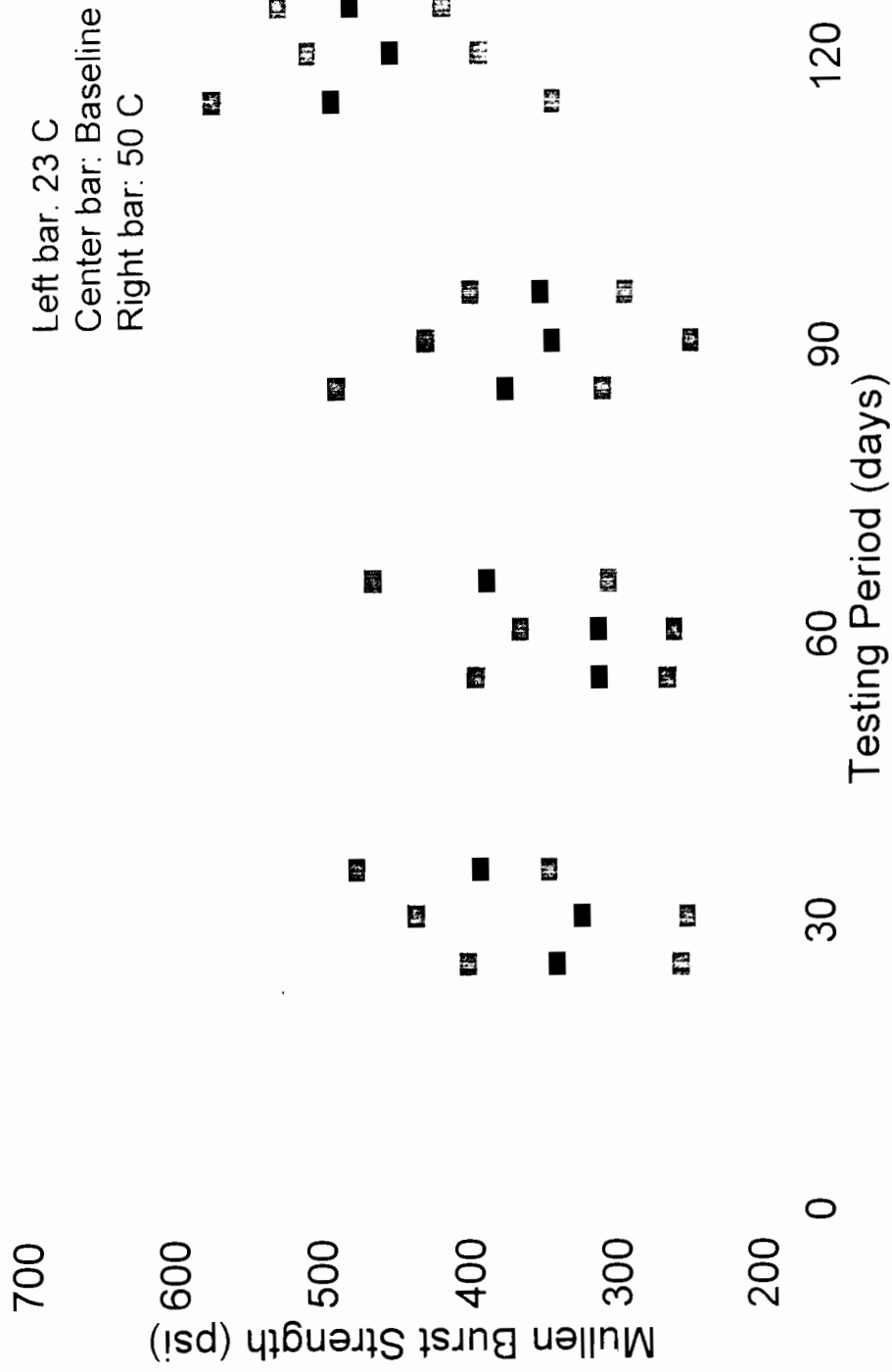
BARBELLA ENVIRONMENTAL EPA METHOD 9090

Amoco 4506 nonwoven GT vs MSW Leachate



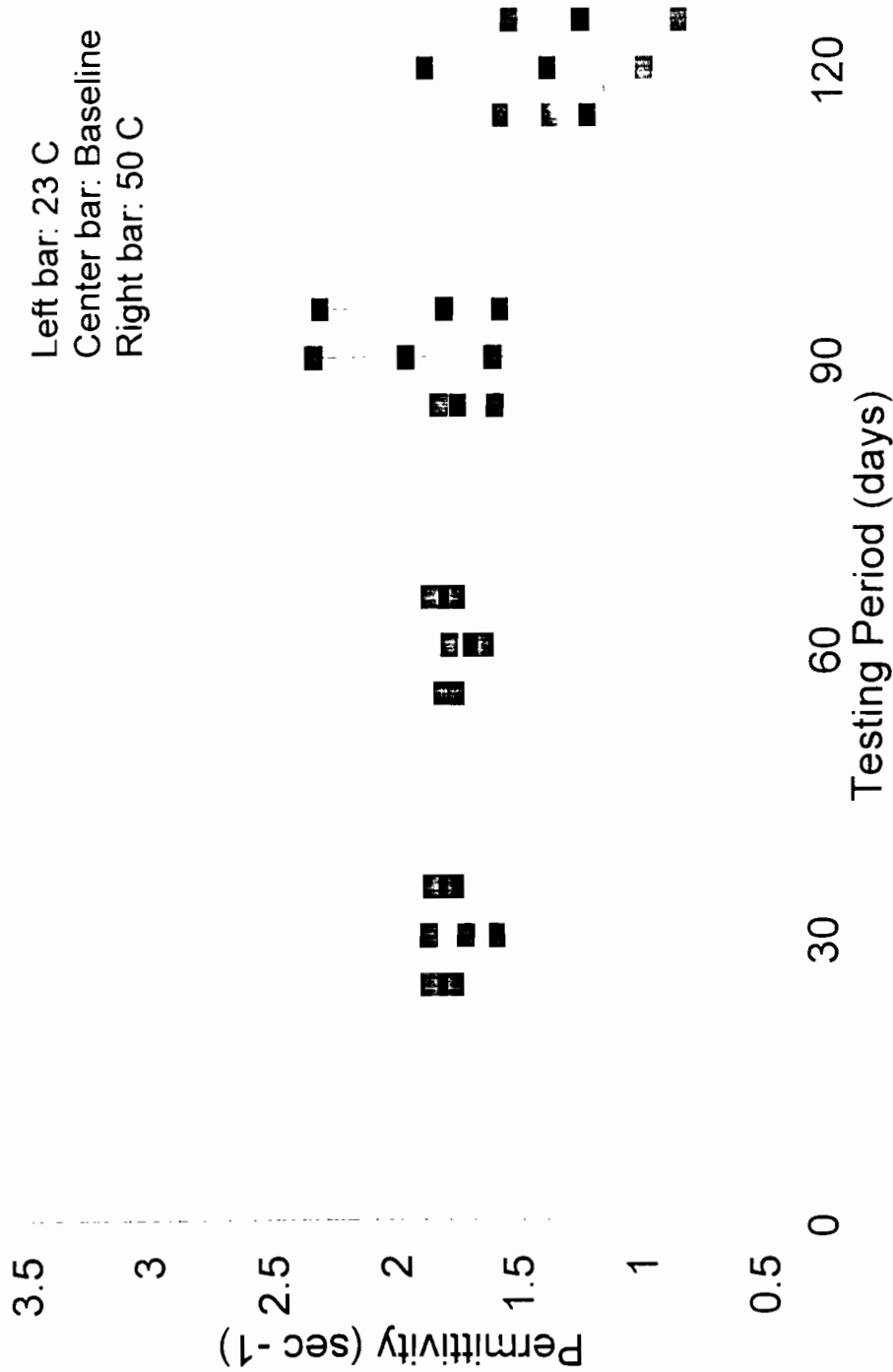
BARBELLA ENVIRONMENTAL EPA METHOD 9090

Amoco 4506 nonwoven GT vs MSW Leachate



BARBELLA ENVIRONMENTAL EPA METHOD 9090

Amoco 4506 nonwoven GT vs MSW Leachate



EPA METHOD 9090 TEST RESULTS

GEOTEXTILE DIMENSIONS

TABLE OF CHEMICAL COMPATIBILITY TEST RESULTS
Exposed to MSW Leachate

Report Date June 21, 1997

Exposure Time and Temperature

Test Parameters	Temp	30 Day			60 Day			90 Day			120 Day		
		Baseline	Exposed	% Change	Baseline	Exposed	% Change	Baseline	Exposed	% Change	Baseline	Exposed	% Change
GEOTEXTILE: Amoco 4506 6oz. nonwoven filter													
Thickness (mils)	23C	56	71	26.8	58	74	27.6	61	69	13.1	62	76	22.6
	50C	65	81	24.6	63	75	19.0	55	65	18.2	60	77	28.3
Length (inches)	23C	8.00	7.93	-0.9	8.01	7.90	-1.4	8.01	7.95	-0.7	8.01	7.85	-2.0
	50C	8.02	7.91	-1.4	8.02	7.88	-1.7	8.01	7.92	-1.1	8.02	7.84	-2.2
Width (inches)	23C	4.03	4.02	-0.2	4.03	4.01	-0.5	4.02	4.03	0.2	4.03	3.99	-1.0
	50C	4.05	4.02	-0.7	4.05	4.00	-1.2	4.04	4.03	-0.2	4.03	4.00	-0.7
Mass (g)	23C	4.06	4.07	0.2	4.91	4.88	-0.6	5.14	5.16	0.4	4.59	4.65	1.3
	50C	5.18	5.28	1.9	5.07	5.25	3.6	4.66	4.83	3.6	5.21	5.45	4.6

BET

BARBELLA ENVIRONMENTAL TECHNOLOGY, INC.

24 Tannery Road
Somerville, NJ 08876
TEL 908-534-1664
FAX 908-534-1697

November 25, 1996

Mr. Phil McQuiston, P.E.
Ogden Remediation Services
166 Route 303
West Nyack, NY 10994

Re: Leachate Collection Line - Geotextile
Clarkstown Landfill

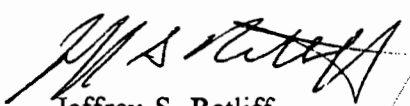
Dear Phil:

On November 25, 1996, BET discussed with Roy F. Weston's, Duane Seamen, the results of the 1994 testing of the Amoco 4506 Leachate Collection Trench Geotextile. He stated that the information provided by Amoco was satisfactory. The product submitted to EPA 9090 testing, meets or exceeds the minimum values required in Table 06020-1 but do not meet the twenty percent deviation from a control sample of the Amoco 4506. Mr. Seaman mentioned that the material can be ordered provided that similar results are obtained from a new EPA 9090, 120 Day test done on the Clarkstown Leachate. He stated that the 20 percent deviation as specified on table 06020-1 can be flexible based upon Weston's review and interpretation of the averaged tested results of the Amoco 4506. At this time BET brought to his attention that we have obtained four additional EPA 9090 test results from other major manufacturers of geotextiles and each one had similar results.

BET is asking that an approval of the Amoco 4506 for the leachate collection trench be provided in writing based upon previously submitted results. BET's submittal meets or exceeds the test values for the EPA 9090 when comparing the tested samples to the specified minimum results given a twenty percent deviation, in Table 06020-1. If the results are to be compared to a control sample instead of the minimum values, Table 06020-1, there is no known fabric on the market that will meet this comparison. Please provide BET with a approved manufacturer, if comparing to a control sample is required.

As you know we are scheduled to begin the construction of the leachate trench on December 2, 1996 and have not been able to order the leachate geotextile based upon Weston's comments and concerns with the fabric. Please expedite an approval of the product to prevent project delays.

Yours truly,


Jeffrey S. Ratliff
Project Engineer

SEAM STRENGTH OF SEWN GEOTEXTILES

ASTM D-4884

Client	OGDEN REMEDIATION SERVICES	Job Number	96S2111-16
Project	CLARKSTOWN SANITARY LANDFILL	Date:	08/20/97
Material	6 oz N-W GEOTEXTILE	Tested By:	D.T.
Sample ID:	HEAT BONDED SEAM	Checked By	K.U.
	SAMPLED ON 8/19/97	Machine	ATS 900B w/ 8"x1" grips

SPECIMEN CONDITIONING --- DRY

No. STICHES per INCH

N/A

Specimen No.	Breaking Force (lb)	Tensile Strength (lb/ft)	Seam Efficiency %	Time to Rupture sec	Type of Failure
1	91.5	137.25	N/A	148.00	Seam Failure
2	90.60	135.9	N/A	110.00	Seam Failure
3	86.20	129.3	N/A	97.00	Seam Failure
AVERAGE	89.43	134.15		118.33	

Spec 202
112
OK

APPENDIX E5:

Drainage Net/Composite Certified Test Reports

DRAINAGE NET NS1305

The drainage net shall be an integrally formed polyethylene net structure. It shall have uniform channels, open area and thickness to assure uniform flow throughout the structure. It shall have high tensile strength and tear strength to resist installation damage and loading on steep slopes. It shall also have a low compressibility under high loadings to maintain a high transmissivity under a range of loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below.

PROPERTY	TEST METHOD	NOTES	UNITS	VALUE
<u>Flow Capacity</u>				
• Gradient of 1				
• Transmissivity @ 500 psf	ASTM 4716		$\times 10^{-3}$ ft ² /sec (gpm/ft)	14.5 (6.5)
• Transmissivity @ 10,000 psf			$\times 10^{-3}$ ft ² /sec (gpm/ft)	8.3 (3.7)
• Transmissivity @ 20,000 psf			$\times 10^{-3}$ ft ² /sec (gpm/ft)	2.9 (1.3)
<u>Mechanical Properties</u>				
• Porosity		1		0.55-0.60
• Peak Tensile Strength MD	ASTM D5035 Modified	2,5	lbs/foot	370
• Compressibility @ 20,000 psf	TTM 2.2	3,4,5	%	50
<u>Material</u>				
• Polyethylene-Specific Gravity	ASTM D792		g/cm ³	0.940
• Carbon Black Stabilization	ASTM D4218		%	2.5
<u>Dimensions</u>				
• Thickness	O.D. Calipered	2,6,7	inches	0.15
• Unit Weight			oz/yd ²	22
• Open Area	COE Method Modified		%	58
• Roll Length			ft	300
• Roll Width			ft	14.0
• Roll Weight			lbs	640

Notes:

1. Except where noted all reported test values are nominal.
2. Minimum Value.
3. Compression tests are performed on a 2-inch square sample loaded at a 1mm/minute constant rate of strain.
4. Maximum Value.
5. Tensile Strength and Compressibility properties shall be tested by the manufacturer every 10,000 square yards of products.
6. Thickness is measured by placing the specimen flat on a comparator base and lowering a round 1/2 inch diameter flat end contact surface squarely over a junction.
7. Product thickness shall be measured by the manufacturer every 2,500 square yards of product.

DRAINAGE COMPOSITE DC3205

The drainage composite shall consist of a geotextile bonded to both sides of a drainage net. The drainage composite shall have a low compressibility in order to maintain high flow capacity over a wide range of confining pressures. The bonding process shall not introduce adhesives or other foreign products. The strength of the bond between the drainage net and the geotextile shall be greater than the friction developed between the geotextile and a soil. The drainage composite shall maintain a high flow under long term loading conditions and shall be resistant to all forms of biological or chemical degradation normally encountered in a soil environment. The drainage composite shall conform to the property requirements listed below.

PROPERTY	TEST METHOD	NOTES	UNITS	VALUE
Flow Capacity	ASTM 4716	1		
• Gradient of 1				
• Transmissivity @ 500 psf			$\times 10^{-3} \text{ft}^2/\text{sec}$ (gpm/ft width)	14.5 (6.5)
• Transmissivity, @ 10,000 psf			$\times 10^{-3} \text{ft}^2/\text{sec}$ (gpm/ft width)	8.3 (3.7)
• Transmissivity @ 20,000 psf			$\times 10^{-3} \text{ft}^2/\text{sec}$ (gpm/ft width)	2.9 (1.3)
Mechanical Properties		3,4,5		
• Compression @ 20,000 psf	TTM 2.2	1,2	%	50
• Peak Tensile Strength-MD	ASTM D5035	6	lbs/ft	370
Drainage Net				
• Aperture Size	I.D. Calipered	7	inches	0.3
• Thickness	O.D. Calipered	8,9	inches	0.15
• Polyethylene Polymer				
-Specific Gravity	ASTM D792		g/cm^3	0.940
-Carbon Black Stabilization	ASTM D4218		%	2.5
Geotextile		10		
• Grab Tensile Strength	ASTM D4632		lbs	135/150
• AOS	ASTM D4751		US Std.Sv.Sz.	70-100
• Weight			oz/sy	4.0/4.5/6.0/8.0
Composite				
• Laminate Bond Strength	ASTM F904	11	g/in	400
• Dimensions - Finished Product				
-Thickness	O.D. Calipered		in	0.19
-Roll Length			ft	225
-Roll Width (Drainage Net)			ft	14
• Roll Weight			lbs	720

Notes

1. Test values are for the core net only.
2. Compression Tests are performed on a 2-inch square sample loaded at a 1mm/minute constant rate of strain.
3. Test values are for drainage net prior to bonding process.
4. All test values are nominal, unless otherwise indicated.
5. MD - Machine (roll) Direction.
6. Minimum value.
7. Inside dimensions in each principal direction are measured by calipers.
8. Outside dimensions in each principal direction are measured by calipers.
9. Thickness is measured by placing the specimen flat on a comparator base and lowering a round 1/2 inch diameter flat end contact surface squarely over a junction.
10. Geotextile splices within each roll of finished goods shall be considered acceptable product. The splicing methods shall include, but are not limited to, stitching or heat bonding. The finished splice shall maintain the continuity of the filtration function of the geotextile. These methods will be considered viable and acceptable unless otherwise specified.
11. Minimum value of a random 5 sample (MD) average between the polyethylene geonet and the needle punched geotextile.

DEC 13 '96 13:19 FR

TO 14047259:50

P.01/05



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

December 13, 1996

Mr. David Hall
Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

fax: 404-705-9660

Dear Mr. Hall:

Thank you for consulting TRI/Environmental, Inc. for your geosynthetic testing needs. TRI/Environmental, Inc. (TRI) is pleased to submit this final report for laboratory testing in support of the Clarkstown Landfill project.

TRI Job Reference Number:	E2041-55-08
Date Received:	11-27-96
Material(s) Tested:	-1 Tensar DC4205-TG650 double laminated geocomposite -1 Tensar DC4205-TG650 double laminated geocomposite NS1305 geonet component
Sample ID(s)	Lot #: 85263, Roll #: A022
Test(s) Requested	Melt Flow Index (ASTM D 1238) Carbon Black Content (ASTM D 1603) Gradient Density (ASTM D 1505) Transmissivity (ASTM D 4716) ✓ Peel Strength (ASTM F 904) ✓

If you have any questions or require any additional information please call us at 1-800-880-8378

Sincerely,

Martin D. Nelson
Project Manager, Geosynthetic Technologies

TRI/Environmental, Inc.

DEC 13 '96 13:19 FR

TO 14047059550

P.02/05

**TRI/ENVIRONMENTAL, INC.***A Texas Research International Company***GEOCOMPOSITE TEST RESULTS**

Tensar Corporation
Clarkstown Landfill

Material: Tensar DC4205-TG650 double laminated geocomposite
Geocomposite Lot #: 86263 Roll #: A022

TRI Log #: E2041-65-08

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD	PROJECT SPEC
Peel Strength (ASTM D 751, mod. *)	1	2	3	4	5			
A Minimum peel strength (ppi) - MD	1.6	2.1	1.7	7.8	3.6	3.3	2.3	N/A
A Minimum peel strength (g/in) - MD	726	953	772	3541	1689	1518	1068	N/A
A Minimum peel strength (ppi) - TD	6.6	4.5	2.4	1.8	1.2	3.3	2.0	N/A
A Minimum peel strength (g/in) - TD	2986	2043	1080	863	545	1507	897	N/A
B Minimum peel strength (ppi) - MD	3.1	6.5	5.0	4.4	6.9	6.0	1.3	N/A
B Minimum peel strength (g/in) - MD	1407	2497	2270	1998	3133	2281	565	N/A
B Minimum peel strength (ppi) - TD	1.6	4.4	6.7	2.4	1.8	3.6	2.7	N/A
B Minimum peel strength (g/in) - TD	881	1998	3950	1090	817	1707	1212	N/A

*"A" denotes arbitrary side of geocomposite, while "B" denotes opposite side from "A".

MD Machine Direction

TD Transverse Direction

N/A Not Available

* ASTM F 904 referenced

The testing herein is based upon accepted industry practice as well as the test method listed.

TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material

MDN 12-13-96
Quality Review/Date

12-13-96
16-18 tested by
15C

DEC 13 '96 13:19 FR

TO 14047055550

P.03/05

TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

HYDRAULIC TRANSMISSIVITY LABORATORY REPORT (ASTM D4716) Tensar Corporation

TRI Log No. E-2041-55-08
Report Date 12-03-96

Material: Tensar DC4205-TG650 double laminated geocomposite
Fluid Media: Water
Confining Pressure (psf): 2000
Seating Time: 15 minutes

Project Name: Clarkstown Landfill

Lot # 88263, Roll # A022

Test Number	Direction	Hydraulic Gradient	Nominal Thickness (in)	Flow Rate (ml/sec)	Transmissivity (gal/min/ft)	Transmissivity (m ² /s)
1	MD	0.10	0.2000	48.5	6.86	1.42E-03
2	MD	0.10	0.2000	48.8	6.90	1.43E-03
3	MD	0.10	0.2000	48.4	6.84	1.42E-03
Avg			0.2000	48.6	6.87	1.42E-03
Std Dev			0.0000	0.2	0.03	6.36E-06

Transmissivity Box Configuration: Steel Plate
Double Laminated Geocomposite
Steel Plate

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDA 12-13-96
Quality Review/Date

9063 Bee Caves Road • Austin, Texas 78733-6201 • (512)263-2101 • FAX (512)263-2558

DEC 13 '96 13:19 FR

TO 14847059550

P.04/05



HYDRAULIC TRANSMISSIVITY LABORATORY REPORT (ASTM D4716) Tensar Corporation

TRI Log No. F2104155-0A
Report Date 12-03-96

Lot #: 88251, Roll #: A022

Material Tensar DC4205-TG650 double laminated geocomposite -
NS1305 HDPE geonet component
Fluid Media Water
Confining Pressure (psf) 2000
Sealing Time: 15 minutes

Project Name: Clarkstown Landfill

Test Number	Direction	Hydraulic Gradient	Nominal Thickness (in)	Flow Rate (ml/sec)	Transmissivity (gal/min/ft)	Transmissivity (m ² /s)
1	MD	0.10	0.2000	85.9	12.82	2.65E-03
2	MD	0.10	0.2000	84.1	12.40	2.57E-03
3	MD	0.10	0.2000	82.2	12.12	2.51E-03
Avg.			0.2000	84.4	12.45	2.58E-03
Std Dev.			0.0000	2.4	0.35	7.22E-05

Transmissivity Box Configuration: Steel Plate
(top to bottom) Geocomposite HDPE Geonet Component
Steel Plate

The testing herein is based upon accepted industry practice as well as the test method tested.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDN 12-12-96
Quality Review/Date

9063 Bee Cave Road • Austin, Texas 78733-6201 • (512)263-2101 • FAX (512)263-2558

DEC 13 '96 13:19 FR

TO 1404705:650

P.05/05



GEOCOMPOSITE TEST RESULTS
 Tensar Corporation
 Clarkstown Landfill

Material: Tensar DC420S-TG650 double laminated geocomposite - NS1305 geonet component
Geocomposite Lot #: 86283 Roll #:A022

TRI Log #: E2041-55-08

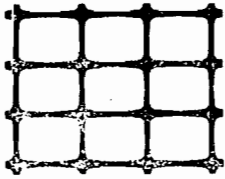
PARAMETER	TEST REPLICATE NUMBER										MEAN	STD	PROJECT SPEC
	1	2	3	4	5	6	7	8	9	10			
Melt Flow Index (ASTM D 1238)													
Melt Flow Index (grams/10 min)	0.49	0.50	0.52								0.50	0.01	N/A
Carbon Black Content (ASTM D 1603)													
% carbon black (%)	2.45	2.40									2.43	0.03	N/A
Gradient Density (ASTM D 1505)													
Density (g/cm ³)	0.955	0.955	0.953								0.954	0.001	N/A

MD Machine Direction
 TD Transverse Direction
 N/A Not Applicable

The testing herein is based upon accepted industry practice as well as the test method listed.
 TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

Handwritten:
 9/11/05
 Add 12-13-96
 Quality Review/Date

9063 Bee Caves Road • Austin, Texas 78733-6201 • (512)263-2101 • FAX (512)263-2558



Tensar

April 27, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10094

*to meet the
contents listed
in the bill of*

The Tensar Corporation

1210 Ogden Road
Morrisville, Georgia 30089
Tel: 770-966-1235
Fax: 770-966-1236

Reference: TENSAR ORDER NUMBER: TES 0365
PURCHASE ORDER NUMBER: 7-52-P2112300
BILL OF LADING NUMBER: TMP 22617, 22618

SOLD TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

SHIP TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

This is to certify that DC4205E665A2 Geotextile Composite and NS130550 Geonet as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheets dated January 22, 1998. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Further, The Tensar Corporation DC4205E665A2 and NS130550 do not exceed 2% by weight of reclaimed polymer added to the resin during manufacturing.

Sincerely,

Thomas N. Dobras

Thomas N. Dobras, P. E.
Quality Assurance Manager

*to meet the
contents listed
in the bill of*

RECEIVED APR 29 1998

7110, FFX, CC

THE TENSAR CORPORATION GEONET NS130550

The geonet NS130551 shall be an integrally formed polyethylene net structure. It shall have high tensile strength to resist installation damage and loading on steep slopes. It shall also have a high compressive strength to maintain a high transmissivity under high loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min. (per ASTM D1238) and a density range of 0.932 to 0.970 grams/cc (per ASTM D792 or D1505). The geonet is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
Mechanical Properties					
• Transmissivity ² normal pressure = 15,000psf; i=1.0	ASTM D 4716-95 metal plate/net/metal plate	m ² /sec (E-04)	7	MARV	200,000 SF (or per project req.)
• MD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	5.9 (33)	MARV	50,000 SF
• XMD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	2.2 (12)	MARV	
• Thickness	ASTM D 5199-91	mm (mil)	4.0 (157)	MARV	
• Roll length	direct measure	m (ft)	91.5 (300.0)	min	Each roll
• Roll width	direct measure	m (ft)	4.2 (14.0)	min	
UV Stabilization					
• Carbon Black	ASTM D 4218-91 (OR ASTM D 1603-94)	(% weight)	(2.0)	MARV	50,000 SF
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	300 (660)	typical	N/A
• Roll Diameter		m (in)	N/A	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
• Labeling					
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation)

It represents the minimum allowable sample roll average for each specific test.

² Transmissivity results reported by The Tensar Corporation are based on standard index test conditions

Actual performance is dependent upon site specific conditions. Please contact the Tensar Corporation for site specific transmissivity testing.

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 24-APR-98

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-22617 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130550	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK
	E3049	4,200 SF
	E3050	4,200 SF
	E3051	4,200 SF
	E3052	4,200 SF
	E3053	4,200 SF
	E3054	4,200 SF
	E3055	4,200 SF
	E3062	4,200 SF
	E3063	4,200 SF

		37,800

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

REV 1001
REV DATA 10/20/97

Product Code NS130550 TMP Number 22617
Customer Name Ogden Remediation Sales Order Number TES 0365
Project Name Clarkstown Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E3055	1	E3049	P09942	2.138	7.60	3.01	0.684	4.56
	2	E3050						
	3	E3051						
	4	F3052						
	5	E3053						
	6	E3054						
	7	E3055						
E3064	8	E3062	P09942	2.227	6.60	3.26	0.679	4.64
	9	E3063						

0.000

April 27, 1998
Date

Thomas N. Dobras
Thomas N. Dobras, P.E.
Quality Assurance Manager

*specimens were made from
samples taken from the
middle of the roll*

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²

*apples
specimens
49 grams per sq ft*

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions		Plate
		Sample
		Plate

TEST NO.: 4048 PRODUCT: NS130550

RIG NO.: 1 PROJECT: Clarkstown

DATE: 12/19/97 0:00 TEST METHOD: ASTM D4716

LOT NUMBER	ROLL NUMBER	LOAD (kpsf)	HYD GRAD	FLOW	
				gpm/ft width	
E2992	E2992	2.00	0.50	7.576	

TRANSMISSIVITY		
gpm/ft width	(x10 ⁻⁴ m ² /sec)	(x10 ⁻³ ft ² /sec)
15.152	31.364	33.760

exceeds 3 x 10⁻⁵

Thomas N. Dobras

Thomas N. Dobras, P.E.
Quality Assurance Manager

12.22.97
Date



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 2/26/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Southern Polmer Resin Type: SP0107A

Resin Lot Number: P09942

Railcar Number: CCBX 55300

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.718</u>	<u>0.731</u>	<u>0.735</u>	<u>0.736</u>
MFI:	<u>0.712</u>	<u>0.726</u>	<u>0.734</u>	<u>0.722</u>
Density:	<u>0.957</u>	<u>0.958</u>	<u>0.956</u>	<u>0.957</u>
Density:	<u>0.958</u>	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>

Compartment:	B1	B2	B3	B4
MFI:	<u>0.719</u>	<u>0.722</u>	<u>0.723</u>	<u>0.746</u>
MFI:	<u>0.755</u>	<u>0.715</u>	<u>0.714</u>	<u>0.727</u>
Density:	<u>0.956</u>	<u>0.957</u>	<u>0.956</u>	<u>0.957</u>
Density:	<u>0.956</u>	<u>0.958</u>	<u>0.957</u>	<u>0.957</u>

DCN QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization

THE TENSAR CORPORATION GEOCOMPOSITE DC4205 - DOUBLE-SIDED WITH TG600 GEOTEXTILES

Geocomposite DC4205 shall consist of Tensar NS1405 geonet bonded on both sides to 6 oz. non-woven polypropylene geotextiles (continuous filament). The geocomposite shall have a high compressive strength in order to ensure maximum flow capacity under high confining pressures. The bonding process shall not introduce adhesives or other foreign products. The geocomposite shall be resistant to all forms of biological or chemical degradation normally encountered in a soil environment. The geocomposite shall be made from the geonet and geotextile products whose property requirements are listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min (per ASTM D1238) and a density range of 0.952 to 0.963 grams/cc (per ASTM D792 or D1505). The geocomposite is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
GEOTEXTILE PROPERTIES					Per ASTM D4759
• Grab Tensile Strength	ASTM D 4632 ✓	N (lbs)	712 (160)	MARV	
• AOS	ASTM D 4751 ✓	mm (US Std. Sieve)	0.25 (60)	MARV	
• Mass/Unit Area	ASTM D 5261 (or ASTM D 3776) ✓	g/m ² (oz/sy)	203 (6.0)	MARV	
• Water Permeability	ASTM D 4491 ✓	cm/sec	0.3	MARV	
• Water Flow Rate	ASTM D 4491 ✓	m ³ /sec/m ² (gpm/ft ²)	0.09 (135)	MARV	
• U.V. Resistance	ASTM D 4355 ✓	%	70		
CORE NET PROPERTIES (97% minimum virgin polyethylene resin with 2-3% carbon black)					50,000 SF
• MD Ultimate Tensile Strength	ASTM D 5035	kN/m (ppi)	8.4 (48)	MARV	
• Thickness	ASTM D 5199 ✓	mm (in)	5.0 (200)	MARV	
• Carbon Black	ASTM D 4218 (OR ASTM D 1603) ✓	(% weight)	(2.0)	MARV	
FINISHED GEOCOMPOSITE PROPERTIES					50,000 SF
• Peel Adhesion	ASTM F 904 (modified) ² ✓	g/in	454	MARV	
• Transmissivity ³ normal pressure = 15000psf; i=1.0	ASTM D 4716 ✓ metal plate/composite/metal plate	m ² /sec (E-04)	1.0	MARV	200,000 SF (or per project req.)
• Geotextile overlap at edges and unbonded area		mm (in)	75 (3.0)	minimum	Each roll
• Roll Length		m (ft)	68.6 (225)	minimum	
• Roll Width		m (ft)	4.0 (13.0)	minimum	
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	388 (855)	typical	N/A
• Roll Diameter		m (in)	0.8 (31)	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
Packaging and Labeling					
• Black polyethylene bag secured with nylon ties. Bag thickness		mm (mils)	0.12 (5.0)	nominal	
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Peel adhesion ASTM F 904 - 2 inch wide strip. Reported value per specimen is average of all computed points between 1" and 5" of separation.

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 24-APR-98

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-22618 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E665A2	13.5FT X 225FT NS1405/ETI TG600 (6 OZ PP) 2-SIDED DN4 DRAINAGE COMP PEEL 500 GMS - OVERLAP 3 INCH UNBONDED 3 INCH

H10076	2,997 SF
H10077	3,074 SF
H10078	3,107 SF
H10079	3,150 SF
H10080	3,058 SF
H10081	3,085 SF
H10082	3,114 SF
H10083	3,102 SF
H10084	3,013 SF
H10085	3,058 SF
H10086	3,103 SF
H10087	3,128 SF
H10088	3,010 SF
H10089	3,071 SF
H10090	3,100 SF
H10091	3,009 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	H10092	3,060 SF
	H10094	3,071 SF

		55,310

*confirm - these are all
in the 1st 500
check in much - they are 1100
as for*

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

TMP Number 22618
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

Product Code DC4205E665A2
Customer Name Ogden Remediation
Project Name Clarkstown

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Secondary (Bottom) Geotextile Roll No.	Finished Product	
					Primary (Top) Geotextile Roll No.	QC Core Net Sample Roll Number		Top	Bottom
H10076	1	H10076	E-6072	E6073	701 6694		701 6468	879.6	690.8
H10089	2	H10077	E-6072		701 6694		701 6468	1290.4	909.4
	3	H10078	E-6072		701 6694		701 6468		
	4	H10079	E-6072		701 6694		701 6468		
	5	H10080	E-6998	E6998	701 6694		701 6468		
	6	H10081	E-6998		701 6694		701 6468		
	7	H10082	E-6998		701 6694		701 6468		
	8	H10083	E-6998		701 6688		701 6693		
	9	H10084	E-6463	E6465	701 6688		701 6693		
	10	H10085	E-6463		701 6688		701 6693		
	11	H10086	E-6463		701 6688		701 6693		
	12	H10087	E-6463		701 6688		701 6693		
	13	H10088	E-6070	E6070	701 6688		701 6693		
	14	H10089	E-6070		701 6688		701 6693		
H10094	15	H10090	E-6070		701 6688		701 6693	1377.9	773.5
	16	H10091	E-6070		701 6691		701 6695		
	17	H10092	E-6461	E6462	701 6691		701 6695		
	18	H10094	E-6461		701 6691		701 6695		

Jan 12, 1998

Date

Thomas N. Dolras, P. E.
Quality Assurance Manager

NOT FOR CONSTRUCTION
REV NO 3
REV DATE 08/07/96

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

Product Code	NS140565	TMP Number	22618
Customer Name	Ogden Remediation	Sales Order Number	TES 0365
Project Name	Clarkstown	Purchase Order Number	7-52-P2112300

Raw Material QC Testing		Finished Product QC Testing				
QC Core Net Sample Roll Number	Resin Lot Number	Carbon Black (%)	Ultimate Tensile Strength (kN/m) MD	Ultimate Tensile Strength (kN/m) XMD	Mass/Area (kg/m ²)	Thickness (mm)
		ASTM D4218	ASTM D5035	ASTM D5035	ASTM D5261-92	ASTM D5199
E6070	I7JA53 ✓	2.761	9.86	2.85	0.808	5.55
E6073	I7JA53 ✓	2.730	9.63	2.88	0.808	5.51
E6462	H7QC41 ✓	2.690	9.80	3.30	0.856	5.59
E6465	H7QC41 ✓	2.750	9.95	2.72	0.840	5.74
E6998	P010764 ✓	3.074	10.80	3.30	9.010	5.63

Thomas N. Dobras
Thomas N. Dobras, P. E.
Quality Assurance Manager

April 27, 1998
Date

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²

The Tensor Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

NEOPRENE
SAMPLE - LINER
PLATE

TEST NO.: 1495-1500 PRODUCT: DC4205E66AP2

RIG NO.: 1 PROJECT: Clarkstown

DATE: 4/10/97 0:00 TEST METHOD: ASTM D4716

LOT NUMBER	ROLL NUMBER	LOAD (kpsf)	HYD GRAD
H2133	H2133	2.00	1.00
H2165	H2165	15.00	1.00
H2211	H2211	2.00	1.00
H2241	H2241	2.00	1.00
H2286	H2286	2.00	1.00
H2301	H2301	2.00	1.00

FLOW
gpm/ft width
2.907
1.563
3.641
2.060
3.261
1.613
3.304
1.856
2.083
0.943
2.768
1.344

TRANSMISSIVITY		
gpm/ft width	($\times 10^{-4} \text{ m}^2/\text{sec}$)	($\times 10^{-3} \text{ ft}^2/\text{sec}$)
2.907	6.018	6.477
1.563	3.234	3.482
3.641	7.537	8.112
2.060	4.265	4.591
3.261	6.750	7.266
1.613	3.339	3.594
3.304	6.839	7.362
1.856	3.843	4.136
2.083	4.313	4.642
0.943	1.953	2.102
2.768	5.729	6.167
1.344	2.782	2.995

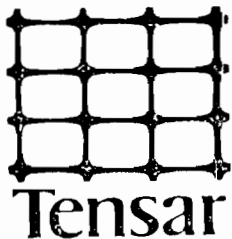
↑ 1st and 2nd GC sample #
performed on 12-22-97

Thomas N. Dobras

Thomas N. Dobras, P.E.

Quality Assurance Manager

Date



Date Tested: 9/15/97
Tested By: Dakshesh Patel

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: _____ Signature _____ Resin Type: HDIG
Resin Lot Number: H7QC41
Railcar Number: CHEX 402

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.708</u>	<u>0.703</u>	<u>0.731</u>	<u>0.645</u>
MFI:	<u>0.734</u>	<u>0.720</u>	<u>0.664</u>	<u>0.736</u>
Density:	<u>0.965</u>	<u>0.961</u>	<u>0.963</u>	<u>0.950</u>
Density:	<u>0.966</u>	<u>0.967</u>	<u>0.963</u>	<u>0.971</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.747</u>	<u>0.731</u>	<u>0.725</u>	<u>0.745</u>
MFI:	<u>0.692</u>	<u>0.706</u>	<u>0.704</u>	<u>0.721</u>
Density:	<u>0.968</u>	<u>0.963</u>	<u>0.955</u>	<u>0.969</u>
Density:	<u>0.967</u>	<u>0.967</u>	<u>0.965</u>	<u>0.965</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date 9/27/96

David Hall /ce
Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 7/16/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

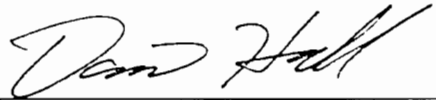
Resin Certification Report

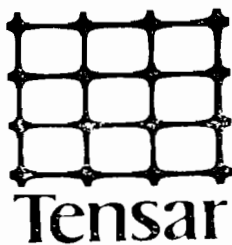
Vendor: Signature Resin Type: LZ013
Resin Lot Number: I7JA53 ✓
Railcar Number: CCHEX 84

Melt Flow Index (g/10 min.): ASTM D1238 Average rail car melt flow: 0.692
Density (g/cc): ASTM D792 Average rail car density: 0.950

Compartment:	T1	T2	T3	T4
MFI:	<u>0.652</u>	<u>0.704</u>	<u>0.711</u>	<u>0.704</u>
MFI:	<u>0.711</u>	<u>0.665</u>	<u>0.703</u>	<u>0.717</u>
Density:	<u>0.960</u>	<u>0.956</u>	<u>0.970</u>	<u>0.971</u>
Density:	<u>0.949</u>	<u>0.972</u>	<u>0.972</u>	<u>0.973</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.689</u>	<u>0.677</u>	<u>0.772</u>	<u>0.711</u>
MFI:	<u>0.661</u>	<u>0.653</u>	<u>0.689</u>	<u>0.66</u>
Density:	<u>0.932</u>	<u>0.932</u>	<u>0.932</u>	<u>0.936</u>
Density:	<u>0.940</u>	<u>0.934</u>	<u>0.933</u>	<u>0.930</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Date Tested: 9/23/97
Tested By: Dakshesh

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Southern Polymer Resin Type: HDIG

Resin Lot Number: P010764

Railcar Number: UNPX 122752

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.699</u>	<u>0.700</u>	<u>0.724</u>	<u>0.694</u>
MFI:	<u>0.720</u>	<u>0.673</u>	<u>0.688</u>	<u>0.679</u>
Density:	<u>0.938</u>	<u>0.952</u>	<u>0.976</u>	<u>0.942</u>
Density:	<u>0.969</u>	<u>0.978</u>	<u>0.978</u>	<u>0.968</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.714</u>	<u>0.700</u>	<u>0.774</u>	<u>0.693</u>
MFI:	<u>0.716</u>	<u>0.709</u>	<u>0.675</u>	<u>0.700</u>
Density:	<u>0.957</u>	<u>0.968</u>	<u>0.950</u>	<u>0.978</u>
Density:	<u>0.956</u>	<u>0.969</u>	<u>0.943</u>	<u>0.967</u>

DCN. QA-RMQC-CERT
Revision No.: <u>1</u>
Revision Date: <u>9/27/96</u>

Charles Rozin for David Hall
Authorization

EVERGREEN
TECHNOLOGIES, INC.

September 25, 1997

Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

Subj: TG600 Geotextile Certificate of Compliance

Ref: Order 1926 PO # 7-9245

Dear Sir/Madam:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 70101.

PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6 oz/yd ²
Thickness	ASTM D 5199	65 * Mil
Grab Strength	ASTM D 4632	160 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	65 lbs
Mullen Burst	ASTM D 3786	285 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S. (2)	ASTM D 4751	.250 * mm (60) * US Std Sieve
Permittivity	ASTM D 4491	1.8 * 1/sec
Water Permeability	ASTM D 4491	0.3 * cm/sec
Water Flow Rate	ASTM D 4491	135 * gpm/sq ft
U.V. Resistance (500 hours)	ASTM G 53	70 %

(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

(2) Smaller sieve size number represents the maximum average roll value.

- * Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Sincerely,

Manoj Tyagi
Manoj Tyagi
QA Manager



EVERGREEN TECHNOLOGIES INC.
MOA/MQC LABORATORY
EVERGREEN, ALABAMA

10/15/97
PRODUCT GRADE: TG 600
LOT NUMBER: 70101
COLOR: BLACK
ROLL DIM.: 15ft 4in x 1860ft

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM D3261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	FUNCTIONALITY ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 (lbs)	THICKNESS ASTM D5199 (mil)	HYDRAULIC TESTS		A.O.S. AUTX D6751 (mm)
			ASTM D4632	M.D. TENS. (lbs)	ELONG. (%)	C.D. TENS. (lbs)					ASTX D4691 PERFOR. (psi)	WATER FLOW (gpm/ft2)	
7016422	09/21/97	6.4	192.3	134.0	229.1	58.7	308.2	101.7	78.5	91.6	96		0.214
7016423	09/21/97	6.1	180.4	134.0	208.6	56.4	301.8						
7016424	09/21/97	6.2	198.9	139.7	238.0	60.2	299.4	101.6	88.6	86.0	99		
7016426	09/22/97	6.5	204.2	158.8	238.2	65.9	298.5	91.6	88.0	100.1	98		
7016427	09/22/97	5.7	209.3	161.7	257.9	61.2	329.0						
7016428	09/22/97	6.8	228.2	150.4	247.8	63.1	333.3						
7016429	09/22/97	7.1	195.6	148.1	245.5	61.1	330.7	107.3	92.0	105.7	103		
7016430	09/23/97	6.7	199.3	149.5	274.2	65.0	343.3						
7016431	09/23/97	6.6	228.8	153.8	254.4	54.3	338.9	102.3	104.2	103.6	99		
7016434	09/23/97	6.3	218.6	145.0	249.2	63.0	327.9	102.9	103.6	109.4	97		
7016437	09/23/97	6.4	212.8	161.3	228.6	67.6	323.0	101.0	94.9	109.9	95		0.406
7016440	09/23/97	6.6	203.2	142.9	230.4	57.8	315.2	102.8	92.9	103.7	88		0.232
7016443	09/23/97	6.4	192.4	146.3	232.1	62.4	310.7	94.2	107.1	100.2	86		
7016444	09/23/97	6.3	202.7	149.9	228.6	63.3	321.4	97.1	86.9	96.1	91		
7016445	09/23/97	6.4	206.5	152.3	233.5	68.3	325.2						
7016446	09/23/97	6.4	203.7	173.8	227.5	65.1	320.9						
7016447	09/23/97	6.2	197.2	155.8	237.8	65.7	331.5	96.1	80.9	92.7	93		
7016448	09/23/97	6.4	204.2	184.9	236.8	65.3	317.3						
7016450	09/23/97	6.2	197.8	182.3	221.3	68.1	319.8	96.6	78.7	96.9	106		
7016452	09/24/97	6.3	194.4	182.2	215.5	63.3	318.4						
7016453	09/23/97	6.3	196.1	171.6	230.7	75.8	327.2	93.0	85.4	92.9	91	0.430	0.230
7016454	09/24/97	6.3	196.2	157.3	230.5	67.4	311.2						
7016455	09/24/97	6.4	186.9	153.5	241.1	65.8	323.0						
7016456	09/23/97	6.2	201.6	167.3	229.3	72.4	308.7	93.7	88.7	94.8	92		
7016457	09/24/97	6.4	183.4	168.4	216.5	62.8	310.7	99.5	88.4	112.9	95		
7016460	09/24/97	6.0	192.4	152.4	235.4	66.9	302.5	95.8	87.4	112.3	94		
7016463	09/24/97	6.4	182.9	149.2	215.1	60.8	307.3	94.7	87.8	103.0	94		
7016466	09/24/97	6.4	199.9	163.8	229.5	70.1	298.5	93.2	95.8	109.2	94		
7016469	09/25/97	6.6	203.5	155.9	239.0	64.1	313.8	99.7	89.5	89.3	98		
7016469	09/25/97	6.4	195.6	152.2	217.7	62.4	305.9						

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd ²)	GRAB TENSILE/ELONGATION						M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4833 NO (lbs)	TEICORRES ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			M.D. TENS. ELONG. (%)	ASTM D4632 TENS. ELONG. (%)	C.D. TENS. ELONG. (%)	ASTM D4632 TENS. ELONG. (%)	ASTM D4632 TENS. ELONG. (%)	ASTM D4632 TENS. ELONG. (%)					PERMIT. (sec-1)	WATER FLOW (gpm/ft ²)	
7016470	09/25/97	6.3	200.0	153.3	227.4	68.5	305.5	96.4	90.3	98.0	95	0.460			
7016471	09/25/97	6.6	201.5	153.1	228.9	63.2	316.3	98.0	86.0	103.6	95				
7016473	09/25/97	6.3	190.1	143.7	212.7	59.5	302.7	98.1	89.3	100.8	95	0.00	0.432	0.0	0.232
AVERAGE =		6.4	200.2	153.8	233.0	63.5	316.5	4.1	7.8	7.5	4	0.00	0.027	0.0	0.018
STD. DEVIATION =		0.2	10.6	9.7	13.8	4.9	12.0								

EVERGREEN
TECHNOLOGIES, INC.

October 2, 1997

Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

Subj: TG600 Geotextile Certificate of Compliance

Ref: Order 1949 PO #

Dear Sir/Madam:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 70103.

PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6 oz/yd ²
Thickness	ASTM D 5199	65 * Mil
Grab Strength	ASTM D 4632	160 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	65 lbs
Mullen Burst	ASTM D 3786	285 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S. (2)	ASTM D 4751	.250 * mm (60) * US Std Sieve
Permittivity	ASTM D 4491	1.8 * 1/sec
Water Permeability	ASTM D 4491	0.3 * cm/sec
Water Flow Rate	ASTM D 4491	135 * gpm/sq ft
U.V. Resistance (500 hours)	ASTM G 53	70 %

(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

(2) Smaller sieve size number represents the maximum average roll value.

- * Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Sincerely,

Manoj Tyagi/cgh
Manoj Tyagi
QA Manager



5775-B Glenridge Drive / Lakeside Center, Suite 450 / Atlanta, Georgia 30328-5363
Tel. 404-250-1290 / Fax 404-705-9650 / 800-984-9784

200 Miller Sellers Drive / Evergreen, Alabama 36401
Tel. 334-578-9003 / Fax 334-578-6141

10/16/97

PRODUCT GRADE: TG 600

LOT NUMBER: 70103

COLOR: BLACK

ROLL DIM.: 15ft 4in x 1860ft

EVERGREEN TECHNOLOGIES INC.

MOA/MQC LABORATORY

EVERGREEN, ALABAMA

REVIEWED BY:

QA

ENGINEER

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM D5281 (oz/yd2)	GRAB TENSILE/ELONGATION				M. ELAST ASTM D3786 (psi)	PUNCTURE RESISTANCE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 BD (lbs)	TEICHONIS ASTM D5198 (mils)	HYDRAULIC TESTS ASTM D491 PERFORCT. FLOW (cm/sec) (gpm/ft2)	A.O.S. ASTM D4751 (mm)
			TENS. ELONG. (lbs)	M.D. (%)	C.D. (%)	TENS. ELONG. (lbs)						
7016669	09/26/97	6.4	206.4	153.9	237.4	59.7	329.7	102.5	106.5	106.0	96	0.248
7016672	09/26/97	6.2	202.0	170.8	236.9	63.7	325.9	101.2	115.1	109.0	85	
7016673	09/26/97	6.2	205.0	159.9	222.0	60.5	346.3	99.7	84.9	94.1	81	
7016676	09/26/97	6.5	204.4	177.3	256.2	67.8	350.8	107.3	86.2	97.5	84	
7016 77	09/26/97	6.4	212.2	170.2	256.1	67.7	334.4					
7016679	09/26/97	6.7	202.9	172.8	247.7	63.8	357.1	106.9	92.8	98.0	85	
7016681	09/27/97	6.7	219.8	187.8	265.0	59.5	339.4					
7016682	09/26/97	6.7	206.3	147.4	234.4	53.6	341.7	109.2	98.8	96.3	85	
7016684	09/27/97	6.8	210.4	166.7	246.2	54.7	354.7					
7016685	09/26/97	6.3	209.8	163.7	249.5	61.4	323.2	100.6	85.3	94.4	81	
7016686	09/27/97	6.6	201.2	156.5	237.5	62.6	316.6	101.0	92.0	103.7	83	
7016687	09/27/97	6.7	201.9	166.0	235.1	64.1	331.2	109.0	97.5	105.6	86	0.444
7016690	09/27/97	6.4	207.1	161.9	240.3	60.4	333.6	99.0	101.1	109.7	81	
7016693	09/27/97	6.5	204.6	161.8	243.7	61.2	319.6	101.9	100.1	108.3	85	
7016696	09/27/97	6.5	205.9	164.6	248.1	64.9	316.6	97.6	88.3	101.8	81	
7016698	09/27/97	6.6	207.9	185.8	241.8	64.9	318.4					
7016699	09/27/97	6.5	205.0	161.7	239.5	66.3	312.9	100.1	81.7	100.4	80	
7016700	09/27/97	6.4	200.0	166.1	254.8	70.5	321.1	97.9	86.3	84.0	79	0.247
7016702	09/27/97	6.3	201.0	178.8	224.6	59.4	308.8					
7016703	09/27/97	6.4	195.7	157.4	216.2	62.9	308.2	101.1	79.4	100.9	81	
7016705	09/27/97	6.3	195.3	157.3	243.0	67.1	306.9					
7016707	09/28/97	6.2	194.0	158.3	241.1	67.4	302.9					
7016708	09/27/97	6.3	198.9	163.3	244.0	71.5	311.5	97.1	79.2	99.3	83	
7016709	09/28/97	6.5	201.3	170.9	240.6	64.3	307.8					
7016711	09/28/97	6.3	199.4	163.3	253.4	72.3	306.9	101.2	78.1	99.1	82	
7016712	09/28/97	6.5	204.7	165.1	231.7	64.5	306.2	99.8	84.4	97.7	83	
7016715	09/28/97	6.5	193.0	171.3	241.4	68.7	322.2	98.1	80.5	96.4	81	
7016718	09/28/97	6.5	208.1	184.8	240.5	66.3	323.8	99.8	81.5	102.0	82	0.234
7016719	09/28/97	6.4	207.0	170.1	232.3	66.0	317.8					
7016720	09/28/97	6.5	205.9	189.1	236.5	66.9	311.0	99.6	78.5	96.8	82	

ROLL NO.	TEST DATE	WEIGHT ASTM (oz/yd2)	GRAB TENSILE/ELONGATION				H. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TEAR TRAP. ASTM D4533 MD CD (lbs)	THICKNESS ASTM D5199 (mil)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)		
			TENS. ELONG. (lbs) (%)	H.D. ASTM D4632	C.D. TENS. ELONG. (lbs) (%)	PERMIT. (sec-1)					ASTM D4491 (cm/sec)				
7016722	09/28/97	6.4	190.9	172.7	237.9	66.4	323.5								
7016723	09/28/97	6.7	207.0	179.0	226.9	64.3	314.8	99.0	78.3	98.6	85				
7016725	09/28/97	6.5	188.3	176.1	235.2	69.8	310.1								
7016726	09/28/97	6.4	196.3	180.3	228.6	69.3	300.0	96.7	82.5	105.6	89				
7016728	09/28/97	6.4	191.4	163.5	234.7	75.8	313.1								
7016729	09/28/97	6.4	201.6	196.8	237.8	73.9	299.5	97.5	78.9	100.1	93				
7016731	09/28/97	6.3	193.9	172.4	241.0	68.6	302.3								
7016732	09/28/97	6.2	201.7	186.8	231.4	73.8	294.7	92.7	87.5	105.1	89	0.434			
7016734	09/29/97	6.4	205.9	184.7	245.0	75.3	313.7								
7016735	09/28/97	6.4	200.0	191.4	243.5	73.9	314.5	93.0	84.5	108.6	78		0.231		
7016736	09/29/97	6.8	218.3	197.7	244.5	77.2	324.4	103.7	81.5	103.5	100				
7016739	09/29/97	6.5	199.8	195.4	209.3	78.1	289.3	90.8	96.5	104.6	95				
7016741	09/29/97	6.5	197.9	138.1	229.0	69.0	289.7								
AVERAGE =		6.5	202.7	169.8	239.0	66.6	319.7	100.1	87.3	101.0	84	0.00	0.429	0.0	0.240
STD. DEVIATION =		0.2	6.4	14.6	10.5	5.6	15.9	4.4	9.5	5.8	5	0.00	0.022	0.0	0.008



Tensar

The Tensar Corporation

1210 Citizens Parkway,
Marietta, Georgia 30067
Tel. 770 • 938 • 3267
Fax 770 • 938 • 4311

May 1, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10094

Reference:	TENSAR ORDER NUMBER:	TES 0365
	PURCHASE ORDER NUMBER:	7-52-P2112300
	BILL OF LADING NUMBER:	TMP 22725, 22727

SOLD TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

SHIP TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

This is to certify that NS130550 Geonet as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheet dated January 22, 1998. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Further, The Tensar Corporation NS130550 does not exceed 2% by weight of reclaimed polymer added to the resin during manufacturing.

Sincerely,

Thomas N. Dobras, P. E.
Quality Assurance Manager

RECEIVED MAY 07 1998

m D, FFX, CC

THE TENSAR CORPORATION GEONET NS130550

The geonet NS130551 shall be an integrally formed polyethylene net structure. It shall have high tensile strength to resist installation damage and loading on steep slopes. It shall also have a high compressive strength to maintain a high transmissivity under high loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min. (per ASTM D1238) and a density range of 0.932 to 0.970 grams/cc (per ASTM D792 or D1505). The geonet is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
Mechanical Properties					
• Transmissivity ² normal pressure = 15,000psf; i=1.0	ASTM D 4716-95 metal plate/net/metal plate	m ² /sec (E-04)	7	MARV	200,000 SF (or per project req.)
• MD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	5.9 (33)	MARV	50,000 SF
• XMD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	2.2 (12)	MARV	
• Thickness	ASTM D 5199-91	mm (mil)	4.0 (157)	MARV	
• Roll length	direct measure	m (ft)	91.5 (300.0)	min	Each roll
• Roll width	direct measure	m (ft)	4.2 (14.0)	min	
UV Stabilization					
• Carbon Black	ASTM D 4218-91 (OR ASTM D 1603-94)	(% weight)	(2.0)	MARV	50,000 SF
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	300 (660)	typical	N/A
• Roll Diameter		m (in)	N/A	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
• Labeling	• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.				

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation).

It represents the minimum allowable sample roll average for each specific test.

² Transmissivity results reported by The Tensar Corporation are based on standard index test conditions.

Actual performance is dependent upon site specific conditions. Please contact the Tensar Corporation for site specific transmissivity testing.

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 27-APR-98

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-22725 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130550	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK
	E2924	4,200 SF
	E2925	4,200 SF
	E2926	4,200 SF
	E2927	4,200 SF
	E2929	4,200 SF
	E2930	4,200 SF
	E2931	4,200 SF
	E2932	4,200 SF
	E2933	4,200 SF
	E2938	4,200 SF
	E2939	4,200 SF
	E2940	4,200 SF
	E2942	4,200 SF
	E2943	4,200 SF
	E2944	4,200 SF
	E2945	4,200 SF
	E2946	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	E2947	4,200 SF
	E2954	4,200 SF
	E2957	4,200 SF
	E2958	4,200 SF
	E3028	4,200 SF
	E3029	4,200 SF
	E3035	4,200 SF
	E3036	4,200 SF
	E3044	4,200 SF
	E3047	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 27-APR-98

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-22727 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130550	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK
	E2923	4,200 SF
	E2936	4,200 SF
	E2937	4,200 SF
	E2948	4,200 SF
	E2949	4,200 SF
	E2950	4,200 SF
	E2951	4,200 SF
	E2952	4,200 SF
	E3025	4,200 SF
	E3026	4,200 SF
	E3027	4,200 SF
	E3030	4,200 SF
	E3031	4,200 SF
	E3032	4,200 SF
	E3033	4,200 SF
	E3034	4,200 SF
	E3037	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	E3038	4,200 SF
	E3039	4,200 SF
	E3040	4,200 SF
	E3041	4,200 SF
	E3042	4,200 SF
	E3043	4,200 SF
	E3046	4,200 SF
	E3048	4,200 SF
	E3095	4,200 SF
	E3096	4,200 SF

		113,400

The Tensor Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

Plate

Sample

Plate

TEST NO.: 4048 PRODUCT: NS130550

RIG NO.: 1 PROJECT: Clarkstown

DATE: 12/19/97 0:00 TEST METHOD: ASTM D4716

LOT NUMBER	ROLL NUMBER	LOAD (kpsf)	HYD GRAD
E2992	E2992	2.00	0.50

FLOW
gpm/ft width 7.576

TRANSMISSIVITY		
gpm/ft width	($\times 10^{-4} \text{m}^2/\text{sec}$)	($\times 10^{-3} \text{ft}^2/\text{sec}$)
15.152	31.364	33.760

OK



Thomas N. Dobras, P.E.
Quality Assurance Manager

12-22-97
Date

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

REVISIONS
REV NO. 3
REV DATE 10/20/97

Product Code NS130551

TMP Number 22725, 22727

Customer Name Ogden Remediation

Sales Order Number TES 0365

Project Name Clarkstown

Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	N Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2929	1	E2923	P09942	2.012	6.91	3.74	4.570	4.44
	2	E2924	P09942					
	3	E2925	P09942					
	4	E2926	P09942					
	5	E2927	P09942					
	6	E2929	P09942					
E2938	7	E2930	P09942	2.393	6.48	3.11	0.684	4.23
	8	E2931	P09942					
	9	E2932	P09942					
	10	E2933	P09942					
	11	E2936	P09942					
	12	E2937	P09942					
E2947	13	E2938	P09942					
	14	E2939	P09942	2.287	6.36	2.85	0.674	4.50
	15	E2940	P09942					
	16	E2942	P09942					
	17	E2943	P09942					
	18	E2944	P09942					
	19	E2945	P09942					
	20	E2946	P09942					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

REV NO 3
REV DATE 10/2/97

Product Code NS130551
Customer Name Ogden Remediation
Project Name Clarkstown

TMP Number 22725, 22727
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Lot Number			Raw Material QC Testing				Finished Product QC Testing			
			Resin Lot Number	Carbon Black (%) ASTM D4218	N Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199		
		21	P09942							
E2956		22	P09942	2.408	7.75	3.46	0.675	4.48		
		23	P09942							
		24	P09942							
		25	P09942							
		26	P09942							
		27	P09942							
E2965		28	P09942	2.244	7.34	3.01	0.708	4.51		
		29	P09942							
E3028		30	P09942	2.160	6.76	3.18	0.679	4.62		
		31	P09942							
		32	P09942							
		33	P09942							
E3037		34	P09942	2.135	6.40	2.93	0.680	4.54		
		35	P09942							
		36	P09942							
		37	P09942							
		38	P09942							
		39	P09942							
		40	P09942							



Tensar

RECEIVED JAN 05 1998

The Tensar Corporation

1210 Citizens Parkway,
Marietta, Georgia 30066
Tel: 404 • 248 • 3255
Fax: 404 • 433 • 8114

December 22, 1997

Ogden Remediation
166 Route 303
West Nyack, NY 10094

Reference:	TENSAR ORDER NUMBER:	TES 365
	PURCHASE ORDER NUMBER:	7-52-P2112300
	BILL OF LADING NUMBER:	TMP 18063

SOLD TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

SHIP TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

This is to certify that DC4205E66AP2 Geotextile Composite as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheet dated November 14, 1997. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Further, The Tensar Corporation DC4205E66AP2 does not exceed 2% by weight of reclaimed polymer added to the resin during manufacturing.

Sincerely,

Thomas N. Dobras, P. E.
Quality Assurance Manager

MO, PHM, TP, CL, PO



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 961 • 3455
Fax 770 • 961 • 8111

December 22, 1997

Ogden Remediation
166 Route 303
West Nyack, NY 10094

Reference:	TENSAR ORDER NUMBER:	TES 365
	PURCHASE ORDER NUMBER:	7-52-P2112300
	BILL OF LADING NUMBER:	TMP 18690, 18695

SOLD TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

SHIP TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

This is to certify that NS130550 Geonet as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheet dated August 4, 1994. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Further, The Tensar Corporation NS130550 does not exceed 2% by weight of reclaimed polymer added to the resin during manufacturing.

Sincerely,

Thomas N. Dobras, P. E.
Quality Assurance Manager



Tensar

December 22, 1997

Ogden Remediation
166 Route 303
West Nyack, NY 10094

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255
Fax: 770 • 961 • 8259

Reference:	TENSAR ORDER NUMBER:	TES 365
	PURCHASE ORDER NUMBER:	7-52-P2112300
	BILL OF LADING NUMBER:	TMP 18063, 18341, 18354

SOLD TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

SHIP TO:
Ogden Remediation
166 Route 303
West Nyack, NY 10094

This is to certify that NS130551 Geonet as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheet dated November 14, 1997. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Further, The Tensar Corporation NS130551 does not exceed 2% by weight of reclaimed polymer added to the resin during manufacturing.

Sincerely,

Thomas N. Dobras, P. E.
Quality Assurance Manager

THE TENSAR CORPORATION GEOCOMPOSITE DC4105 - SINGLE-SIDED WITH TG600 GEOTEXTILE

Geocomposite DC4105 shall consist of Tensar NS1405 geonet bonded to a single 6 oz. non-woven polypropylene geotextile (continuous filament). The geocomposite shall have a high compressive strength in order to ensure maximum flow capacity under high confining pressures. The bonding process shall not introduce adhesives or other foreign products. The geocomposite shall be resistant to all forms of biological or chemical degradation normally encountered in a soil environment. The geocomposite shall be made from the geonet and geotextile products whose property requirements are listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min (per ASTM D1238) and a density range of 0.932 to 0.963 grams/cc (per ASTM D792 or D1505). The geocomposite is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
GEOTEXTILE PROPERTIES					Per ASTM D4759 675' x 22' 3" = 15,000 SF 3' x 10' = 30 SF 1.5' x 10' = 15 SF
• Grab Tensile Strength	ASTM D 4632 ✓	N (lbs)	712 (160) ✓	MARV	
• AOS	ASTM D 4751 ✓	mm (US Std. Sieve)	0.25 (60) ✓	MARV	
• Mass/Unit Area	ASTM D 5261 (or ASTM D 3776) ✓	g/m ² (oz/sy)	203 (6.0) ✓	MARV	
• Water Permeability	ASTM D 4491 ✓	cm/sec	0.3 ✓	MARV	
• Water Flow Rate	ASTM D 4491 ✓	m ³ /sec/m ² (gpm/ft ²)	0.09 (135)	MARV	
• U.V. Resistance	ASTM D 4355 ✓	%	70 ✓		
CORE NET PROPERTIES (97% minimum virgin polyethylene resin with 2-3% carbon black)					
• MD Ultimate Tensile Strength	ASTM D 5035	kN/m (ppi)	8.4 (48)	MARV	50,000 SF
• Thickness	ASTM D 5199 ✓	mm (mil)	5.0 (200)	MARV	
• Carbon Black	ASTM D 4218 (OR ASTM D 1603)	(% weight)	(2.0) ✓	MARV	
FINISHED GEOCOMPOSITE PROPERTIES					50,000 SF
• Peel Adhesion	ASTM F 904 (modified) ²	g/in	454	MARV	
• Transmissivity ³ normal pressure = 15000psf; i=1.0	ASTM D 4716 metal plate/composite/metal plate	m ² /sec (E-04)	5.0 ✓	MARV	200,000 SF (or per project req.)
• Geotextile overlap at edges and net unbonded area		mm (in)	75 (3.0)	minimum	Each roll
• Roll Length		m (ft)	68.6 (225)	minimum	
• Roll Width		m (ft)	4.0 (13.0)	minimum	
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	325 (716)	typical	N/A
• Roll Diameter		m (in)	0.8 (31)	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
Packaging and Labeling					
• Black polyethylene bag secured with nylon ties. Bag thickness		mm (mils)	0.12 (5.0)	nominal	
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Peel adhesion ASTM F 904 2 inch wide strip. Reported value per specimen is average of 5 highest peaks.

³ Transmissivity: Results reported by Tensar are based on standard index test conditions. Actual performance is dependent upon site specific conditions. Please contact Tensar Corporation for site specific transmissivity testing.

DRAINAGE NET NS1305

The drainage net shall be an integrally formed polyethylene net structure. It shall have uniform channels, open area and thickness to assure uniform flow throughout the structure. It shall have high tensile strength and tear strength to resist installation damage and loading on steep slopes. It shall also have a low compressibility under high loadings to maintain a high transmissivity under a range of loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below.

PROPERTY	TEST METHOD	NOTES	UNITS	VALUE
<u>Flow Capacity</u>				
• Gradient of 1	ASTM 4716 ✓			
• Transmissivity @ 500 psf			x10 ⁻³ ft ² /sec (gpm/ft)	14.5 (6.5)
• Transmissivity @ 10,000 psf			x10 ⁻³ ft ² /sec (gpm/ft)	8.3 (3.7)
• Transmissivity @ 20,000 psf			x10 ⁻³ ft ² /sec (gpm/ft)	2.9 (1.3)
<u>Mechanical Properties</u>		1		
• Porosity				0.55-0.60
• Peak Tensile Strength MD	ASTM D5035 Modified	2,5	lbs/foot	370
• Compressibility @ 20,000 psf	TTM 2.2	3,4,5	%	50
<u>Material</u>				
• Polyethylene-Specific Gravity	ASTM D792		g/cm ³	0.940
• Carbon Black Stabilization	ASTM D4218 ✓		%	2.5
<u>Dimensions</u>				
• Thickness	O.D. Calipered	2,6,7	inches	0.15
• Unit Weight			oz/yd ²	22
• Open Area	COE Method Modified		%	58
• Roll Length			ft	300
• Roll Width			ft	14.0
• Roll Weight			lbs	640

Notes:

- Except where noted all reported test values are nominal.
- Minimum Value.
- Compression tests are performed on a 2-inch square sample loaded at a 1mm/minute constant rate of strain.
- Maximum Value.
- Tensile Strength and Compressibility properties shall be tested by the manufacturer every 10,000 square yards of products.
- Thickness is measured by placing the specimen flat on a comparator base and lowering a round 1/2 inch diameter flat end contact surface squarely over a junction.
- Product thickness shall be measured by the manufacturer every 2,500 square yards of product.

THE TENSAR CORPORATION GEONET NS130551

The geonet NS130551 shall be an integrally formed polyethylene net structure. It shall have high tensile strength to resist installation damage and loading on steep slopes. It shall also have a high compressive strength to maintain a high transmissivity under high loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min. (per ASTM D1238) and a density range of 0.932 to 0.970 grams/cc (per ASTM D792 or D1505). The geonet is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
Mechanical Properties					
• Transmissivity ² normal pressure = 15,000psf; i=1.0	ASTM D 4716-95 metal plate/net/metal plate	m ² /sec (E-04)	7	MARV	200,000 SF (or per project req.)
• MD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	5.9 (33)	MARV	50,000 SF
• XMD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	2.2 (12)	MARV	
• Thickness	ASTM D 5199-91	mm (mil)	4.0 (157)	MARV	
• Roll length	direct measure	m (ft)	91.5 (300.0)	min	Each roll
• Roll width	direct measure	m (ft)	4.2 (14.0)	min	
UV Stabilization					
• Carbon Black	ASTM D 4218-91 (OR ASTM D 1603-94)	(% weight)	(2.0)	MARV	50,000 SF
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	295 (650)	typical	N/A
• Roll Diameter		m (in)	N/A	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
• Labeling					
• Labeling. Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Transmissivity results reported by The Tensar Corporation are based on standard index test conditions. Actual performance is dependent upon site specific conditions. Please contact the Tensar Corporation for site specific transmissivity testing.

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date: 14-NOV-97

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-18063 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET
	E2013	4,200 SF
	E2016	4,200 SF
	E2023	4,200 SF
	E2042	4,200 SF
	E2207	4,200 SF
	E2216	4,200 SF
	E2288	4,200 SF
	E2396	4,200 SF
2	DC4205E66AP2	33,600 13.5FT X 225FT NS1405/ETI TG600-6 CZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING
	H2074	3,172 SF
	H2115	3,082 SF
	H2117	3,128 SF
	H2119	3,105 SF
	H2120	3,105 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
	H2121	3,105 SF
	H2122	3,128 SF
	H2123	3,105 SF
	H2124	3,105 SF
	H2125	3,150 SF
	H2126	3,218 SF
	H2127	3,060 SF
	H2128	3,105 SF
	H2129	3,150 SF
	H2130	3,150 SF
	H2131	3,105 SF
	H2136	3,105 SF
	H2225	3,150 SF
	H2239	3,103 SF

59,331

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 25-NOV-97

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-18341 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET
	E1227	4,200 SF
	E1869	4,200 SF
	E2012	4,200 SF
	E2015	4,200 SF
	E2017	4,200 SF
	E2018	4,200 SF
	E2022	4,200 SF
	E2025	4,200 SF
	E2026	4,200 SF
	E2027	4,200 SF
	E2028	4,200 SF
	E2034	4,200 SF
	E2072	4,200 SF
	E2215	4,200 SF
	E2217	4,200 SF
	E2303	4,200 SF
	E2307	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
	E2308	4,200 SF
	E2309	4,200 SF
	E2310	4,200 SF
	E2323	4,200 SF
	E2338	4,200 SF
	E2352	4,200 SF
	E2380	4,200 SF
	E2406	4,200 SF
	E2407	4,200 SF
	E2461	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

----- Packing List -----

Date:

25-NOV-97

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-18354 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

56288 C014 4,200 SF

56288 C028 4,200 SF

56288 C029 4,200 SF

56288 C065 4,200 SF

56288 E001 4,200 SF

56288 E003 4,200 SF

56288 E006 4,200 SF

56288 E009 4,200 SF

56288 E107 4,200 SF

E2014 4,200 SF

E2020 4,200 SF

E2024 4,200 SF

E2029 4,200 SF

E2031 4,200 SF

E2032 4,200 SF

E2033 4,200 SF

E2035 4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
	E2038	4,200 SF
	E2041	4,200 SF
	E2044	4,200 SF
	E2045	4,200 SF
	E2137	4,200 SF
	E2686	4,200 SF
	E2691	4,200 SF
	E2697	4,200 SF
	E2698	4,200 SF
	E2700	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

----- Packing List -----

Date:

12-DEC-97

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-18690 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130550	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK
E2981		4,200 SF
E2982		4,200 SF
E2983		4,200 SF
E2984		4,200 SF
E2985		4,200 SF
E2986		4,200 SF
E2987		4,200 SF
E2988		4,200 SF
E2990		4,200 SF
E2991		4,200 SF
E2992		4,200 SF
E2993		4,200 SF
E2994		4,200 SF
E2995		4,200 SF
E2996		4,200 SF
E2999		4,200 SF
E3000		4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	E3002	4,200 SF
	E3008	4,200 SF
	E3074	4,200 SF
	E3075	4,200 SF
	E3076	4,200 SF
	E3077	4,200 SF
	E3083	4,200 SF
	E3085	4,200 SF
	E3086	4,200 SF
	E3087	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 12-DEC-97

40179-HQ
Bill OGDEN REMEDIATION
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REMEDIATION
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-18695 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130550	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK
	E2957	4,200 SF
	E2970	4,200 SF
	E2971	4,200 SF
	E2972	4,200 SF
	E2973	4,200 SF
	E2974	4,200 SF
	E2975	4,200 SF
	E2976	4,200 SF
	E2977	4,200 SF
	E2978	4,200 SF
	E2979	4,200 SF
	E3064	4,200 SF
	E3065	4,200 SF
	E3066	4,200 SF
	E3067	4,200 SF
	E3068	4,200 SF
	E3069	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	E3071	4,200 SF
	E3072	4,200 SF
	E3073	4,200 SF
	E3078	4,200 SF
	E3079	4,200 SF
	E3080	4,200 SF
	E3081	4,200 SF
	E3084	4,200 SF
	E3088	4,200 SF
	E3094	4,200 SF

		113,400

DCN 04 DDCG CRT

REV NO. 4

REV DATE 11/12/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4025E66AP2
Customer Name Ogden Remediation
Project Name Clarktown

TMP Number TMP 18063
Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC					Finished Product		
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)			
							Top	Bottom		
H2079	1	H2074	56323/A029	56323/A028	7001115	7001057	1437.0	1224.0		
H2115	2	H2115	56314/B046	56314/B046	7001113	7001055	783.8	979.6		
H2133	3	H2117	56314/B046		7001113	7001055	948.0	762.0		
	4	H2119	56314/B047	56314/B049	7001113	7001053				
	5	H2120	56314/B047		7001113	7001053				
	6	H2121	56314/B047		7001113	7001053				
	7	H2122	56314/B047		7001117	7001053				
	8	H2123	56314/B045	56314/B046	7001117	7001053				
	9	H2124	56314/B045		7001117	7001053				
	10	H2125	56314/B045		7001117	7001053				
	11	H2126	56314/B045		7001117	7001053				
	12	H2127	56314/B004	56314/B004	7001117	7001053				
	13	H2128	56314/B004		7001054	7001049				
	14	H2129	56314/B004		7001054	7001049				
	15	H2130	56314/B004		7001054	7001049				
	16	H2131	56314/B004		7001054	7001049				
H2148	17	H2136	56314/B016	56314/B016	7001054	7001129	1296.0	810.0		
H2226	18	H2225	E13	E16	7001169	7001170	1283.4	811.4		
H2241	19	H2239	E129	E131	7001148	7001168	1024.6	912.2		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4025E66AP2
Customer Name Ogden Remediation
Project Name Clarktown

TMP Number TMP 18063
Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

Material QC				Finished Product	
QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.
					Secondary (Bottom) Geotextile Roll No.
					Top
					Bottom



Thomas N. Dobras, P. E.

Quality Assurance Manager

12-22-97

Date

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

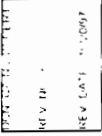
REV DATE 10/20/97

Product Code NS130550 Bill of Lading Number TMP 18690, 18695
Customer Name Ogden Remediation Sales Order Number TES 365
Project Name Clarktown Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2965	1	E2957	P09942	2.244	7.34	3.01	0.708	5.51
E2974	2	E2970	P09942	2.200	7.30	3.15	0.669	4.48
	3	E2971	P09942					
	4	E2972	P09942					
	5	E2973	P09942					
	6	E2974	P09942					
E2983	7	E2975	P09942	2.269	7.86	3.24	0.697	4.58
	8	E2976	P09942					
	9	E2977	P09942					
	10	E2978	P09942					
	11	E2979	P09942					
	12	E2981	P09942					
	13	E2982	P09942					
	14	E2983	P09942					
E2992	15	E2984	P09942	2.209	7.46	3.22	0.690	4.47
	16	E2985	P09942					
	17	E2986	P09942					
	18	E2987	P09942					
	19	E2988	P09942					
	20	E2989	P09942					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net



Product Code NS130550 Bill of Lading Number TMP 18690, 18695
 Customer Name Ogden Remediation Sales Order Number TES 365
 Project Name Clarktown Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E3001	21	E2990	P09942					
	22	E2991	P09942					
	23	E2992	P09942					
	24	E2993	P09942	2.203	7.99	3.17	0.703	4.57
	25	E2994	P09942					
	26	E2995	P09942					
	27	E2996	P09942					
	28	E2999	P09942					
	29	E3000	P09942					
	E3010	30	E3002	P09942	2.687	7.64	2.89	0.693
F3064	31	E3008	P09942					
	32	E3064	P09942	2.227	6.60	3.26	0.679	4.64
	33	F3065	P09942	2.219	7.74	3.23	0.696	4.60
	34	E3066	P09942					
		35	E3067	P09942				
	36	E3068	P09942					
	37	E3069	P09942					
	38	E3071	P09942					
	39	E3072	P09942					
		40	E3073	P09942				

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

REV DATE	10/19/97
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Product Code	NS130550	Bill of Lading Number	TMP 18690, 18695
Customer Name	Ogden Remediation	Sales Order Number	TES 365
Project Name	Clarktown	Purchase Order Number	7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E3082	41	E3074	P09942	2.116	7.95	3.23	0.697	4.60
	42	E3075	P09942					
	43	E3076	P09942					
	44	E3077	P09942					
	45	E3078	P09942					
	46	E3079	P09942					
	47	E3080	P09942					
	48	E3081	P09942					
E3091	49	E3083	P09942	2.190	8.20	2.95	0.697	4.58
	50	E3084	P09942					
	51	E3085	P09942					
	52	E3086	P09942					
	53	E3087	P09942					
	54	E3088	P09942					


Thomas N. Dobras, P. E.
Quality Assurance Manager
Date 12-22-97

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

Product Code NS130551

Customer Name Ogden Remediation

Project Name Clarktown

TMP Number TMP 18063, 18341, 18354

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
56288-C019	1	56288-C014	C60906M01A	2.510	8.60	2.88	0.693	4.52
56288-C028	2	56288-C028	C60906M01A	2.480	8.80	3.11	0.693	4.46
56288-C037	3	56288-C029	C60906M01A	2.440	8.45	2.65	0.680	4.42
56288-C073	4	56288-C065	C60906M01A	2.268	8.54	2.55	0.676	4.48
56288-E001	5	56288-E001	C60606M02A	2.560	8.00	2.80	0.683	4.61
56288-E010	6	56288-E003	C60606M02A	2.510	8.40	2.70	0.689	4.54
	7	56288-E006	C60606M02A					
	8	56288-E009	C60606M02A					
56288-E108	9	56288-E107	C60618F02A	2.610	7.90	2.80	0.663	4.60
E1234	10	E1227	C61001M02A	2.400	8.20	3.00	0.703	4.57
E1875	11	E1869	H6YF43	2.328	7.90	3.00	0.670	4.57
E2014	12	F2012	H6SN43	2.447	8.00	3.00	0.685	4.56
	13	I2013	H6SN43					
	14	E2014	H6SN43					
E2015	15	E2015	H6SN43	2.442	7.30	2.70	0.661	4.53
E2024	16	E2016	H6SN43	2.399	7.20	2.90	0.682	4.55
	17	E2017	H6SN43					
	18	F2018	H6SN43					
	19	E2020	H6SN43					
	20	E2022	H6SN43					

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

REVISIONS
REV NO 3
DATE 11/02/09

Product Code NS130551
Customer Name Ogden Remediation
Project Name Clarktown
TMP Number TMP 18063, 18341, 18354
Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2033	21	E2023	H6SN43					
	22	E2024	H6SN43					
	23	E2025	H6SN43	2.412	7.46	2.76	0.675	4.55
	24	E2026	H6SN43					
	25	E2027	H6SN43					
E2042	26	E2028	H6SN43					
	27	E2029	H6SN43					
	28	E2031	H6SN43					
	29	E2032	H6SN43					
	30	E2033	H6SN43					
E2051	31	E2034	H6SN43	2.379	7.50	2.77	0.672	4.58
	32	E2035	H6SN43					
	33	E2038	H6SN43					
	34	E2041	H6SN43					
	35	E2042	H6SN43					
E2078	36	E2044	H6SN43	2.443	7.57	2.55	0.692	4.53
	37	E2045	H6SN43					
	38	E2072	H6SN43	2.539	7.27	2.68	0.683	4.45
	39	E2137	H6SN43	2.549	7.70	2.90	0.696	4.56
	40	E2207	H6SN43	2.493	7.30	2.90	0.681	4.48

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

Product Code NS130551

TMP Number TMP 18063, 18341, 18354

Customer Name Ogden Remediation

Sales Order Number TES 365

Project Name Clarktown

Purchase Order Number 7-52-P2112300

Raw Material QC Testing				Finished Product QC Testing				
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2217	41	E2215	H6SN43	2.493	7.30	2.90	0.681	4.48
	42	E2216	H6SN43					
	43	E2217	H6SN43					
E2296	44	E2288	B7BE22	2.466	6.88	2.82	0.689	4.74
E2305	45	E2303	B7BE22	2.380	7.40	2.58	0.693	4.72
E2314	46	E2307	B7BE22	2.403	7.12	2.40	0.688	4.82
	47	E2308	B7BE22					
	48	E2309	B7BE22					
	49	E2310	B7BE22					
E2323	50	E2323	B7BE22	2.428	7.29	2.83	0.691	4.85
E2341	51	E2338	B7BE22	2.937	6.60	2.75	0.683	4.39
E2359	52	F2352	B7BE22	3.147	7.35	2.56	0.694	4.70
E2386	53	F2380	B7BE22	3.226	7.00	2.81	0.699	4.71
E2404	54	E2396	B7BE22	3.196	7.23	2.81	0.691	4.69
E2413	55	E2406	B7BE22	2.963	7.70	2.53	0.699	4.75
	56	E2407	B7BE22					
E2467	57	E2461	B7BE22	2.657	7.20	2.47	0.684	4.59
E2691	58	E2686	P09440	2.438	8.00	3.20	0.701	4.39
	59	E2691	P09440					
E2700	60	E2697	P09440	2.372	7.16	3.16	0.676	4.35

The Tensar Corporation Quality Control Test Data

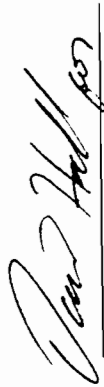
Product Type: Drainage Net

REV. NO. 3
REV. DATE 10/2/97

Product Code NS130551
Customer Name Ogden Remediation
Project Name Clarktown

TMP Number TMP 18063, 18341, 18354
Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing			
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%)	Ultimate Tensile Strength (k/Nm) MD	Ultimate Tensile Strength (k/Nm) XMD
				ASTM D4218	ASTM D5035	ASTM D5261-92
	61	E2698	P09440			
	62	E2700	P09440			


Thomas N. Dobras, P. E.
Quality Assurance Manager

12-22-97
Date

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²

The Tensor Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

TMP Number	TMP 18063
------------	-----------

Sales Order Number

Purchase Order Number 7-52-P2112300

Product Code NS130565

Customer Name Ogden Remediations

Project Name	Clarktown
--------------	-----------

QC Core Net Sample Roll Number	Raw Material QC Testing		Finished Product QC Testing			
	Resin Lot Number	Carbon Black (%)	Ultimate Tensile Strength (kN/m) MID	Ultimate Tensile Strength (kN/m) XMD	Mass/Area (kg/m ²)	Thickness (mm)
		ASTM D4218	ASTM D5035	ASTM D5035	ASTM D5261-92	ASTM D5199
56314/B004	C60927M05A	2.680	10.60	3.30	0.870	5.48
56314/B016		2.746	9.81	2.91	0.837	5.50
56314/B046		2.480	11.04	3.20	0.855	5.57
56314/B049		2.754	10.65	3.54	0.857	5.47
56323/A028	P09351	2.478	9.29	2.90	0.840	5.43

Carroll Hall

Thomas N. Dobras, P. E.

Quality Assurance Manager

Date _____

Dec 27, 1997

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²

The Tensor Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

NEOPRENE

SAMPLE - LINER

PLATE

TEST NO.: 1495-1500 PRODUCT: DC4205E66AP2

RIG NO.: 1 PROJECT: Clarkstown

DATE: 4/10/97 0:00 TEST METHOD: ASTM D4716

LOT NUMBER	ROLL NUMBER	LOAD (kpsf)	HYD GRAD	FLOW		TRANSMISSIVITY	
				gpm/ft width		(x10 ⁻⁴ m ² /sec)	
H2133	H2133	2.00	1.00	2.907		6.018	6.477
		15.00	1.00	1.563		3.234	3.482
H2165	H2165	2.00	1.00	3.641		7.537	8.112
		15.00	1.00	2.060		4.265	4.591
H2211	H2211	2.00	1.00	3.261		6.750	7.266
		15.00	1.00	1.613		3.339	3.594
H2241	H2241	2.00	1.00	3.304		6.839	7.362
		15.00	1.00	1.856		3.843	4.136
H2286	H2286	2.00	1.00	2.083		4.313	4.642
		15.00	1.00	0.943		1.953	2.102
H2301	H2301	2.00	1.00	2.768		5.729	6.167
		15.00	1.00	1.344		2.782	2.995



Thomas N. Dobras, P.E.
Quality Assurance Manager

12-22-97

Date

The Tensar Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

Plate

Sample

Plate

TEST NO.: 4048 PRODUCT: NS130550

RIG NO.: 1 PROJECT: Clarkstown

DATE: 12/19/97 0:00 TEST METHOD: ASTM D4716

LOT NUMBER	ROLL NUMBER	LOAD (kpsf)	HYD GRAD
E2992	E2992	2.00	0.50

FLOW
gpm/ft width
7.576

TRANSMISSIVITY		
gpm/ft width	($\times 10^{-4} \text{ m}^2/\text{sec}$)	($\times 10^{-3} \text{ ft}^2/\text{sec}$)
15.152	31.364	33.760



Thomas N. Dobras, P.E.
Quality Assurance Manager

12-22-97
Date

The Tensar Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

Plate

Sample

Plate

TEST NO.:	4047	PRODUCT:	NS130551
RIG NO.:	1	PROJECT:	Clarkstown
DATE:	12/19/97 0:00	TEST METHOD	ASTM D4716

TRANSMISSIVITY		
	gpm/ft width	(x10 ⁻⁴ m ² /sec)
	15.306	31.684
		(x10 ⁻³ ft ² /sec)
		34.105

FLOW	
	gpm/ft width
	7.653

LOT NUMBER	ROLL NUMBER	LOAD (kpsf)	HYD	
			GRAD	
E2700	E2700	2.00	0.50	


Thomas N. Dobras, P.E.
Quality Assurance Manager

12.27.97
Date



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255

ate Tested: 2/19/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

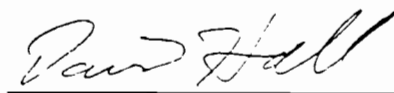
Vendor: Signature Resin Type: HDIG
Resin Lot Number: B7BE22
Railcar Number: ACFX 96314

Melt Flow Index (g/10 min.): ASTM D1238

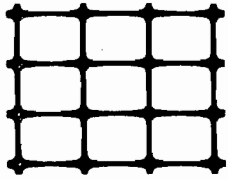
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.756</u>	<u>0.780</u>	<u>0.810</u>	<u>0.774</u>
MFI:	<u>0.795</u>	<u>0.764</u>	<u>0.817</u>	<u>0.752</u>
Density:	<u>0.952</u>	<u>0.953</u>	<u>0.952</u>	<u>0.952</u>
Density:	<u>0.952</u>	<u>0.953</u>	<u>0.950</u>	<u>0.953</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.752</u>	<u>0.779</u>	<u>0.773</u>	<u>0.739</u>
MFI:	<u>0.792</u>	<u>0.769</u>	<u>0.821</u>	<u>0.771</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.953</u>	<u>0.956</u>
Density:	<u>0.952</u>	<u>0.952</u>	<u>0.953</u>	<u>0.956</u>

DCN	QA-RMQC-CERT
Revision No	1
Revision Date	9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested 7/9/97
Tested By Monica

T1	T2	T3	T4
B1	B2	B3	B4

Railcar Compartments

Resin Certification Report

Vendor Solvay

Resin Type G36-24-150

Resin Lot Number C60618F02A

Railcar Number ELTX 1161

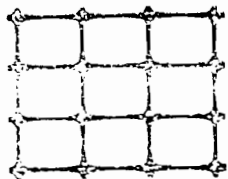
Melt Flow Index (g/10 min.) : ASTM D1238

Density (g/cc) : ASTM D792

Compartment:	T1	T2	T3	T4	Approved (yes/no)
MFI:	<u>0.209</u>	<u>0.217</u>	<u>0.201</u>	<u>0.209</u>	<u>Yes</u>
MFI:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Density:	<u>0.934</u>	<u>0.935</u>	<u>0.933</u>	<u>0.936</u>	<u>Yes</u>
Density:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Compartment:	B1	B2	B3	B4	Approved (yes/no)
MFI:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
MFI:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Density:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Density:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Authorization

DCN: MQC-CERT
Revision Number: 1
Revision Date: 9/27/96



Tensar

The Tensar Corporation



Date Tested: 10/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG
Resin Lot Number: C60906M01A
Railcar Number: ELTX 3274

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.811</u>	<u>0.789</u>	<u>0.816</u>	<u>0.810</u>
MFI:	<u>0.807</u>	<u>0.802</u>	<u>0.829</u>	<u>0.791</u>
Density:	<u>0.952</u>	<u>0.954</u>	<u>0.954</u>	<u>0.955</u>
Density:	<u>0.955</u>	<u>0.954</u>	<u>0.954</u>	<u>0.955</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.83</u>	<u>0.845</u>	<u>0.833</u>	<u>0.831</u>
MFI:	<u>0.826</u>	<u>0.821</u>	<u>0.827</u>	<u>0.824</u>
Density:	<u>0.954</u>	<u>0.955</u>	<u>0.954</u>	<u>0.954</u>
Density:	<u>0.954</u>	<u>0.954</u>	<u>0.955</u>	<u>0.955</u>

DCN: QA-RMQC-CERT
Revision No: 1
Revision Date: 9/27/96

David Hall
Authorization

Tensar

Tensar Corporation

Date Tested: 10/7/96
 Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

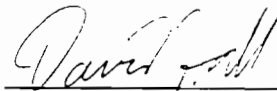
Resin Certification Report

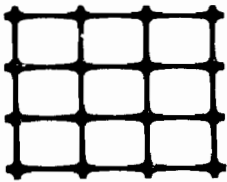
Vendor: Solvay Resin Type: HDIG A60
 Resin Lot Number: C60906/M02A
 Railcar Number: ELTX 3197

Melt Flow Index (g/10 min.): ASTM D1238
 Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.883</u>	<u>0.859</u>	<u>0.867</u>	<u>0.880</u>
MFI:	<u>0.846</u>	<u>0.838</u>	<u>0.875</u>	<u>0.874</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.959</u>	<u>0.959</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.959</u>	<u>0.959</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.888</u>	<u>0.85</u>	<u>0.879</u>	<u>0.855</u>
MFI:	<u>0.886</u>	<u>0.846</u>	<u>0.856</u>	<u>0.861</u>
Density:	<u>0.958</u>	<u>0.958</u>	<u>0.959</u>	<u>0.958</u>
Density:	<u>0.958</u>	<u>0.958</u>	<u>0.959</u>	<u>0.958</u>

DCN QA-RMQC-CERT
 Revision No 1
 Revision Date 9/27/96


 Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
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Fax: 770 • 961 • 8233

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

Railcar Compartments

Resin Certification Report

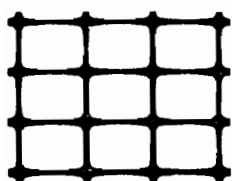
Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60927M05A
Railcar Number: ELTX 3415

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.735</u>	<u>0.738</u>	<u>0.720</u>	<u>0.741</u>
MFI:	<u>0.693</u>	<u>0.753</u>	<u>0.706</u>	<u>0.680</u>
Density:	<u>0.950</u>	<u>0.949</u>	<u>0.949</u>	<u>0.949</u>
Density:	<u>0.949</u>	<u>0.949</u>	<u>0.950</u>	<u>0.950</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.738</u>	<u>0.738</u>	<u>0.741</u>	<u>0.758</u>
MFI:	<u>0.711</u>	<u>0.698</u>	<u>0.663</u>	<u>0.726</u>
Density:	<u>0.949</u>	<u>0.948</u>	<u>0.957</u>	<u>0.956</u>
Density:	<u>0.949</u>	<u>0.956</u>	<u>0.956</u>	<u>0.955</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 12/2/96
Tested By: MONICA

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

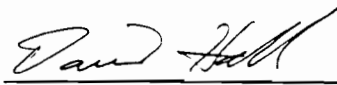
Resin Certification Report

Vendor: SOLVAY Resin Type: HDIG A60
Resin Lot Number: C61001M02A
Railcar Number: ELTX 3441

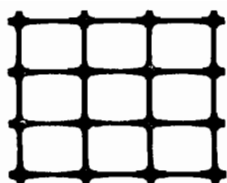
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.690</u>	<u>0.669</u>	<u>0.666</u>	<u>0.696</u>
MFI:	<u>0.671</u>	<u>0.664</u>	<u>0.669</u>	<u>0.685</u>
Density:	<u>0.946</u>	<u>0.947</u>	<u>0.940</u>	<u>0.949</u>
Density:	<u>0.950</u>	<u>0.953</u>	<u>0.944</u>	<u>0.949</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.685</u>	<u>0.672</u>	<u>0.682</u>	<u>0.669</u>
MFI:	<u>0.638</u>	<u>0.680</u>	<u>0.647</u>	<u>0.681</u>
Density:	<u>0.946</u>	<u>0.946</u>	<u>0.946</u>	<u>0.948</u>
Density:	<u>0.947</u>	<u>0.947</u>	<u>0.944</u>	<u>0.945</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 966 • 3255
Fax: 770 • 961 • 8239

Date Tested: 2/11/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Signature Resin Type: HDIG
Resin Lot Number: H6SN43
Railcar Number: ACFX 55920

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.446</u>	<u>0.473</u>	<u>0.358</u>	<u>0.422</u>
MFI:	<u>0.444</u>	<u>0.340</u>	<u>0.349</u>	<u>0.435</u>
Density:	<u>0.945</u>	<u>0.944</u>	<u>0.944</u>	<u>0.947</u>
Density:	<u>0.945</u>	<u>0.944</u>	<u>0.943</u>	<u>0.945</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.479</u>	<u>0.467</u>	<u>0.552</u>	<u>0.573</u>
MFI:	<u>0.484</u>	<u>0.581</u>	<u>0.497</u>	<u>0.436</u>
Density:	<u>0.946</u>	<u>0.945</u>	<u>0.944</u>	<u>0.949</u>
Density:	<u>0.947</u>	<u>0.948</u>	<u>0.946</u>	<u>0.947</u>

DCN QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 2/11/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

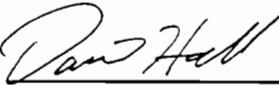
Resin Certification Report

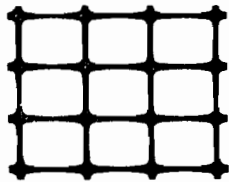
Vendor: _____ Signature _____ Resin Type: HDIG
Resin Lot Number: H6YF43
Railcar Number: ACFX 67609

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	0.692	0.685	0.696	0.679
MFI:	0.658	0.744	0.699	0.653
Density:	0.950	0.951	0.947	0.955
Density:	0.951	0.951	0.951	0.952
Compartment:	B1	B2	B3	B4
MFI:	0.730	0.698	0.696	0.682
MFI:	0.677	0.657	0.677	0.686
Density:	0.950	0.953	0.951	0.952
Density:	0.953	0.953	0.953	0.954

DCN QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 10/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

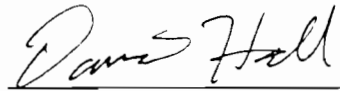
Resin Certification Report

Vendor: Southern Polmer Resin Type: HDIG
Resin Lot Number: P09351
Railcar Number: AFPX 945622

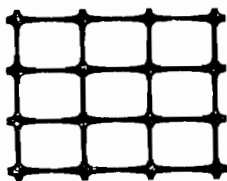
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.653</u>	<u>0.658</u>	<u>0.643</u>	<u>0.674</u>
MFI:	<u>0.663</u>	<u>0.660</u>	<u>0.660</u>	<u>0.666</u>
Density:	<u>0.955</u>	<u>0.958</u>	<u>0.958</u>	<u>0.958</u>
Density:	<u>0.959</u>	<u>0.958</u>	<u>0.958</u>	<u>0.959</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.674</u>	<u>0.659</u>	<u>0.649</u>	<u>0.659</u>
MFI:	<u>0.671</u>	<u>0.670</u>	<u>0.667</u>	<u>0.676</u>
Density:	<u>0.958</u>	<u>0.959</u>	<u>0.957</u>	<u>0.959</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.958</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway,
Morrow, Georgia 30260
Tel: 770 • 968 • 3255

Date Tested: 2/26/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

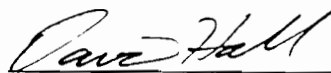
Resin Certification Report

Vendor: Southern Polymer Resin Type: HDG
Resin Lot Number: P09440
Railcar Number: AFPX 945823

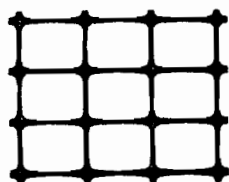
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.724</u>	<u>0.751</u>	<u>0.727</u>	<u>0.749</u>
MFI:	<u>0.722</u>	<u>0.708</u>	<u>0.745</u>	<u>0.711</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.960</u>	<u>0.960</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.960</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.714</u>	<u>0.713</u>	<u>0.730</u>	<u>0.733</u>
MFI:	<u>0.726</u>	<u>0.729</u>	<u>0.712</u>	<u>0.723</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.956</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.957</u>	<u>0.960</u>

DCN	QA-RMQC-CERT
Revision No	1
Revision Date	9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway,
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 2/26/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

Railcar Compartments

Resin Certification Report

Vendor: Southern Polmer Resin Type: SP0107A

Resin Lot Number: P09942

Railcar Number: CCBX 55300

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.718</u>	<u>0.731</u>	<u>0.735</u>	<u>0.736</u>
MFI:	<u>0.712</u>	<u>0.726</u>	<u>0.734</u>	<u>0.722</u>
Density:	<u>0.957</u>	<u>0.958</u>	<u>0.956</u>	<u>0.957</u>
Density:	<u>0.958</u>	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.719</u>	<u>0.722</u>	<u>0.723</u>	<u>0.746</u>
MFI:	<u>0.755</u>	<u>0.715</u>	<u>0.714</u>	<u>0.727</u>
Density:	<u>0.956</u>	<u>0.957</u>	<u>0.956</u>	<u>0.957</u>
Density:	<u>0.956</u>	<u>0.958</u>	<u>0.957</u>	<u>0.957</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization

Evergreen Technologies

February 13, 1997

Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

Subj: TG600 Geotextile Certificate of Compliance

Ref: Clarkstown Project, Order 1347, 1348 & 1350 PO # 7-9030

Dear Sir/Madam:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 70010.

PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6 oz/yd ²
Thickness	ASTM D 5199	70 * Mil
Grab Strength	ASTM D 4632	150 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	60 lbs
Mullen Burst	ASTM D 3786	250 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S. (2)	ASTM D 4751	.212 * mm
		(70) * US Std Sieve
Permittivity	ASTM D 4491	1.8 * 1/sec
Water Permeability	ASTM D 4491	0.3 * cm/sec
Water Flow Rate	ASTM D 4491	135 * gpm/sq ft
U.V. Resistance (500 hours)	ASTM D 4355	70 %

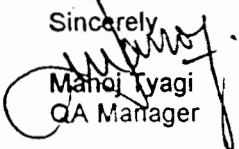
(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

(2) Smaller sieve size number represents the maximum average roll value.

- * Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Sincerely,


Manoj Tyagi
QA Manager

02/12/97

PRODUCT GRADE: TG 600

LOT NUMBER: 70010

COLOR: BLACK

ROLL DIM.: 15ft 4in x 1860ft

EVERGREEN TECHNOLOGIES INC.
MQA/MQC LABORATORY
EVERGREEN, ALABAMA

REVIEWED BY:

QA production is proper

ENGINEER

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			M.D. TENS. ELONG. (%)	ASTM D4632 TENS. ELONG. (%)	C.D. TENS. ELONG. (%)						PERMIT. (sec-1)	WATER FLOW (gpm/ft2)	
7001017	02/06/97	6.7	193.6	141.8	244.0	63.8	340.4	100.1	88.9	113.4	92	0.338	0.242
7001018	02/06/97	6.7	189.2	142.8	240.2	58.5	341.7						
7001019	02/06/97	6.8	193.8	152.1	230.6	55.0	350.2	102.2	98.3	102.5	88		
7001021	02/06/97	6.3	189.0	150.8	243.7	54.3	337.8						
7001022	02/06/97	6.5	176.8	134.9	225.5	50.1	350.3	99.1	86.8	108.2	86		
7001023	02/06/97	6.7	189.5	151.3	242.6	60.8	379.5						
7001024	02/06/97	6.3	177.4	155.3	237.1	61.7	353.1						
7001025	02/06/97	6.6	184.6	151.8	228.3	51.6	393.7	108.3	103.8	96.2			
7001027	02/06/97	6.5	197.3	136.3	236.3	50.1	361.2	106.0	101.9	115.0	90		
7001028	02/06/97	6.5	182.1	126.7	229.7	55.0	352.6	99.2	99.4	106.7	77		
7001031	02/06/97	6.4	186.1	134.1	233.7	50.5	341.6	93.3	100.1	100.8	81	0.365	0.250
7001034	02/07/97	6.4	185.5	134.6	247.2	52.2	360.3	101.4	94.0	110.8	80		
7001037	02/07/97	6.1	175.8	131.3	236.8	50.9	345.6	90.6	103.2	94.0	72		
7001039	02/07/97	6.3	179.9	144.4	237.9	54.7	328.4	91.1	91.5	98.5	78		
7001040	02/07/97	6.1	192.6	148.3	240.3	53.9	328.7						
7001041	02/07/97	6.3	189.2	155.8	226.5	51.8	334.7	94.4	87.8	112.2	76		
7001042	02/07/97	6.4	186.8	159.8	229.9	57.4	348.5						
7001043	02/07/97	6.5	182.3	157.5	229.6	51.4	355.4	92.0	87.0	101.1	70		
7001044	02/07/97	6.7	213.5	139.2	269.6	58.9	358.7	105.6	85.4	101.8	74		
7001045	02/07/97	6.5	210.8	166.5	253.2	58.9	362.6						
7001046	02/07/97	6.6	194.6	164.3	246.0	56.0	371.7	98.8	90.5	99.4	70		
7001047	02/07/97	6.4	214.3	171.2	235.9	54.7	360.3						
7001048	02/07/97	6.4	202.8	159.8	260.7	57.8	357.7	95.5	89.0	104.6	70		
7001049	02/07/97	6.6	210.8	169.0	259.3	58.5	375.8						
7001050	02/07/97	6.6	197.2	173.2	258.8	68.4	365.1	96.9	83.9	98.6	82	0.323	0.250
7001054	02/07/97	6.6	184.0	176.8	234.8	66.9	348.5	94.1	83.8	95.6	75		
7001057	02/08/97	6.4	197.8	175.6	242.3	75.2	345.4	95.9	82.0	95.6	71		
7001060	02/08/97	6.4	200.2	182.2	241.8	68.6	342.9	96.1	82.6	97.4	76		
7001062	02/08/97	6.7	200.8	171.3	238.0	63.5	351.9	101.7	86.6	98.5	77		0.250

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)		
			ASTM D4632	C.D.	TENS. ELONG. (lbs)	TENS. ELONG. (%)					ASTM D4491	PERMIT. (sec-1)		PERM. (Kv) (gpm/ft2)	
															M.D.
001134	02/10/97	6.3	175.9	178.6	231.3	64.4	317.5	91.6	74.8	93.2	78				
001137	02/10/97	6.1	175.5	179.3	228.2	66.1	327.9	88.8	77.4	101.2	75				
001139	02/10/97	6.5	187.7	160.3	232.6	58.3	335.1	98.5	84.8	98.2	80				
001142	02/11/97	6.0	175.8	156.3	213.2	55.9	298.8	91.4	82.0	98.6	72				
001145	02/11/97	6.0	175.2	151.6	214.2	53.8	320.2	91.7	83.0	96.5	73				
001146	02/11/97	6.0	174.9	150.8	232.1	52.1	321.4								
001147	02/11/97	6.0	174.7	145.7	231.9	52.2	323.1								
001148	02/11/97	6.2	176.9	148.9	224.6	50.3	324.1	93.9	79.2	107.2	76				
001149	02/11/97	6.2	183.2	154.0	226.0	54.8	341.6	96.5							
001151	02/11/97	6.3	175.9	157.7	218.1	54.4	331.4	92.8	80.3	109.7	82				
001154	02/11/97	6.1	175.7	150.0	223.6	54.8	339.2	90.6	82.3	103.7	76				
001155	02/11/97	6.2	179.8	147.5	228.3	53.2	335.0								
001157	02/11/97	6.2	177.9	151.3	226.3	56.3	328.9	89.5	90.2	108.7	80				
001160	02/11/97	6.2	178.6	153.6	222.9	57.4	321.8								
001162	02/11/97	6.2	175.4	154.7	231.3	59.1	334.7	93.5	81.7	96.2	80				
001164	02/11/97	6.2	167.5	157.3	209.7	56.2	331.5								
001165	02/11/97	6.2	174.4	161.6	216.9	61.6	333.2								
001166	02/11/97	6.4	179.1	165.6	236.1	57.8	340.2	92.2	74.0	93.7	76				
001169	02/11/97	6.2	172.7	161.4	226.6	58.4	325.5	89.8	74.9	101.0	71				
001172	02/11/97	6.2	162.2	154.5	220.0	58.3	324.8	93.6	69.9	101.5	79				
001173	02/12/97	6.3	166.0	156.4	227.1	59.8	325.4								
AVERAGE =		6.3	185.5	165.3	233.3	59.5	338.3	94.1	84.6	101.5	76	1.92	0.346	143.5	0.248
STD. DEVIATION =		0.2	12.1	16.0	11.0	5.6	16.3	5.6	9.1	5.2	7	0.03	0.027	2.3	0.004

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd ²)	GRAB TENSILE/ELONGATION						M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MO (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS ASTM D4891 PERMIT. PRESS. (KSI) (sec-1)	WATER FLOW (gpm/ft ²)	A.O.S. ASTM D4751 (mm)
			TENS. ELONG. (lbs)	(%)	M.D. ASTM D4532 (lbs)	TENS. ELONG. (lbs)	(%)	C.D. ASTM D4532 (lbs)							
7001204	02/13/97	6.2	174.6	153.3	222.1	53.3	334.5	94.5	74.2	95.8	79				
7001205	02/13/97	6.5	174.7	155.1	239.0	51.8	341.8								
7001206	02/13/97	6.3	178.1	154.0	222.7	53.9	330.3								
7001207	02/13/97	6.4	168.1	155.3	214.7	52.3	315.7	90.3	84.4	101.1	79				
7001208	02/13/97	6.4	179.5	146.8	231.5	50.8	347.8	92.8							
7001210	02/13/97	6.1	172.0	148.7	232.7	52.8	334.6	97.2	83.8	107.8	81				
7001212	02/13/97	6.3	178.8	168.2	215.3	55.2	326.8	92.6	73.0	92.1	81				
7001217	02/13/97	6.3	178.0	166.8	226.2	58.7	270.2	93.0	74.9	103.4	79				
7001221	02/14/97	7.0	191.4	163.8	225.3	64.3	288.8	88.1	86.1	108.9	77				
7001223	02/14/97	6.4	159.3	165.5	229.9	55.2	300.4	89.6	76.4	108.3	79				
7001225	02/14/97	6.5	175.4	160.8	236.3	50.0	277.2	95.0	88.7	110.6	84				
7001227	02/14/97	6.5	163.1	148.6	228.2	50.0	276.1								
7001228	02/14/97	6.9	172.5	151.7	231.1	54.5	289.4	98.1	84.4	116.9	87				
7001229	02/14/97	6.6	185.4	153.1	224.3	56.3	323.5								

AVERAGE = 6.3 182.4 163.3 230.7 58.3 335.2 93.7 83.1 101.4 76 0.00 0.000 0.0 0.000
 STD. DEVIATION = 0.2 12.1 14.5 11.0 5.5 19.0 5.1 8.7 5.7 7 0.00 0.000 0.0 0.000

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
TEL 770 • 968 • 3255

May 21, 1997

Ogden Remediation
166 Route 303
West Nyack, NY 10994
Attention: Phil McQuiston

Reference: TENSAR ORDER NUMBER: TES 365
PURCHASE ORDER NUMBER: 7-52-P2112300

SOLD TO:
OGDEN REMEDIATION
166 ROUTE 303
WEST NYACK, NY 10994

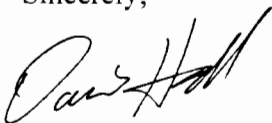
SHIP TO:
OGDEN REMEDIATION
166 ROUTE 303
WEST NYACK, NY 10994

Handwritten notes:
need enclosed sheet new back to

Dear Mr. McQuiston,

This is to certify that The Tensar Corporation DC4205E66AP2 geocomposite as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheet dated April 8, 1997. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Sincerely,



David Hall
Quality Assurance
Laboratory Supervisor

THE TENSAR CORPORATION GEOCOMPOSITE DC4205 - DOUBLE-SIDED WITH TG600 GEOTEXTILES

Geocomposite DC4205 shall consist of Tensar NS1405 geonet bonded on both sides to 6 oz. non-woven polypropylene geotextiles (continuous filament). The geocomposite shall have a high compressive strength in order to ensure maximum flow capacity under high confining pressures. The bonding process shall not introduce adhesives or other foreign products. The geocomposite shall be resistant to all forms of biological or chemical degradation normally encountered in a soil environment. The geocomposite shall be made from the geonet and geotextile products whose property requirements are listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min (per ASTM D1238) and a density range of 0.932 to 0.963 grams/cc (per ASTM D792 or D1505). The geocomposite is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
GEOTEXTILE PROPERTIES					Per ASTM D4759
• Grab Tensile Strength	ASTM D 4632	N (lbs)	712 (160)	MARV	
• AOS	ASTM D 4751	mm (US Std. Sieve)	0.25 (60)	MARV	
• Mass/Unit Area	ASTM D 5261 (or ASTM D 3776)	g/m ² (oz/sy)	203 (6.0)	MARV	
• Water Permeability	ASTM D 4491	cm/sec	0.3	MARV	
• Water Flow Rate	ASTM D 4491	m ³ /sec/m ² (gpm/ft ²)	0.09 (135)	MARV	
• U.V. Resistance	ASTM D 4355	%	70		
CORE NET PROPERTIES (97% minimum virgin polyethylene resin with 2-3% carbon black)					50,000 SF
• MD Ultimate Tensile Strength	ASTM D 5035	kN/m (ppi)	8.4 (48)	MARV	
• Thickness	ASTM D 5199	mm (in)	5.0 (200)	MARV	
• Carbon Black	ASTM D 4218 (OR ASTM D 1603)	(% weight)	(2.0)	MARV	
FINISHED GEOCOMPOSITE PROPERTIES					50,000 SF
• Peel Adhesion	ASTM F 904 (modified) ²	g/in	454	MARV	
• Transmissivity ³ normal pressure = 15000psf; i=1.0	ASTM D 4716 metal plate/composite/metal plate	m ² /sec (E-04)	2.0	MARV	100,000 SF
• Geotextile overlap at edges and unbonded area		mm (in)	75 (3.0)	minimum	Each roll
• Roll Length		m (ft)	68.6 (225)	minimum	
• Roll Width		m (ft)	4.0 (13.0)	minimum	
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	370 (815)	typical	N/A
• Roll Diameter		m (in)	0.8 (31)	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
Packaging and Labeling					
• Black polyethylene bag secured with nylon ties. Bag thickness		mm (mils)	0.12 (5.0)	nominal	
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Peel adhesion ASTM F 904 2 inch wide strip. Reported value per specimen is average of 3 highest peaks.

³ Transmissivity: Results reported by Tensar are based on standard index test conditions. Actual performance is dependent upon site specific conditions. Please contact Tensar Corporation for site specific transmissivity testing.

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255

LOAD # 1

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 9921 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TOTAL	27
-------	----

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255

LOAD # 2

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 9924 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TOTAL	27
-------	----

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255

LOAD # 3

OGDEN REMEDIATION
CLARKSTOWN LANDFILL
TMP 10041 TES 365
DC4205E66AP2

CLARKSTOWN LANDFILL

TMP 10041 TES 365

DC4205E66AP2

[illegible]

TES0365.XLS

1210 Citizens Parkway
Morrow Georgia 30260
Tel 770 • 966 • 3255

OGDEN REMEDIATION
CLARKSTOWN LANDFILL
TMP 10110 TES 365
DC4205E66AP2

[illegible]

TOTAL	27
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1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255

LOAD # 5

OGDEN REMEDIATION
CLARKSTOWN LANDFILL
TMP 10144 TES 365
DC4205E66AP2

[illegible]

TOTAL	27
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1210 Citizens Parkway,
Morrow, Georgia 30200
Tel. 770 • 968 • 3255

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10149 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TES0365.XLS

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255

LOAD # 7

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10152 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TOTAL	27
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1111 Chiles Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255

LOAD # 8

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10172 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TES0365.XLS

1210 Citizens Parkway
Morrow, Georgia 30260
Te 770 • 968 • 3255

LOAD # 9

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10251 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TOTAL	27
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1210 Citizens Parkway
Morrow Georgia 30260
Tel. 770 • 968 • 3255

LOAD # 10

OGDEN REMEDIATION

CLARKSTOWN LANDFILL

TMP 10253 TES 365

DC4205E66AP2

TOTAL	27
-------	----

1210 City Center, Suite 1000
Metro: Georgia 30201
Tel: 404 • 361 • 3255

LOAD # 11

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10254 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TES0365.XLS

*210 Citizens Parkway
Morrow, Georgia 30241
Tel: 770 • 302 • 3255

LOAD # 12

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10264 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TOTAL	27
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1210 Citizens Parkway
Monroe, Georgia 30601
Tel. 770 • 966 • 3257

LOAD # 13

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 10324 TES 365
PRODUCT CODE :	DC4205E66AP2

[illegible]

TOTAL	27
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DCN QA-DCQC-CERT
REV NO 5
REV DATE 05/16/97

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net Composite

Product Code	DC4205E66A92	Sales Order Number	TES 365
Customer Name	OGDEN REMEDIATION	Purchase Order Number	7-52-P2112300
Project Name	CLARKSTOWN LF		

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MID Peel-ASTM F904 (g/in)	
						Top	Bottom
H1792	H1792	E186	E188	7001025	5025331	1680	1118
H1808	H1793					1146	952
	H1794						
	H1795	E21	E22				
	H1796						
	H1797						
	H1798						
	H1799	E188	E188				
	H1800			7001042	7001038		
	H1801						
	H1802						
	H1803	E700	E700				
	H1804						
	H1805						
	H1806						
	H1807	E1093	E1095	7001041	7001037		
	H1808						

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Sales Order Number TES 365

Project Name CLARKSTOWN LF

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	Material QC			Finished Product	
			QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
H1827	H1809					1499	1100
	H1810						
	H1811	E1118	E1119				
	H1812						
	H1813						
	H1814						
	H1815	E1068	E1068	7001029	7001039		
	H1816						
	H1817						
	H1818						
	H1819	E1085	E1086				
	H1820						
	H1821						
	H1822						
	H1823	E1067	E1068	7001047	7001044		
	H1824						
	H1825						

DCN QA-DCQC-CERT
REV NO. 5
REV DATE: 05/16/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	Material QC			Finished Product	
			QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H1826						
	H1827	E1072	E1074				
H1842	H1828					1248	862
	H1829						
	H1830						
	H1831	E1084	E1086	7001040	7001036		
	H1832						
	H1833						
	H1834						
	H1835	E1073	E1074				
	H1836						
	H1837						
	H1838						
	H1839	E1066	E1068	7001043	7001030		
	H1840						
	H1841						
	H1842						

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	Top	Bottom
H1857	H1843	E1065	E1068			1204	679
	H1844						
	H1845						
	H1846				7001045		
	H1847	E1061	E1062				
	H1848			7001046			
	H1849						
	H1850						
	H1851	E1087	E1089				
	H1852						
	H1853						
	H1854	E84	E85		7001024		
	H1855						
	H1856			7001027			
	H1857						
H1872	H1858	E1071	E1071			1092	928
	H1859						

DCN QA-DCQC-CERT

REV NO 5

REV DATE: 05/16/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code	DC4205E66A92	Sales Order Number	TES 365
Customer Name	OGDEN REMEDIATION	Purchase Order Number	7-52-P2112300
Project Name	CLARKSTOWN LF		

Material QC				Finished Product	
QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.
	H1860				
	H1861			7001022	
	H1862	E1064	E1065		
	H1863				7001028
	H1864				
	H1865				
	H1866	E1060	E1062		
	H1867				
	H1868				
	H1869				7001035
	H1870	E1026	E1029		
	H1871			7001034	
	H1872				
H1887	H1873	E1090	E1092		
	H1874				1049
	H1875				861
	H1876				

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H1877	E1088	E1089				
	H1878				7001026		
	H1879						
	H1880			7001020			
	H1881	E1086	E1086				
	H1882						
	H1883						
	H1884						
	H1885	E149	E149				
	H1886				7001019		
	H1887						
H1903	H1888			7001032		1375	1033
	H1889	E138	E140				
	H1890						
	H1891						
	H1892						
	H1893	E642	E642				

DCN QA-DCQC-CERT

REV NO. 5

REV DATE: 05/16/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H1894				7001031		
	H1895			7001023			
	H1896						
	H1897	E142	E143				
	H1898						
	H1899						
	H1900						
	H1901	E136	E137				
	H1902				7001033		
	H1903			7001017			
H1929	H1904					1153	607
	H1905	E14	E16				
	H1906						
	H1907						
	H1908						
	H1909	E1727	E128				
	H1910				7001064		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product MD Peel-ASTM F904 (g/in)
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	
						Top Bottom
	H1911					
	H1912			7001071		
	H1920	E1092	E1092	7001065	7001070	
	H1921	E128	E128			
	H1922					
	H1923					
	H1924					
	H1925	E1027	E1029			
	H1926				7001072	
	H1927					
	H1928			7001068		
	H1929	E23	E25			
H1944	H1930					1068
	H1931					
	H1932					
	H1933	E33	E34			
	H1934				7001069	

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H1935						
	H1936			7001018			
	H1937	E1063	E1065				
	H1938						
	H1939						
	H1940						
	H1941	E24	E25				
	H1942			7001073			
H2000	H1995	56314 D030	56314 D031	7001090	7001076	1337	803
	H1996	56314 D036	56314 D037				
	H1997						
	H1998				7001079		
	H2000	56323 A003	56323 A004	7001086			
H2016	H2001					1167	1136
	H2002						
	H2003						
	H2004	56323 A013	56323 A013				

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Material QC					Finished Product	
		Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)		
						Top	Bottom	
	H2008	E124	E125	7001080	7001101			
	H2010							
	H2011	E157	E158					
	H2012							
	H2013							
	H2014			7001091	7001107			
	H2015	E14	E16					
	H2016							
H2025	H2017					929	511	
	H2018							
	H2019	56314 D028	56314 D028					
	H2020							
	H2022							
	H2023	56323 A002	56323 A004	7001108	7001087			
	H2024							
	H2025							
H2048	H2026					846	677	

DCN: QA-DCQC-CERT

REV NO: 5

REV DATE: 05/16/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H2027	56314 D031	56314 D031				
	H2028						
	H2029						
	H2030						
	H2031	56306 A038	56306 A043	7001088	7001089		
	H2032						
	H2034						
	H2040	56314 D027	56314 D028	7001102	7001098		
	H2041						
	H2042						
	H2043	E989	E990				
	H2044						
	H2045						
	H2046						
	H2047	E119	E119	7001089	7001092		
H2063	H2049					1534	948
	H2052	E1520	E1521				

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H2054						
	H2058	56314 D017	56314 D019	7001128	7001120		
	H2059	56314 D013	56314 D013				
	H2060						
	H2061						
	H2062						
	H2063	D134	D134		7001131		
H2079	H2064			7001106		1437	1224
	H2065						
	H2066						
	H2067	E1112	E1113				
	H2069						
	H2070						
H2103	H2080	56314 D010	56314 D010	7001115	7001050	515	1077
	H2081			7001146			
H2148	H2135	56314 B016	56314 B016	7001054	7001049	1296	810
	H2137				7001129		

DCN QA-DCQC-CERT
REV NO 5
REV DATE: 05/16/97

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H2138			7001124			
H1281	H2169	56314 B004	56314 B004	7001130	7001143	1289	789
	H2170			7001112			
	H2171						
	H2172						
	H2173	56314 B005	56314 B007				
	H2174						
	H2175						
	H2176						
	H2177	56314 B001	56314 B001	7001105	7001104		
	H2178						
	H2179						
	H2180						
	H2181	56314 B002	56314 B004				
H2196	H2182					1535	1019
	H2183						
	H2184						

The Tensor Corporation Quality Control Test Data

Product Type: Drainage Net Composite

DL14 QA-DQC-CERT
REV NO. 5
REV DATE: 05/16/97

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	
						MD Peel-ASTM F904 (g/in) Top Bottom
	H2185	E12	E12		7001103	
	H2186			7001149		
	H2187					
	H2188					
	H2189	56314 B006	56314 B007			
	H2190					
	H2191					
	H2192					
	H2193	56314 B013	56314 B013		7001100	
	H2194			7001151		
	H2195					
	H2196					
H2211	H2197	E11	E12			1270 978
	H2198					
	H2199					
	H2200					
	H2201	E16	E16		7001152	

D:\N. OA-DCQC-CERT

REV NO. 5

REV DATE: 05/16/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	
						MD Peel-ASTM F904 (g/in) Top Bottom
	H2202					
H2226	H2225	E13	E16	7001169	7001170	1283 811
H2241	H2239	E129	E131	7001148	7001168	1025 912
H2271	H2260	E638	E639	7001186	7001172	1241 814
	H2261					
	H2262					
	H2263				7001178	
	H2264	56346 B007	56346 B007			
	H2265					
	H2266					
	H2267					
	H2268	56288 G025	56288 G025			
	H2269					
	H2270					
	H2271				7001192	
H2286	H2272	E8	E9	7001176		1463 584
	H2274					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	Top	Bottom
	H2275	E12	E12				
	H2276						
	H2277						
	H2278				7001177		
	H2279	56306 A016	56306 A016				
	H2280			7001203			
	H2281						
	H2282						
	H2283	E1111	E1113				
	H2284						
	H2285						
	H2286				7001021		
H2301	H2291	E153	E155			983	1092
	H2292						
	H2293						
	H2294			7001175			
	H2295	E1110	E1110				

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	Material QC			Finished Product	
			QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H2296				7001133		
	H2297			7001147			
	H2298	56303 B005	56303 B007				
	H2299						
	H2300						
	H2301						
H2316	H2302					1334	1182
	H2303	E140	E140				
	H2304				7001135		
	H2305			7001132			
	H2306						
	H2307	56314 D026	56314 D028				
	H2308						
	H2309						
	H2310						
	H2311	56314 D005	56314 D007				
	H2312				7001136		

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product
				Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	
						Top Bottom
	H2313			7001156		
	H2314	56299 D007	56299 D007			
	H2315					
	H2316					
H2331	H2317					1506 1305
	H2318					
	H2319	56314 B008	56314 B010			
	H2320				7001223	
	H2321			7001225		
	H2322					
	H2323	56295 A037	56295 A038			
	H2324					
	H2326	E193	E194			
	H2327				7001222	
	H2328					
	H2329			7001134		
	H2330	56295 A006	56295 A007			

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LF

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Material QC					Finished Product	
		Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)		
						Top	Bottom	
	H2331							
H2346	H2332					1343	1362	
	H2333							
	H2334	56306 A005	56306 A007					
	H2335							
	H2336	56303 B017	56303 A019		7001226			
	H2337			7001221				
	H2338							
	H2339	56295 A003	56295 A004					
	H2340							
	H2341							
	H2342	56303 B007	56303 B007		7001228			
	H2343							
	H2344			7001218				
	H2345							
	H2346							
H2352	H2347	E968	E969			1272	1023	

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Material QC				Finished Product	
		Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H2348						
	H2349						
	H2350						
	H2351	E118	E119		7001212		
	H2352						
H2389	H2353			7001235		849	901
	H2354						
	H2355	E1655	E1656				
	H2356						
	H2357						
	H2358						
	H2359	E1654	E1656		7001224		
	H2360						
	H2361			7001229			
	H2362						
	H2363	E1653	E1653				
	H2381	56295 A054	56295 A055	7001227	7001204		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66A92

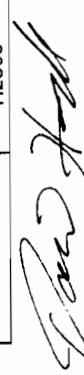
Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LF

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Shipped Roll Number	Material QC				Finished Product	
		Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
						Top	Bottom
	H2382						
	H2383	56306 A041	56306 A043				
	H2384	E1644	E1644		7001194		
	H2385			7001200			
	H2386						
	H2387						
	H2388	E1651	E1653				
	H2389						
H2403	H2390					858	1239
	H2391				7001201		
	H2392	E1652	E1653				
	H2393			7001101			

David Hall
Quality Assurance
Laboratory Supervisor5-27-97
Date

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

QC QA WORK SHEET

11/10/97

REV DATE 05/10/97

Product CodeDC4205E66A9C

Customer NameOGDEN REMEDIATION

Project NameCLARKSTOWN LANDFILL

Sales Order NumberTES 365

Purchase Order Number7-52-P2112300

QC Core Net Sample Roll Number	Raw Material QC Testing		Finished Product QC Testing		
	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
56288 G025	C60906M02A	2.37	10.80	0.903	5.57
56295 A004	C60905M05A	2.53	10.43	0.942	5.60
56295 A007	C60905M05A	2.26	10.71	0.923	5.46
56295 A038	C60905M05A	2.50	10.20	0.910	5.68
56295 A055	C60905M05A	2.75	10.90	0.893	5.67
56298 D007	C60905M05A	2.57	9.86	0.872	5.48
56303 B007	P09351	2.42	10.20	0.870	5.56
56306 A007	C60906M03A	2.73	10.80	0.852	5.47
56306 A016	C60906M03A	2.63	9.57	0.832	5.48
56306 A019	C60906M03A	2.49	10.47	0.849	5.52
56306 A043	C60906M03A	2.61	9.68	0.857	5.55
56314 B001	C60927M05A	2.73	11.30	0.865	5.52
56314 B004	C60927M05A	2.68	10.60	0.870	5.48
56314 B007	C60927M05A	2.57	10.10	0.868	5.56
56314 B010	C60927M05A	2.60	10.30	0.870	5.55
56314 B013	C60927M05A	2.97	9.23	0.868	5.50
56314 B016	C60927M05A	2.75	9.81	0.837	5.49
56314 D007	C60927M05A	2.69	10.13	0.846	5.54
56314 D010	C60927M05A	2.70	10.78	0.842	5.50
56314 D013	C60927M05A	2.53	10.65	0.861	5.59
56314 D019	C60927M05A	2.33	10.06	0.877	5.57
56314 D028	C60927M05A	2.44	8.69	0.852	5.49
56314 D031	C60927M05A	2.31	10.19	0.842	5.59
56314 D037	C60927M05A	2.15	10.91	0.845	5.47
56323 A004	P09351	2.18	9.51	0.860	5.53
56323 A013	P09351	2.12	10.31	0.834	5.50

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

Product Code DC4205E66A9C
Customer Name OGDEN REMEDIATION
Project Name CLARKSTOWN LANDFILL

Sales Order Number TES 365
Purchase Order Number 7-52-P2112300

QC Core Net Sample Roll Number	Raw Material QC Testing		Finished Product QC Testing		
	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
56346 B007	C60927M04A	2.51	10.50	0.861	5.48
E9	P09351	2.43	10.03	0.807	5.31
E12	P09351	2.51	10.45	0.859	5.40
E22	P09351	2.39	10.00	0.854	5.40
E25	P09351	2.38	9.60	0.842	5.36
E34	P09351	2.37	8.60	0.853	5.33
E85	P09351	2.45	10.17	0.822	5.65
E119	P09351	2.73	10.29	0.883	5.41
E125	C60928M04A	2.79	10.35	0.876	5.36
E128	C60928M04A	2.72	9.52	0.855	5.36
E131	C60928M04A	2.55	10.90	0.886	5.43
E134	C60928M04A	2.63	10.04	0.890	5.42
E137	C60928M04A	2.90	11.04	0.898	5.44
E140	C60928M04A	2.91	9.65	0.863	5.44
E143	C60928M04A	2.35	10.18	0.891	5.45
E149	C60928M04A	2.55	10.79	0.898	5.51
E155	C60928M04A	2.53	10.29	0.887	5.45
E158	C60928M04A	2.59	10.32	0.898	5.43
E188	C60928M04A	2.84	10.71	0.866	5.49
E194	C60928M04A	2.28	9.83	0.881	5.51
E639	C60930M03A	2.47	9.76	0.885	5.51
E642	C60930M03A	2.45	9.50	0.871	5.54
E700	C60930M03A	2.53	9.33	0.835	5.44
E969	C60903M04A	2.48	11.23	0.919	5.51
E990	C61001M01A	2.92	10.67	0.930	5.53
E1029	C61001M01A	2.29	9.70	0.888	5.52

PCN JA NSQC CERT

REV NO 3

REV DATE 05/15/97

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

Product Code DC4205E66A9C

Customer Name OGDEN REMEDIATION

Project Name CLARKSTOWN LANDFILL

Sales Order Number TES 365

Purchase Order Number 7-52-P2112300

QC Core Net Sample		Raw Material QC Testing		Finished Product QC Testing		
Roll Number	Resin Lot Number	Carbon Black (%)	ASTM D4218	Ultimate Tensile Strength (kN/m)	Mass/Area (kg/m ²)	Thickness (mm)
			ASTM D4218	ASTM D5035	ASTM D5261-92	ASTM D5199
E1062	C61001M01A	2.78		10.10	0.903	5.55
E1065	C61001M01A	2.76		8.90	0.877	5.55
E1068	C61001M01A	2.60		9.70	0.792	5.54
E1071	C61001M01A	2.45		9.00	0.914	5.60
E1074	C61001M01A	2.68		9.54	0.885	5.30
E1086	C61001M01A	2.70		10.15	0.912	5.43
E1089	C61001M02A	2.67		8.95	0.873	5.42
E1092	C61001M02A	2.86		8.80	0.880	5.44
E1095	C61001M02A	2.75		9.44	0.891	5.45
E1110	C61001M02A	2.73		9.48	0.886	5.38
E1113	C61001M02A	2.71		10.02	0.887	5.50
E1119	C61001M02A	2.70		8.66	0.851	5.36
E1644	P09775	2.50		9.50	0.839	5.32
E1653	P09775	2.56		10.30	0.860	5.31
E1656	P09775	2.82		9.50	0.873	5.36

David Hall

Quality Assurance

Laboratory Supervisor

1 kN/m= 68.54 lbs/ft

1 kg/m² = 0.2048 lbs/ft²

The Tensar Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

NEOPRENE
SAMPLE-LINER
PLATE

TEST NO.: 1483-1488

PRODUCT:

DC4205E66AP2

RIG NO.: 1

PROJECT:

CLARKSTOWN LANDFILL

DATE: 4/9/97 0:00

TEST METHOD

ASTM D4716

TEST NUMBER	LOT NUMBER	LOAD (kpsf)	HYD GRAD
1483	H1792	2.00	1.00
1484	H1808	15.00	1.00
1485	H1842	15.00	1.00
1486	H1872	2.00	1.00
1487	H1903	2.00	1.00
1488	H1929	2.00	1.00

FLOW
gpm/ft width
2.011
0.837
2.066
0.792
2.451
0.984
2.322
1.078
2.568
1.055
2.435
1.082

TRANSMISSIVITY		
gpm/ft width	($\times 10^{-4}$ m ² /sec)	($\times 10^{-3}$ ft ² /sec)
2.011	4.162	4.480
0.837	1.733	1.865
2.066	4.277	4.604
0.792	1.639	1.765
2.451	5.074	5.461
0.984	2.037	2.193
2.322	4.807	5.174
1.078	2.231	2.401
2.568	5.317	5.723
1.055	2.184	2.350
2.435	5.041	5.426
1.082	2.240	2.411

David Hall

David Hall

Quality Assurance Laboratory Supervisor

Date

5-27-97

✓

288
288

3.10

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

NEOPRENE

SAMPLE-LINER

PLATE

TEST NO.: 1489-1494 PRODUCT: DC4205E66AP2

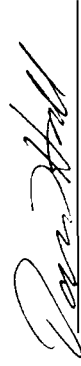
RIG NO.: 1 PROJECT: CLARKSTOWN LANDFILL

DATE: 4/9/97 0:00 TEST METHOD: ASTM D4716

TEST NUMBER	LOT NUMBER	LOAD (kpsf)	HYD GRAD
1489	H1960	2.00	1.00
1490	H1989	15.00	1.00
1491	H2000	15.00	1.00
1492	H2023	15.00	1.00
1493	H2063	2.00	1.00
1494	H2103	15.00	1.00

FLOW
gpm/ft width
2.757
1.302
3.191
1.335
3.261
1.553
2.863
1.220
2.246
1.003
2.315
0.960

TRANSMISSIVITY		
gpm/ft width	($\times 10^{-4} \text{ m}^2/\text{sec}$)	($\times 10^{-3} \text{ ft}^2/\text{sec}$)
2.757	5.708	6.144
1.302	2.695	2.901
3.191	6.607	7.111
1.335	2.763	2.974
3.261	6.750	7.266
1.553	3.214	3.460
2.863	5.926	6.378
1.220	2.524	2.717
2.246	4.648	5.003
1.003	2.076	2.234
2.315	4.792	5.158
0.960	1.988	2.140



David Hall

Quality Assurance Laboratory Supervisor

5-27-97

Date

The Tensor Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

NEOPRENE

SAMPLE-LINER

PLATE

TEST NO.: 1495-1500 PRODUCT: DC4205E66AP2

RIG NO.: 1 PROJECT: CLARKSTOWN LANDFILL

DATE: 4/10/97 0:00 TEST METHOD: ASTM D4716

TEST NUMBER	LOT NUMBER	LOAD (kpsf)	HYD GRAD
1495	H2133	2.00	1.00
1496	H2165	2.00	1.00
1497	H2211	2.00	1.00
1498	H2241	2.00	1.00
1499	H2286	2.00	1.00
1500	H2301	2.00	1.00

FLOW
gpm/ft width
2.907
1.563
3.641
2.060
3.261
1.613
3.304
1.856
2.083
0.943
2.768
1.344

TRANSMISSIVITY		
gpm/ft width	($\times 10^{-4}$ m ² /sec)	($\times 10^{-3}$ ft ² /sec)
2.907	6.018	6.477
1.563	3.234	3.482
3.641	7.537	8.112
2.060	4.265	4.591
3.261	6.750	7.266
1.613	3.339	3.594
3.304	6.839	7.362
1.856	3.843	4.136
2.083	4.313	4.642
0.943	1.953	2.10
2.768	5.729	6.17
1.344	2.782	2.99


 Date 5-27-97

David Hall
 Quality Assurance Laboratory Supervisor

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

NEOPRENE

SAMPLE-LINER

PLATE

TEST NO.: 1501-1502 PRODUCT: DC4205E66AP2

RIG NO.: 1 PROJECT: CLARKSTOWN LANDFILL

DATE: 4/10/97 0:00 TEST METHOD: ASTM D4716

TEST NUMBER	LOT NUMBER	LOAD (kpsf)	HYD GRAD
1501	H2331	2.00	1.00
		15.00	1.00
1502	H2373	2.00	1.00
		15.00	1.00

FLOW
gpm/ft width
2.717
1.309
2.389
1.040

TRANSMISSIVITY	
gpm/ft width	($\times 10^{-4} \text{m}^2/\text{sec}$)
2.717	5.625
1.309	2.709
2.389	4.944
1.040	2.153
	($\times 10^{-3} \text{ft}^2/\text{sec}$)
	6.055
	2.916
	5.322
	2.318



David Hall

Quality Assurance Laboratory Supervisor

5-27-97
Date



GEOCOMPOSITE TEST RESULTS
Tensar Corporation
Clarkstown Landfill

Material: Tensar DC4205-TG600 double laminated geocomposite
Geocomposite Lot #: not labeled, Roll #: not labeled

TRI Log #: E2041-74-10

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD	PROJECT SPEC
Peel Strength (ASTM D 751, mod. *)	1	2	3	4	5			
A Minimum peel strength (ppi) - MD	1.6	5.4	3.4	2.9	1.9	3.0	1.3	N/A
A Minimum peel strength (g/in) - MD	726	2452	1544	1317	863	1380	612	N/A
A Minimum peel strength (ppi) - TD	2.6	2.4	2.1	3.6	4.5	3.0	0.9	N/A
A Minimum peel strength (g/in) - TD	1180	1090	953	1634	2043	1380	403	N/A
B Minimum peel strength (ppi) - MD	1.8	1.4	2.5	2.5	2.5	2.2	0.5	N/A
B Minimum peel strength (g/in) - MD	817	636	1135	1180	1135	981	216	N/A
B Minimum peel strength (ppi) - TD	0.9	2.6	3.6	1.4	2.9	2.3	1.0	N/A
B Minimum peel strength (g/in) - TD	409	1180	1634	636	1317	1035	450	N/A

*"A" denotes arbitrary side of geocomposite while "B" denotes opposite side from "A".

MD Machine Direction

TD Transverse Direction

N/A Not Available

* ASTM F 904 referenced

The testing herein is based upon accepted industry practice as well as the test method listed.

TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDN 01-23-97
Quality Review/Date



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

HYDRAULIC TRANSMISSIVITY LABORATORY REPORT (ASTM D4716) Tensor Corporation

TRI Log No.: E2041-74-10
Report Date: 01-23-97

Material: Tensor DC4205-TG600 double laminated geocomposite
Fluid Media: Water
Confining Pressure (psf): 2000
Seating Time: 15 minutes

Lot #: not labeled, Roll #: not labeled

Project Name: Clarkstown Landfill

Trial Number	Direction	Hydraulic Gradient	Nominal Thickness (in)	Flow Rate (ml/sec)	Transmissivity (gal/min/ft)	Transmissivity (m ² /s)
1	MD	0.10	0.2000	43.2	6.37	1.32E-03
2	MD	0.10	0.2000	43.4	6.40	1.32E-03
3	MD	0.10	0.2000	43.4	6.40	1.33E-03
Avg			0.2000	43.3	6.39	1.32E-03
Std. Dev.			0.0000	0.1	0.02	3.85E-06

Transmissivity Box Configuration:
(top to bottom)

Steel Plate
Double Laminated Geocomposite
Steel Plate

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

HDN 01-23-97
Quality Review/Date

GEOCOMPOSITE TEST RESULTS
Tensor Corporation
Clarkstown Landfill

Material: Tensor DC4205-TG600 double laminated geocomposite - NS1305 geonet component
Geocomposite Lot #: not labeled, Roll #: not labeled

TRI Log #: E2041-74-10

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD	PROJECT SPEC.	
Melt Flow Index (ASTM D 1238)	✓	1	2	3	4	5	6	7	8	9	10			
Melt Flow Index (grams/10 min)		0.70	0.70	0.66	✓							0.69	0.02	N/A
Carbon Black Content (ASTM D 1603)	✓													
% carbon black (%)		2.25	2.29	✓								2.27	0.02	N/A
Gradient Density (ASTM D 1505)	✓													
Density (g/cm3)		0.957	0.957	0.954	✓							0.956	0.001	N/A

MD Machine Direction
TD Transverse Direction
N/A Not Available

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDA 01-23-97
Quality Review/Date



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

HYDRAULIC TRANSMISSIVITY LABORATORY REPORT (ASTM D4716) Tensor Corporation

TRI Log No.: E2041-74-10
Report Date: 01-23-97

Lot #: not labeled, Roll #: not labeled

Trial Number	Direction	Hydraulic Gradient	Nominal Thickness (in)	Flow Rate (ml/sec)	Transmissivity (gal/min/ft)	Transmissivity (m ² /s)
1	MD	0.10	0.2000	123.2	18.17	3.76E-03
2	MD	0.10	0.2000	120.6	17.79	3.68E-03
3	MD	0.10	0.2000	123.2	18.17	3.76E-03
Avg.			0.2000	122.3	18.04	3.74E-03
Std. Dev.			0.0000	1.5	0.22	4.58E-05

Transmissivity Box Configuration:
(top to bottom)

Steel Plate
Geocomposite HDPE Geonet Component
Steel Plate

Material: Tensor DC4205-TG600 double laminated geocomposite -
NS1305 HDPE geonet component
Fluid Media: Water
Confining Pressure (psf): 2000
Seating Time: 15 minutes
Project Name: Clarkstown Landfill

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

MDJ 01-23-97
Quality Review/Date



The Tensor Corporation

10000 W. 10th Ave.
Denver, CO 80202
303.733.1100

Date Tested: 10/7/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60906M02A
Railcar Number: ELTX 3197

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.883</u>	<u>0.859</u>	<u>0.867</u>	<u>0.880</u>
MFI:	<u>0.846</u>	<u>0.838</u>	<u>0.875</u>	<u>0.874</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>	<u>0.959</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>	<u>0.959</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.888</u>	<u>0.85</u>	<u>0.878</u>	<u>0.855</u>
MFI:	<u>0.886</u>	<u>0.846</u>	<u>0.856</u>	<u>0.861</u>
Density:	<u>0.958</u>	<u>0.958</u>	<u>0.958</u>	<u>0.958</u>
Density:	<u>0.958</u>	<u>0.958</u>	<u>0.959</u>	<u>0.958</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Marietta, Georgia 30066
Tel: 770 • 424 • 3255
Fax: 770 • 424 • 3256

Date Tested: 10/7/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG

Resin Lot Number: C60905M05A

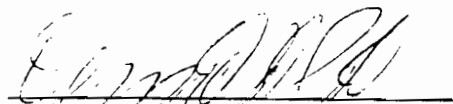
Railcar Number: ELTX 3043

Melt Flow Index (g/10 min.): ASTM D1238

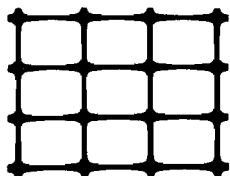
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.877</u>	<u>0.871</u>	<u>0.893</u>	<u>0.872</u>
MFI:	<u>0.876</u>	<u>0.872</u>	<u>0.872</u>	<u>0.868</u>
Density:	<u>0.955</u>	<u>0.958</u>	<u>0.958</u>	<u>0.957</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>	<u>0.958</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.887</u>	<u>0.853</u>	<u>0.858</u>	<u>0.849</u>
MFI:	<u>0.843</u>	<u>0.859</u>	<u>0.854</u>	<u>0.852</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>	<u>0.957</u>
Density:	<u>0.957</u>	<u>0.957</u>	<u>0.957</u>	<u>0.958</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 10/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

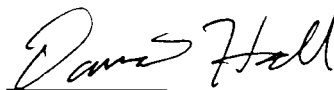
Vendor: Southern Polmer Resin Type: HDIG
Resin Lot Number: P09351
Railcar Number: AFPX 945622

Melt Flow Index (g/10 min.): ASTM D1238

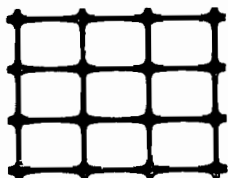
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.653</u>	<u>0.658</u>	<u>0.643</u>	<u>0.674</u>
MFI:	<u>0.663</u>	<u>0.660</u>	<u>0.660</u>	<u>0.666</u>
Density:	<u>0.955</u>	<u>0.958</u>	<u>0.958</u>	<u>0.958</u>
Density:	<u>0.959</u>	<u>0.958</u>	<u>0.958</u>	<u>0.959</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.674</u>	<u>0.659</u>	<u>0.649</u>	<u>0.659</u>
MFI:	<u>0.671</u>	<u>0.670</u>	<u>0.667</u>	<u>0.676</u>
Density:	<u>0.958</u>	<u>0.959</u>	<u>0.957</u>	<u>0.959</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.958</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 10/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60906M03A
Railcar Number: ELTX 3012

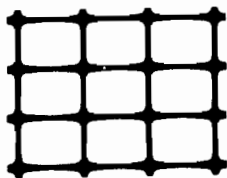
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.871</u>	<u>0.859</u>	<u>0.883</u>	<u>0.878</u>
MFI:	<u>0.887</u>	<u>0.880</u>	<u>0.887</u>	<u>0.876</u>
Density:	<u>0.954</u>	<u>0.956</u>	<u>0.955</u>	<u>0.954</u>
Density:	<u>0.954</u>	<u>0.956</u>	<u>0.955</u>	<u>0.952</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.892</u>	<u>0.858</u>	<u>0.859</u>	<u>0.878</u>
MFI:	<u>0.862</u>	<u>0.855</u>	<u>0.853</u>	<u>0.865</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.954</u>	<u>0.952</u>
Density:	<u>0.953</u>	<u>0.953</u>	<u>0.954</u>	<u>0.954</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

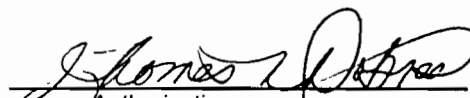
Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60927M05A
Railcar Number: ELTX 3415

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.735</u>	<u>0.738</u>	<u>0.720</u>	<u>0.741</u>
MFI:	<u>0.693</u>	<u>0.759</u>	<u>0.706</u>	<u>0.680</u>
Density:	<u>0.950</u>	<u>0.949</u>	<u>0.949</u>	<u>0.949</u>
Density:	<u>0.949</u>	<u>0.949</u>	<u>0.950</u>	<u>0.950</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.738</u>	<u>0.738</u>	<u>0.741</u>	<u>0.758</u>
MFI:	<u>0.711</u>	<u>0.698</u>	<u>0.663</u>	<u>0.726</u>
Density:	<u>0.949</u>	<u>0.948</u>	<u>0.957</u>	<u>0.956</u>
Density:	<u>0.949</u>	<u>0.956</u>	<u>0.956</u>	<u>0.955</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

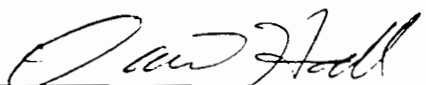
Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60927M04A
Railcar Number: ELTX 3385

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	0.828	0.802	0.829	0.875
MFI:	0.826	0.820	0.804	0.806
Density:	0.956	0.956	0.957	0.958
Density:	0.956	0.956	0.957	0.957
Compartment:	B1	B2	B3	B4
MFI:	0.835	0.863	0.825	0.824
MFI:	0.795	0.794	0.806	0.796
Density:	0.957	0.956	0.956	0.956
Density:	0.959	0.956	0.955	0.957

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

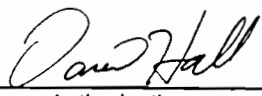
Vendor: Solvay Resin Type: HDIG
Resin Lot Number: C60928M04A
Railcar Number: ELTX 3385

Melt Flow Index (g/10 min.): ASTM D1238

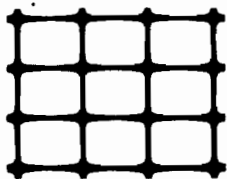
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.653</u>	<u>0.632</u>	<u>0.668</u>	<u>0.642</u>
MFI:	<u>0.647</u>	<u>0.650</u>	<u>0.671</u>	<u>0.643</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.957</u>	<u>0.958</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.957</u>	<u>0.957</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.680</u>	<u>0.651</u>	<u>0.622</u>	<u>0.650</u>
MFI:	<u>0.692</u>	<u>0.643</u>	<u>0.639</u>	<u>0.636</u>
Density:	<u>0.957</u>	<u>0.956</u>	<u>0.956</u>	<u>0.956</u>
Density:	<u>0.959</u>	<u>0.956</u>	<u>0.955</u>	<u>0.957</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/25/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

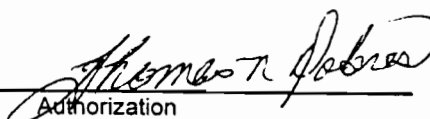
Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60930M03A
Railcar Number: ELTX 3323

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.570</u>	<u>0.692</u>	<u>0.671</u>	<u>0.653</u>
MFI:	<u>0.581</u>	<u>0.683</u>	<u>0.668</u>	<u>0.651</u>
Density:	<u>0.950</u>	<u>0.951</u>	<u>0.951</u>	<u>0.950</u>
Density:	<u>0.947</u>	<u>0.950</u>	<u>0.951</u>	<u>0.950</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.663</u>	<u>0.669</u>	<u>0.556</u>	<u>0.612</u>
MFI:	<u>0.635</u>	<u>0.640</u>	<u>0.615</u>	<u>0.580</u>
Density:	<u>0.951</u>	<u>0.951</u>	<u>0.951</u>	<u>0.951</u>
Density:	<u>0.952</u>	<u>0.951</u>	<u>0.950</u>	<u>0.951</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/25/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

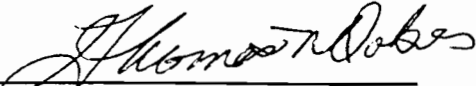
Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60930M04A
Railcar Number: ELTX 3402

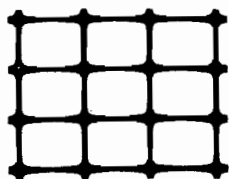
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.467</u>	<u>0.499</u>	<u>0.521</u>	<u>0.519</u>
MFI:	<u>0.422</u>	<u>0.516</u>	<u>0.516</u>	<u>0.508</u>
Density:	<u>0.953</u>	<u>0.950</u>	<u>0.951</u>	<u>0.950</u>
Density:	<u>0.951</u>	<u>0.951</u>	<u>0.952</u>	<u>0.951</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.604</u>	<u>0.572</u>	<u>0.594</u>	<u>0.521</u>
MFI:	<u>0.567</u>	<u>0.600</u>	<u>0.554</u>	<u>0.512</u>
Density:	<u>0.947</u>	<u>0.950</u>	<u>0.950</u>	<u>0.952</u>
Density:	<u>0.948</u>	<u>0.952</u>	<u>0.951</u>	<u>0.952</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/25/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

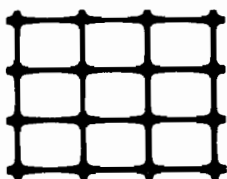
Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C61001M01A
Railcar Number: ELTX 3323

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.559</u>	<u>0.586</u>	<u>0.581</u>	<u>0.574</u>
MFI:	<u>0.598</u>	<u>0.563</u>	<u>0.563</u>	<u>0.548</u>
Density:	<u>0.952</u>	<u>0.951</u>	<u>0.953</u>	<u>0.954</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.952</u>	<u>0.949</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.563</u>	<u>0.587</u>	<u>0.571</u>	<u>0.553</u>
MFI:	<u>0.568</u>	<u>0.559</u>	<u>0.556</u>	<u>0.585</u>
Density:	<u>0.954</u>	<u>0.952</u>	<u>0.952</u>	<u>0.953</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.953</u>	<u>0.954</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Thomas R. Dobres
Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 12/2/96
Tested By: MONICA

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: SOLVAY Resin Type: HDIG A60
Resin Lot Number: C61001M02A
Railcar Number: ELTX 3441

Melt Flow Index (g/10 min.): ASTM D1238

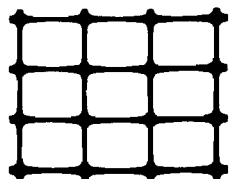
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.690</u>	<u>0.669</u>	<u>0.686</u>	<u>0.696</u>
MFI:	<u>0.671</u>	<u>0.684</u>	<u>0.669</u>	<u>0.685</u>
Density:	<u>0.946</u>	<u>0.947</u>	<u>0.940</u>	<u>0.949</u>
Density:	<u>0.950</u>	<u>0.953</u>	<u>0.944</u>	<u>0.949</u>

Compartment:	B1	B2	B3	B4
MFI:	<u>0.685</u>	<u>0.672</u>	<u>0.682</u>	<u>0.669</u>
MFI:	<u>0.638</u>	<u>0.680</u>	<u>0.647</u>	<u>0.681</u>
Density:	<u>0.946</u>	<u>0.946</u>	<u>0.946</u>	<u>0.948</u>
Density:	<u>0.947</u>	<u>0.947</u>	<u>0.944</u>	<u>0.945</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 1/30/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

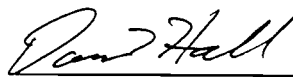
Vendor: Southern Polmer Resin Type: HDIG
Resin Lot Number: P09775
Railcar Number: UTCX48249

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.542</u>	<u>0.537</u>	<u>0.544</u>	<u>0.544</u>
MFI:	<u>0.543</u>	<u>0.548</u>	<u>0.533</u>	<u>0.537</u>
Density:	<u>0.950</u>	<u>0.951</u>	<u>0.949</u>	<u>0.947</u>
Density:	<u>0.950</u>	<u>0.950</u>	<u>0.951</u>	<u>0.950</u>

Compartment:	B1	B2	B3	B4
MFI:	<u>0.530</u>	<u>0.553</u>	<u>0.549</u>	<u>0.547</u>
MFI:	<u>0.546</u>	<u>0.550</u>	<u>0.541</u>	<u>0.547</u>
Density:	<u>0.951</u>	<u>0.949</u>	<u>0.950</u>	<u>0.952</u>
Density:	<u>0.950</u>	<u>0.951</u>	<u>0.951</u>	<u>0.950</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization

Evergreen Technologies

January 9, 1997

Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

Subj: TG600 Geotextile Certificate of Compliance

Ref: Order 1296, PO # 7-9004

Dear Sir/Madam:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 60068.

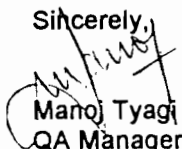
PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6 oz/yd ²
Thickness	ASTM D 5199	70 * Mil
Grab Strength	ASTM D 4632	150 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	60 lbs
Mullen Burst	ASTM D 3786	250 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S.	ASTM D 4751	250 * mm
		(60) * US Std Sieve
Permittivity	ASTM D 4491	1.8 * 1/sec
Water Permeability	ASTM D 4491	0.3 * cm/sec
Water Flow Rate	ASTM D 4491	135 * gpm/sq ft
U.V. Resistance	ASTM D 4355	70 %
(500 hours)		

(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

* Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Sincerely,


Manoj Tyagi
QA Manager

12/16/96

PRODUCT GRADE: TG 600

LOT NUMBER: 60068

COLOR: BLACK

ROLL DIM.: 15ft 4in x 1860ft

EVERGREEN TECHNOLOGIES INC.
MOA/MQC LABORATORY
EVERGREEN, ALABAMA

REVIEWED BY:
QA *Marrit Cooper*
ENGINEER

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE RESISTANCE ASTM D4833 (lbs)	TRAP. TEAR		THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS			A. O. S. ASTM D4751 (mm)
			ASTM D4632	M.D. TENS. ELONG. (%)	C.D. TENS. ELONG. (%)				ASTM D4533 MD (lbs)	CD (lbs)		PERMIT. (sec-l)	PERM. (Kv) (cm/sec)	WATER FLOW (gpm/ft2)	
5025308	12/04/96	6.5	192.2	126.8	234.6	51.8	360.5	100.9	111.4	117.0	84				
5025309	12/04/96	6.3	192.3	130.5	225.4	51.8	328.4								
5025311	12/04/96	6.5	178.7	139.3	225.7	54.8	360.0	104.2	81.3	101.0	84		0.360		0.238
5025312	12/04/96	6.6	204.6	145.3	235.3	53.3	364.7								
5025313	12/05/96	6.6	212.0	133.3	243.7	51.8	368.8	113.0	94.0	100.8	83				
5025314	12/05/96	6.4	217.3	139.2	244.9	52.4	365.5								
5025315	12/05/96	6.7	214.2	141.3	233.1	54.6	363.1								
5025316	12/05/96	6.6	201.3	130.1	228.1	56.3	375.2								
5025317	12/05/96	6.6	202.1	134.1	233.2	58.3	368.0								
5025318	12/05/96	6.6	196.0	131.7	232.9	55.8	360.9	102.6	88.5	114.5	79				
5025319	12/05/96	6.5	198.5	124.1	225.7	58.2	364.0								
5025320	12/05/96	6.3	190.4	133.4	221.3	52.8	343.9								
5025321	12/05/96	6.3	203.9	133.8	231.2	57.3	346.9	95.2	90.1	98.3	76				
5025322	12/05/96	6.2	192.9	131.8	223.9	54.3	346.9								
5025323	12/05/96	6.6	192.9	129.4	221.7	59.8	369.6								
5025324	12/05/96	6.3	193.9	132.7	229.6	56.2	349.5	87.1	80.5	100.0	70				
5025325	12/05/96	6.4	193.9	132.7	229.6	56.2	342.1	89.3	96.4	107.2	72				
5025326	12/05/96	6.6	206.6	133.5	236.1	53.3	342.1	101.6	101.8	102.7	83		0.300		0.250
5025327	12/05/96	6.4	197.4	132.5	215.7	50.1	352.3								
5025328	12/05/96	6.2	183.6	129.8	217.8	52.4	327.4	86.8	106.7	113.9	76				
5025329	12/05/96	6.3	174.9	130.2	218.4	56.8	331.3								
5025330	12/05/96	6.2	174.6	128.6	202.7	52.1	340.2	91.8	103.6	108.0	77				
5025332	12/05/96	6.1	180.4	133.4	204.6	52.0	319.6	91.8	100.2	113.5	74				
5025333	12/05/96	6.4	187.1	136.7	218.6	51.0	340.8								
5025335	12/05/96	6.4	180.6	139.8	216.8	55.5	345.4	87.3	84.0	101.6	77				
5025336	12/05/96	6.3	186.5	136.2	229.9	56.3	343.8								
5025337	12/06/96	6.2	184.0	143.9	229.4	56.7	316.2	90.7	93.3	93.9	75				
5025339	12/06/96	6.8	190.1	138.5	231.5	58.3	360.8	92.5	93.7	100.1	80				
5025340	12/06/96	6.4	187.0	140.8	225.9	56.8	350.7								
5025341	12/06/96	6.7	196.5	146.7	247.6	63.2	346.5	91.1	86.5	93.9	79				

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			TENS. ELONG. (%)	TENS. ELONG. (lbs)	C.D. (%)	ASTM D4632					PERMIT. (sec-1)	ASTM D4491 PERM. (KV) (cm/sec)	
5025342	12/06/96	6.6	194.9	139.7	217.3	55.1	344.7						
5025343	12/06/96	6.6	198.0	139.6	241.4	56.6	346.0	95.0	80.8	105.3	72		
5025344	12/06/96	6.8	205.0	148.2	239.2	52.8	363.7	102.9	92.3	106.4	75		
5025345	12/06/96	6.6	192.2	139.0	225.6	55.0	353.9						
5025347	12/06/96	6.4	214.6	136.6	253.8	58.3	343.1	94.4	93.2	113.8	75		
5025350	12/06/96	6.7	181.5	127.8	227.1	52.3	345.5	95.3	104.6	108.8	73	0.300	0.250
5025351	12/06/96	6.4	170.0	134.1	224.9	54.0	333.9						
5025352	12/06/96	6.5	173.4	134.5	215.0	58.4	330.8	91.5	100.3	110.8	76		
5025353	12/06/96	6.5	177.7	133.3	211.5	52.1	344.4						
5025354	12/06/96	6.9	198.5	135.0	225.8	55.1	353.3						
5025355	12/06/96	6.5	175.3	136.6	239.1	59.6	326.7	85.0	110.0	126.9	80		
5025356	12/06/96	6.9	195.4	134.0	222.3	53.3	346.2						
5025358	12/06/96	6.3	170.6	137.7	215.1	55.9	316.8	90.2	75.3	93.2	78	0.300	
5025360	12/07/96	6.7	200.3	137.3	227.7	51.0	342.5	91.3	92.1	98.7	76		
5025361	12/07/96	6.7	199.4	135.3	223.0	50.8	349.9						
5025362	12/07/96	6.6	186.3	136.8	238.9	50.9	335.3	108.6	85.7	105.1	81		
5025363	12/07/96	7.1	199.1	140.2	241.5	57.3	360.8						
5025364	12/07/96	7.0	189.1	135.8	230.5	49.5	347.9	98.8	86.5	97.2	77		0.250
5025365	12/07/96	6.8	188.3	141.2	235.9	55.5	347.5						
5025370	12/09/96	6.9	219.6	135.3	227.0	54.8	323.2	100.9	100.6	103.1	79		
AVERAGE =													
STD. DEVIATION =													
		6.5	192.7	135.6	228.0	54.8	347.0	95.7	93.6	105.2	77	0.00	0.315
		0.2	12.2	5.0	10.4	2.9	14.4	7.1	9.6	8.1	3	0.00	0.030
													0.0
													0.006

OK

Evergreen Technologies

February 19, 1997

Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

Subj: TG600 Geotextile Certificate of Compliance

Ref: Clarkstown Project, Order 1355 & 1356, PO # 7-9030

Dear Sir/Madam:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 70010.

PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6 oz/yd ²
Thickness	ASTM D 5199	70 Mil
Grab Strength	ASTM D 4832	150 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	60 lbs
Mullen Burst	ASTM D 3786	250 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S. (2)	ASTM D 4751	.212 mm
Permittivity	ASTM D 4491	(70) US Std Sieve
Water Permeability	ASTM D 4491	1.8 1/sec
Water Flow Rate	ASTM D 4491	0.3 cm/sec
U.V. Resistance	ASTM D 4355	135 gpm/sq ft
(500 hours)		70 %

(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

(2) Smaller sieve size number represents the maximum average roll value.

* Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Sincerely,

Meha Tyagi
QA Manager

02/19/97

PRODUCT GRADE: TG 500

LOT NUMBER: 70010

COLOR: BLACK

ROLL DIM.: 15ft 4in x 1860ft

EVERGREEN TECHNOLOGIES INC.

MOA/MQC LABORATORY

EVERGREEN, ALABAMA

REVIEWED BY:

QA *Robert Cooper*

ENGINEER

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE RESISTANCE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.B. ASTM D4751 (mm)
			TENS. (lbs)	ELONG. (%)	M.D. (lbs)	C.D. (lbs)					PERMIT. (sec-1)	PERM. (cm/sec)	
7001017	02/06/97	6.7	193.6	141.8	244.0	63.8	340.4	100.1	88.9	113.4	92		
7001018	02/06/97	6.7	189.2	142.8	240.2	58.5	341.7						
7001019	02/06/97	6.8	193.8	152.1	230.6	55.0	350.2	102.2	98.3	102.5	88		
7001020	02/06/97	6.3	189.0	150.8	243.7	54.3	337.8						
7001022	02/06/97	6.5	176.8	134.9	225.5	50.1	350.3	99.1	86.8	108.2	86		
7001023	02/06/97	6.7	188.5	151.3	242.6	60.8	379.5						
7001024	02/06/97	6.3	177.4	155.3	237.1	61.7	353.1						
7001025	02/06/97	6.6	184.6	151.8	228.3	51.6	393.7	108.3	103.8	96.2	72		
7001026	02/06/97	6.5	197.3	136.3	236.3	50.1	361.2	106.0	101.9	115.0	90		
7001028	02/06/97	6.5	182.1	126.7	229.7	55.0	352.6	92.2	99.4	106.7	77		
7001030	02/06/97	6.4	188.1	134.1	233.7	50.5	341.6	93.3	100.1	100.8	81		
7001032	02/07/97	6.4	185.5	134.6	247.2	52.2	360.3	101.4	94.0	110.8	80		
7001033	02/07/97	6.1	175.8	131.3	236.8	50.9	345.6	90.6	103.2	94.0	72		
7001039	02/07/97	6.3	179.9	144.4	237.9	54.7	328.4	91.1	91.5	98.5	78		
7001040	02/07/97	6.1	192.6	148.3	240.3	53.9	328.7						
7001041	02/07/97	6.3	189.2	155.8	226.5	51.8	334.7	94.4	87.8	112.2	76		
7001042	02/07/97	6.4	186.8	159.8	229.9	57.4	348.5						
7001043	02/07/97	6.5	182.3	157.5	229.6	51.4	355.4	92.0	87.0	101.1	70		
7001044	02/07/97	6.7	213.5	139.2	269.6	58.9	358.7	105.6	85.4	101.8	74		
7001045	02/07/97	6.5	210.8	165.5	253.2	58.9	362.6						
7001046	02/07/97	6.6	194.6	164.3	246.0	56.0	371.7	98.8	90.5	99.4	70		
7001047	02/07/97	6.4	214.3	171.2	235.9	54.7	360.3						
7001048	02/07/97	6.4	202.8	159.8	260.7	57.8	357.7	95.5	89.0	104.6	70		
7001049	02/07/97	6.6	210.8	169.0	259.3	58.5	375.8						
7001050	02/07/97	6.6	197.2	173.2	258.8	68.4	365.1	96.9	83.9	98.6	82		
7001051	02/07/97	6.6	184.0	176.8	234.8	66.9	348.5	94.1	83.8	95.6	75		
7001057	02/08/97	6.4	197.8	175.6	242.3	75.2	345.4	95.9	82.0	95.6	71		
7001060	02/08/97	6.4	200.2	182.2	241.8	68.6	342.9	96.1	82.6	97.4	76		
7001062	02/08/97	6.7	200.8	171.3	238.0	63.5	351.9	101.7	86.6	98.5	77		
7001064	02/08/97	6.5	204.3	172.8	244.1	62.5	357.4	96.6	91.2	105.0	70		

LOT NUMBER: 70010

Page No. 2

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	FRACTURE RESISTANCE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.B. ASTM D4751 (mm)
			TENS. ELONG. (%)	M.D. TENS. ELONG. (%)	C.D. TENS. ELONG. (%)	ASTM D4632					PERMIT. PESM. (KV) (cm/sec)	WATER FLOW (gpm/ft2)	
7001065	02/08/97	6.1	201.8	178.1	237.6	63.6	327.3						
7001068	02/08/97	6.3	195.2	178.3	230.1	59.8	338.6	84.1	83.4	103.1	139		
7001069	02/08/97	6.3	206.8	189.8	230.4	65.2	339.8						
7001070	02/08/97	6.3	199.7	175.8	237.6	62.8	341.1						
7001071	02/08/97	6.6	209.2	177.0	245.8	63.2	356.3	95.7	90.7	103.6	70		
7001072	02/08/97	6.4	203.6	171.8	240.4	62.1	336.5						
7001073	02/08/97	6.3	197.1	182.1	245.1	67.1	343.1						
7001074	02/08/97	6.7	204.7	182.6	241.0	65.5	347.9	96.2	98.2	100.8	71		
7001076	02/08/97	6.7	209.3	192.7	249.2	69.4	344.1	99.0	80.8	101.1	71		
7001079	02/08/97	6.2	193.7	191.5	242.3	73.8	333.9	90.9	74.1	100.6	71		
7001082	02/09/97	6.4	183.6	180.0	241.9	78.4	340.6	92.7	77.5	104.1	70		
7001083	02/09/97	6.1	172.4	175.8	237.6	68.0	321.7						
7001086	02/09/97	6.4	194.0	196.3	238.3	60.8	343.7	106.3	75.5	93.9	76		
7001088	02/09/97	6.3	172.0	168.8	218.5	59.5	333.7	88.1	78.2	96.5	70		
7001089	02/09/97	6.2	180.4	182.7	226.8	61.8	316.9						
7001090	02/09/97	6.4	186.5	176.4	227.7	61.4	357.3						
7001091	02/09/97	6.2	183.4	193.6	234.2	61.6	321.8	90.0	75.6	94.8	70		
7001092	02/09/97	6.4	172.7	179.3	227.1	58.3	334.6						
7001093	02/09/97	6.3	183.2	181.6	232.8	61.8	325.9						
7001097	02/09/97	6.2	192.7	174.2	225.2	58.8	322.4	98.4	79.4	102.2	74		
7001098	02/09/97	6.3	174.1	178.3	229.5	59.9	328.8						
7001099	02/09/97	6.4	187.8	187.2	240.4	63.7	338.7						
7001100	02/09/97	6.2	175.9	179.4	212.5	57.6	323.9	86.4	78.4	102.8	70		
7001101	02/09/97	6.5	174.2	186.2	233.1	66.0	346.0						
7001102	02/09/97	6.2	176.2	180.3	236.8	60.3	325.5	91.8	100.8	101.5	71		
7001104	02/09/97	6.4	169.5	170.8	236.5	57.9	345.9	96.0	69.8	102.8	73		
7001107	02/09/97	6.3	177.5	180.4	238.8	64.8	344.3	86.3	72.3	104.5	70		
7001112	02/10/97	6.1	184.5	187.9	219.4	59.3	325.2	84.1	81.7	95.3	70		
7001115	02/10/97	6.1	172.5	176.1	221.9	60.9	332.2	94.7	71.3	98.3	71		
7001117	02/10/97	6.4	176.6	173.3	214.4	58.3	333.3	89.4	70.7	98.5	71		
7001119	02/10/97	6.3	175.3	187.0	231.0	55.3	310.9	84.3	75.6	106.7	78		
7001120	02/10/97	6.3	183.0	187.4	234.0	58.8	319.4	84.7	91.9	104.5	71		
7001123	02/10/97	6.3	176.8	167.7	235.1	59.8	317.9	94.9	85.7	105.2	78		
7001125	02/10/97	6.3	183.5	172.6	234.0	59.3	325.1	90.6	97.1	98.1	76		
7001126	02/10/97	6.2	173.5	166.0	232.5	61.5	325.8	91.2	81.8	106.5	75		
7001128	02/10/97	6.2	182.0	185.3	225.1	59.1	313.0	93.4	87.8	104.3	78		
7001132	02/10/97	6.2	177.6	174.9	218.6	61.7	325.3	87.3	75.8	94.7	77		
7001133	02/10/97	6.4	179.3	176.5	219.0	62.4	320.6						

EYERGREEN TECH. INC.

02/18/97 PED 10:43 FAX 334 578 0141

LOT NUMBER: 70010

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ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION					M. BURST ASTM D3786 (psi)	FUNCTIONS ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			TENS. (lbs)	ELONG. (%)	N.D.	ASTM D4632	C.D.					PERMIT. (sec-l)	PIERK. (KV)	
7001134	02/10/97	6.3	175.9	178.6	231.3	64.4	317.5	91.6	74.8	93.2	78			
7001137	02/10/97	6.1	175.5	179.3	228.2	66.1	327.9	88.8	77.4	101.2	75			
7001139	02/10/97	6.5	187.7	160.3	232.6	58.3	335.1	98.5	84.8	98.2	80			
7001142	02/11/97	6.0	175.8	156.3	213.2	55.9	298.8	91.4	82.0	98.6	72			
7001145	02/11/97	6.0	175.2	151.6	214.2	53.8	320.2	91.7	83.0	96.5	73			
7001146	02/11/97	6.0	174.9	150.8	232.1	52.1	321.4							
7001147	02/11/97	6.0	174.7	145.7	231.9	52.2	323.1							
7001148	02/11/97	6.2	176.9	148.9	224.6	50.3	324.1	93.9	79.2	107.2	76			
7001149	02/11/97	6.2	183.2	154.0	226.0	54.8	341.6	96.5						
7001151	02/11/97	6.3	175.9	157.7	218.1	54.4	331.4	92.8	80.3	109.7	82			
7001154	02/11/97	6.1	175.7	150.0	223.6	54.8	339.2	90.6	82.3	103.7	76			
7001155	02/11/97	6.2	178.8	147.5	228.3	53.2	335.0							
7001157	02/11/97	6.2	177.9	151.3	226.3	56.3	328.9	89.5	90.2	108.7	80			
7001160	02/11/97	6.2	178.6	153.6	222.9	57.4	321.8	92.7	83.0	105.5	76			
7001162	02/11/97	6.2	175.4	154.7	231.3	59.1	334.7	93.5	81.7	96.2	80			
7001164	02/11/97	6.2	167.5	157.3	209.7	56.2	331.5							
7001165	02/11/97	6.2	174.4	161.6	216.9	61.6	333.2							
7001166	02/11/97	6.4	179.1	165.6	236.1	57.8	340.2	92.2	74.0	93.7	76			
7001169	02/11/97	6.2	172.7	161.4	226.6	58.4	325.5	89.8	74.9	101.0	71			
7001172	02/11/97	6.2	162.2	154.5	220.0	58.3	324.8	93.6	69.9	101.5	79			
7001173	02/12/97	6.3	166.0	156.4	227.1	59.8	325.4							
7001174	02/12/97	6.3	173.4	156.9	214.7	56.0	336.0							
7001175	02/12/97	6.2	175.7	155.1	219.6	53.9	341.3	84.9	82.9	105.4	70			
7001176	02/12/97	6.1	172.7	158.1	218.5	54.1	349.5							
7001177	02/12/97	6.2	169.4	158.9	214.8	54.8	330.2							
7001178	02/12/97	6.1	169.1	155.8	223.4	54.9	341.8	92.6	78.7	100.2	71			
7001179	02/12/97	6.3	167.7	156.3	223.4	53.2	340.3							
7001182	02/12/97	6.0	172.0	155.1	224.2	54.4	325.7	94.7	76.5	95.7	70			
7001183	02/12/97	6.1	171.8	150.8	214.7	53.0	338.6							
7001185	02/12/97	6.3	174.0	157.3	214.9	54.2	334.3	95.3	71.3	101.5	71			
7001186	02/12/97	6.3	173.0	152.9	213.2	52.8	350.6							
7001187	02/12/97	6.4	176.1	155.8	228.4	57.3	348.9							
7001188	02/12/97	6.2	178.0	153.3	221.0	54.7	330.6	91.5	81.8	99.8	73			
7001190	02/12/97	6.3	174.3	161.6	220.5	54.2	350.1	93.0	74.8	90.0	65			
7001193	02/12/97	6.3	165.9	166.0	216.8	53.1	337.9	87.5	71.5	94.9	71			
7001196	02/12/97	6.2	173.7	164.1	220.8	59.6	335.1	93.0	70.7	92.5	71			
7001199	02/13/97	6.1	168.9	166.7	218.2	58.6	329.7	94.6	78.3	92.3	77			
7001202	02/13/97	6.2	172.6	164.9	225.5	59.0	336.9	95.3	76.5	99.7	78			

LOT NUMBER: 70010

Page No. 4

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd ²)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 CD (lbs)	THICKNESS ASTH D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			TENS. (lbs)	ELONG. (%)	M.D. ASTM D4632 C.D. TENS. (lbs)	ELONG. (%)					PERMIT. (sec-1)	WATER FLOW (gpm/ft ²)	
7001206	02/13/97	6.2	174.6	153.3	222.1	53.3	334.5	94.5	74.2	95.8	79		
7001206	02/13/97	6.5	174.7	155.1	239.0	51.8	341.8						
7001206	02/13/97	6.3	178.1	154.0	222.7	53.9	330.3						
7001207	02/13/97	6.4	168.1	155.3	214.7	52.3	315.7	90.3	84.4	101.1	79		
7001208	02/13/97	6.4	179.5	146.8	231.5	50.8	347.8	92.8					
7001210	02/13/97	6.1	172.0	148.7	232.7	52.8	334.6	97.2	83.8	107.8	81		
7001212	02/13/97	6.3	178.8	148.2	215.3	53.2	326.8	92.6	73.0	92.1	81		
7001217	02/13/97	6.3	178.0	166.6	226.2	58.7	270.2	93.0	74.9	103.4	79		
7001221	02/14/97	7.0	191.4	153.8	225.3	64.3	288.8	88.1	86.1	108.9	77		
7001223	02/14/97	6.4	159.3	165.5	229.9	55.2	300.4	89.6	76.4	108.3	79		
7001225	02/14/97	6.5	175.4	160.8	236.3	50.0	277.2	95.0	88.7	110.6	84		
7001227	02/14/97	6.5	183.1	148.6	228.2	50.0	276.1						
7001228	02/14/97	6.9	172.5	151.7	231.1	54.5	289.4	98.1	84.4	116.9	87		
7001229	02/14/97	6.6	185.4	153.1	224.3	56.3	323.5						
AVERAGE =			6.3	182.4	163.3	230.7	58.3	335.2	93.7	83.1	101.4	76	0.000
STD. DEVIATION =			0.2	12.1	14.5	11.0	5.5	19.0	5.1	8.7	5.7	7	0.000

EVEKREYEN TECH. INC.

02/18/97 REV 10:43 FAX 334 318 0141

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255

May 27, 1997

Ogden Remediation
166 Route 303
West Nyack, NY 10994
Attention: Phil McQuiston

Reference: TENSAR ORDER NUMBER: TES 365
 PURCHASE ORDER NUMBER: 7-52-P2112300

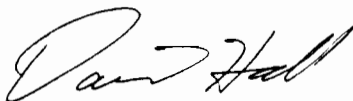
SOLD TO:
OGDEN REMEDIATION
166 ROUTE 303
WEST NYACK, NY 10994

SHIP TO:
OGDEN REMEDIATION
166 ROUTE 303
WEST NYACK, NY 10994

Dear Mr. McQuiston,

This is to certify that The Tensar Corporation NS130551 geonet as manufactured by The Tensar Corporation for the project referenced above meets the characteristics and properties per the enclosed specification sheet dated April 8, 1997. The referenced product has been manufactured and tested in accordance with The Tensar Corporation Quality Assurance Program. Quality control test data is enclosed.

Sincerely,



David Hall
Quality Assurance
Laboratory Supervisor

THE TENSAR CORPORATION GEONET NS130551

The geonet NS130551 shall be an integrally formed polyethylene net structure. It shall have high tensile strength to resist installation damage and loading on steep slopes. It shall also have a high compressive strength to maintain a high transmissivity under high loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min. (per ASTM D1238) and a density range of 0.932 to 0.970 grams/cc (per ASTM D792 or D1505). The geonet is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
Mechanical Properties					
• Transmissivity ² normal pressure = 15,000psf; $i \leq 1.0$	ASTM D 4716 metal plate/net/metal plate	m ² /sec (E-04)	8 ✓	MARV	100,000 SF
• MD Ultimate Tensile Strength	ASTM D 5035	kN/m (ppi)	5.9 (33)	MARV	50,000 SF
• XMD Ultimate Tensile Strength	ASTM D 5035	kN/m (ppi)	2.2 (12)	MARV	
• Thickness	ASTM D 5199	mm (mil)	4.0 (150) ✓	MARV	
• Roll length	direct measure	m (ft)	91.5 (300.0)	min	Each roll
• Roll width	direct measure	m (ft)	4.2 (14.0)	min	
UV Stabilization					
• Carbon Black	ASTM D 4218 (OR ASTM D 1603)	(% weight)	(2.0) ✓	MARV	50,000 SF
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	295 (650)	typical	N/A
• Roll Diameter		m (in)	N/A	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
• Labeling					
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Transmissivity results reported by The Tensar Corporation are based on standard index test conditions. Actual performance is dependent upon site specific conditions. Please contact the Tensar Corporation for site specific transmissivity testing.

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 0255

SOLD TO:	OGDEN REMEDIATION
SHIP TO:	CLARKSTOWN LANDFILL
BILL OF LADING :	TMP 9916 TES 365
PRODUCT CODE :	NS130551

[illegible]

TES0365 XLS

Product Code NS130551 Bill of Lading TMP 9916
Customer Name OGDEN REMEDIATION Sales Order Number TES 365
Project Name CLARKSTOWN LF Purchase Order Number 7-52-P2112300

Raw Material QC Testing Finished Product QC Testing

QC Sample Roll Lot Number Number	Resin Lot Number	Carbon Black (%)	Ultimate Tensile		Mass/Area (kg/m2)	Thickness (mm)
			Strength (kN/m)	ASTM D4218	ASTM D3776	ASTM D5199
2566	E2561 B7BE22	2.41	7.9		.675	4.6
	E2562 B7BE22	2.41	7.9		.675	4.6
	E2563 B7BE22	2.41	7.9		.675	4.6
	E2564 B7BE22	2.41	7.9		.675	4.6
2593	E2589 B7BE22	2.47	7.9		.693	4.6
	E2590 B7BE22	2.47	7.9		.693	4.6
	E2591 B7BE22	2.47	7.9		.693	4.6
	E2592 B7BE22	2.47	7.9		.693	4.6
2619	E2619 P09440	2.36	7.7		.689	4.3
2628	E2620 P09440	2.44	8.0		.685	4.4
	E2621 P09440	2.44	8.0		.685	4.4
	E2622 P09440	2.44	8.0		.685	4.4
	E2623 P09440	2.44	8.0		.685	4.4
2646	E2645 P09440	2.67	7.4		.684	4.3
	E2646 P09440	2.67	7.4		.684	4.3
2654	E2647 P09440	2.31	7.6		.675	4.3

 5/28/97 Date
David Hall

Quality Assurance Laboratory Supervisor

1 kN/m = 68.54 lbs/ft
1 kg/m2 = 0.2048 lbs/ft2
A production lot for Tensar geonets and
geocomposites consists of 50,000 ft2 of
consecutive production

Product Code NS130551
 Customer Name OGDEN REMEDIATION
 Project Name CLARKSTOWN LF

Bill of Lading TWP 9916
 Sales Order Number TES 365
 Purchase Order Number 7 52 P2112300

Raw Material QC Testing Finished Product QC Testing

QC Sample Roll	Resin Lot	Carbon Black (%)	Ultimate Tensile Strength (kN/m)	Mass/Area (kg/m ²)	Thickness (mm)
Lot Number	Number	ASTM D4218	ASTM D5035	ASTM D3776	ASTM D5199
E2655	E2648 P09440	2.31	7.6	.675	4.3
E2649	P09440	2.31	7.6	.675	4.3
E2673	E2670 P09440	2.54	7.7	.692	4.4
E2671	P09440	2.54	7.7	.692	4.4
E2672	P09440	2.54	7.7	.692	4.4
E2673	P09440	2.54	7.7	.692	4.4
E2691	E2691 P09440	2.44	8.0	.701	4.4
E2700	E2692 P09440	2.37	7.2	.676	4.4
E2709	E2705 P09440	2.31	7.8	.693	4.4
E2709	P09440	2.31	7.8	.693	4.4
E2718	E2710 P09440	2.46	7.3	.680	4.4


 Date 5.28.97

David Hall
 Quality Assurance Laboratory Supervisor

1 kN/m = 68.54 lbs/ft
 1 kg/m² = 0.2048 lbs/ft²
 A production lot for Tensar geonets and geocomposites consists of 50,000 ft² of consecutive production.

The Tensar Corporation Quality Assurance

FLOW AND TRANSMISSIVITY DATA

Boundary Conditions

PLATE

SAMPLE

PLATE

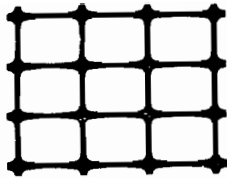
TEST NO.: 1643-1644 PRODUCT: NS130551 *See note*

RIG NO.: 1 PROJECT: CLARKSTOWN LANDFILL

DATE: 5/22/97 0:00 TEST METHOD: ASTM D4716

TEST NUMBER	LOT NUMBER	LOAD (kpsf)	HYD GRAD	FLOW		TRANSMISSIVITY	
				gpm/ft width		(x10 ⁻⁴ m ² /sec)	
1643	E2566	2.00	0.50	7.500		31.051	
1644	E2709	2.00	0.50	7.282		30.146	
				15.000		33.422	
				14.563		32.449	

David Hall
 Date: 5-28-97
 David Hall
 Quality Assurance Laboratory Supervisor



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255

Date Tested: 2/26/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

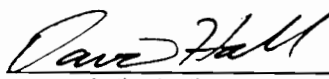
Resin Certification Report

Vendor: Southern Polmer Resin Type: HDIG
Resin Lot Number: P09440
Railcar Number: AFPX 945823

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.724</u>	<u>0.751</u>	<u>0.727</u>	<u>0.749</u>
MFI:	<u>0.722</u>	<u>0.708</u>	<u>0.745</u>	<u>0.711</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.960</u>	<u>0.960</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.960</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.714</u>	<u>0.713</u>	<u>0.730</u>	<u>0.733</u>
MFI:	<u>0.726</u>	<u>0.729</u>	<u>0.712</u>	<u>0.723</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.956</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.957</u>	<u>0.960</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization

2571 XLS

TO Roy F. Weston of New York, Inc. (RFW)

Raritan Plaza III, Suite 2B

101 Fieldcrest Ave.

Edison, NJ 08837

(732) 417-5800/5801 (fax)

Date: 11/30/98

OE&C Project No. 60010 0000 0050 8000

Attention: Bruce LaPenta

Re: Remediation of Clarkstown Sanitary LF & LF Capping

Town of Clarkstown, Rockland County, New York

Ogden Engineering & Construction, Inc. (OE&C)

Submittal Item # 147.06

Subcontractor/Supplier:

We Are Sending You (Fedex):

- ☒ Attached
 ☐ Prints
 ☐ Under separate cover via _____ the following items:
 ☐ Shop drawings
 ☐ Change order
 ☐ Plans
 ☐ Samples
 ☐ Specifications
 ☒ Copy of letter
 ☐ Reviewed & Approved
 ☒ Material Certs.

COPIES	DATE	NO. of Pgs	DESCRIPTION
5	6/16/98		ETI - Geocomposite/Net Cert., 1567
			Applicable Spec. Section: 06030, 1.02

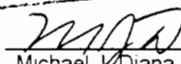
These are transmitted as checked below:

- ☐ For approval
 ☐ Approved as submitted
 ☐ Resubmit ____ copies for approval
 ☒ For your use
 ☐ Approved as noted
 ☐ Submit ____ copies for distribution
 ☐ As requested
 ☐ Returned for corrections
 ☐ Return ____ corrected prints
 ☐ For review and comment
 ☐ For Record Purposes
 ☐ Prints Returned After Loan to Us
 ☐ For Bids Due on

Remarks:

DEC 2 1998

Copies To: CDS/TL/KK, RFW w/attachment
FF.NY144 w/att.; CF.PM, CL

Signed: 
Michael J. Diana Quality Control

Ogden Engineering & Construction, Inc.
166 Rout.. 303
West Nyack, NY 10994
(914) 358-2720 (EST)
(914) 358-2720 (fax)

EVERGREEN
TECHNOLOGIES, INC.

June 16, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10994

Customer Order # 2529, PO # NS, Project: Ogden Remediation
TES Order # 365, B/L # 1567

Dear Sir:

This letter is to certify that DC4200AA is a Geotextile Composite manufactured by Evergreen Technologies, Inc. (ETI). Further, all of the components are manufactured by ETI. The components consist of TG600, a 6 ounce geotextile, from lot numbers 80039 are bonded to each side of NS1400 from lot number 83031.

DC4200AA from lot number 84021 meets the minimum properties listed below:

PROPERTY UNITS	TEST PROCEDURE	VALUE (1)
Peel Adhesion	ASTM F 904	454 g/in
Transmissivity (2)	ASTM D 4716	$3.0 \times 10^{-5} \text{ m}^2/\text{sec}$

(1) Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 which meet or exceed the minimum values listed).

(2) Transmissivity test parameters were set at gradient of 0.5, pressure load of 2,000 pounds per square foot (psf), with a configuration of metal plate / neoprene / sample / liner / metal plate

This certification is based on testing conducted by ETI Quality Assurance & Quality Control testing laboratory at the time of manufacturing. ETI issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Respectfully,

Philip Azar

Philip Azar
QA Engineer



RECEIVED JUN 22 1998
mD, FFX, CC

5775-B Glenridge Drive / Lakeside Center, Suite 450 / Atlanta, Georgia 30326-5363

Tel. 800-984-9784 / Fax 404-705-9650

200 Miller Sellers Drive / Evergreen, Alabama 36401

Tel. 334-578-9003 / Fax 334-578-6141

OGDEN REMEDIATION SHIPPING LIST

Roll Number	Lot Number	Geonet roll number	GEONET Lot Number	textile roll number (top)	TOP Lot Number	textile roll number (bottom)	BOTTOM Lot Number	Textile (top)	Textile (bottom)	Item Number
8403131	84021	8301573	83031	8010923	80039	8010919	80039	600	600	DC4200AA162225
8403132	84021	8301573	83031	8010923	80039	8010919	80039	600	600	DC4200AA162225
8403133	84021	8301573	83031	8010923	80039	8010919	80039	600	600	DC4200AA162225
8403134	84021	8301573	83031	8010923	80039	8010902	80039	600	600	DC4200AA162225
8403135	84021	8301574	83031	8010923	80039	8010902	80039	600	600	DC4200AA162225
8403136	84021	8301574	83031	8010923	80039	8010902	80039	600	600	DC4200AA162225
8403137	84021	8301574	83031	8010923	80039	8010902	80039	600	600	DC4200AA162225
8403138	84021	8301574	83031	8010923	80039	8010902	80039	600	600	DC4200AA162225
8403139	84021	8301574	83031	8010909	80039	8010902	80039	600	600	DC4200AA162225
8403140	84021	8301575	83031	8010909	80039	8010902	80039	600	600	DC4200AA162225
8403141	84021	8301575	83031	8010909	80039	8010902	80039	600	600	DC4200AA162225
8403142	84021	8301575	83031	8010909	80039	8010926	80039	600	600	DC4200AA162225

The ETI Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4200AA162225

Bill of Lading Number 1567

Customer Name Ogden Remediation

Sales Order Number 2529

Project Name

Purchase Order Number NS

TES Number 365

QC Sample Roll No.	Roll Count List	Production LOT No.	Core Net Roll No.	Core Net LOT	Material QC				Finished Product		
					Primary (Top) Geotextile Roll No TG 600	Top Geotextile LOT	Secondary (Bottom) Geotextile Roll No TG 600	Bottom Geotextile LOT	MD Peel-ASTM F904 (g/in)		Transmissivity ASTM D 4716 x10 ⁻⁵ m ² /sec
									Top	Bottom	
8403124	8403131	84021	8301573	83031	8010923	80039	8010919	80039	1203.0	1268.0	
	8403132	84021	8301573	83031	8010923	80039	8010919	80039			
	8403133	84021	8301573	83031	8010923	80039	8010919	80039			
	8403134	84021	8301573	83031	8010923	80039	8010902	80039			
8403135	8403135	84021	8301574	83031	8010923	80039	8010902	80039	852.7	1173.0	
	8403136	84021	8301574	83031	8010923	80039	8010902	80039			
	8403137	84021	8301574	83031	8010923	80039	8010902	80039			4.777
	8403138	84021	8301574	83031	8010923	80039	8010902	80039			
	8403139	84021	8301574	83031	8010909	80039	8010902	80039			
	8403140	84021	8301575	83031	8010909	80039	8010902	80039			
	8403141	84021	8301575	83035	8010909	80039	8010902	80039			
	8403142	84021	8301575	83035	8010909	80039	8010926	80039			

EVERGREEN
TECHNOLOGIES, INC.

June 16, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10994

Subj: NS1300 Certificate of Compliance

Customer Order # 2529, PO # NS, Project: Ogden Remediation
TES Order # 365, B/L # 1567

Dear Sir:

This letter certifies that NS1300, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, Inc. (ETI), meets or exceeds the minimum requirements listed below and was shipped from Lot # 83032 and 83033.

PROPERTY	TEST PROCEDURE	VALUE (1)
Mass/Area	ASTM D 5261	.150 lbs/ft ²
Transmissivity (2)	ASTM D 4716	7 x10 ⁻⁴ m ² /sec ✓
Thickness	ASTM D 5199	157 Mil ✓
Ultimate Tensile Strength (md)	ASTM D 5035	35 lb/in ✓
Ultimate Tensile Strength (xmd)	ASTM D 5035	12 lb/in ✓
Carbon Black Content	ASTM D 4218	2 %

Resin Information

A minimum 97% virgin polyethylene is used to produce NS1400. Railcar Numbers MBLEX-53042, ACFX-58596, HDPE; , PSPX-5875, MDPE.

PROPERTY	TEST PROCEDURE	VALUE
Melt Flow Range	ASTM D 1238	0.1 - 1.0 g/10 min
Density Range	ASTM D 1505	0.932 - 0.970 g/cc

(1) Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 which meet or exceed the minimum values listed).

(2) Transmissivity test parameters were set at gradient of 1.0, pressure load of 15,000 pounds per square foot (psf), with a configuration of metal plate / sample / metal plate.

This certification is based on testing conducted by ETI Quality Assurance & Quality Control testing laboratory at the time of manufacturing. ETI issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Respectfully,

Philip Azar
Philip Azar
QA Engineer



5775-B Glenridge Drive / Lakeview Center, Suite 450 / Atlanta, Georgia 30328-5363

Tel 800-984-9784 / Fax 404-705-9650

200 Miller Sellers Drive / Evergreen, Alabama 36401

Tel. 334-578-9003 / Fax 334-578-6141

Evergreen Technologies
Quality Control Laboratory
Evergreen Alabama

Production Lot Number : 83032
 Product Type: NS1400
 DIMENSION: 14 x 1400

Bill of Lading Number: 1567
 Sales Order Number: 2529
 TES Number: 365

Strip Tensile ASTM D 5035

Roll Number	Test Date	MD Tensile (lb/in)	CD Tensile (lb/in)	Mass/Area	Thickness	Carbon Black	Transmissivity(1)
				ASTM D 5281 (lb/ft ²)	ASTM D 5199 (mil)	Content ASTM D 4218 (%)	ASTM D 4716 m2/sec(E-04)
8301461	8/1/98	39.8	13.3	0.161	201.0	2.3	11.8
8301467	8/1/98	48.5	13.1	0.160	202.0	2.3	
8301473	6/2/98	41.7	14.3	0.157	200.0	2.5	
Average =		43.3	13.6	0.159	201.0	2.4	11.8
Std. Dev. =		4.6	0.8	0.002	1.0	0.1	

(1) Transmissivity Tested at 15,000 psf; gradient = 1; configuration = metal plate/ sample/ metal plate.

*Not in any band
in spec (within)*

*Specified
20.0
3x10⁻⁵ m²/sec
OK*

Evergreen Technologies
Quality Control Laboratory
Evergreen Alabama

Production Lot Number : 83033
Product Type: NS1300
DIMENSION: 14 x 300

Bill of Lading Number: 1567
Sales Order Number: 2529
TES Number: 365

Strip Tensile ASTM D 5036

Roll Number	Test Date	MD Tensile (lb/in)	CD Tensile (lb/in)	Mass/Area	Thickness	Carbon Black	Transmissivity(1)
				ASTM D 5261 (lb/ft ²)	ASTM D 5199 (mil)	Content ASTM D 4218 (%)	ASTM D 4716 m2/sec(E-04)
8301477	6/2/98	47.2	14.6	0.162	202.0	2.3	14.1
8301487	6/2/98	40.9	12.6	0.152	196.0	2.4	
8301498	6/2/98	47.4	13.3	0.157	200.0	2.4	
8301507	6/2/98	48.6	15.4	0.155	201.0	2.4	
8301510	6/3/98	45.1	11.9	0.156	202.0	2.4	
8301516	6/3/98	47.3	15.0	0.162	204.0	2.6	
8301523	6/3/98	45.1	12.7	0.153	200.0	2.6	9.0
8301524	6/3/98	45.7	13.7	0.159	200.0	2.6	9.8
Average =		46.0	13.0	0.157	200.7	2.4	11.6
Std. Dev. =		2.6	1.1	0.004	2.5	0.1	3.6

(1) Transmissivity Tested at 15,000 psf; gradient = 1; configuration = metal plate/ sample/ metal plate.



STAR...  **Safety Through Accountability
and Recognition**

Mobil Polyethylene Certificate of Analysis

"QUALITY PEOPLE MAKING QUALITY PRODUCTS"

PHILLIP AZAR
E. T. I.
200 MILLER SELLER DRIVE
EVERGREEN, AL 36401

05/26/1998

Mobil Chemical, a major supplier of quality polyethylene, has shipped a lot of material to your facility. The lot identification and analyses are listed below. This data has been supplied by our Quality Control Laboratory located here in Beaumont. If you should need further information or another copy of this report, please call your sales office in ATLANTA, GA Phone: (770)396-4572.

Resin Identification		Resin Analysis	
		Test	Lot Data
Product Type	HYA301	Flow Index (gm/10 min) I21	43.0
Lot Number	Z-50620	Melt Index (gm/10 min) I2	0.40
Hopper Car Number	MBLX-053042	Density (gms/cc)	0.953
Quantity Shipped	159,400 LB		
Date Shipped	05/01/1998		
Delivery Note	0080028173		
P.O. Number	5906		
Location Shipped To EVERGREEN, AL			

Thank you for your business. If you need additional assistance, please do not hesitate to contact our Sales Representative in your area.

CC: MP-ATLANTA

Fax To: (334) 578-6141 PHILLIP AZAR



STAR...  **Safety Through Accountability
and Recognition**

Mobil Polyethylene Certificate of Analysis

"QUALITY PEOPLE MAKING QUALITY PRODUCTS"

PHILLIP AZAR
E. T. I.
200 MILLER SELLER DRIVE
EVERGREEN, AL 36401

05/11/1998

Mobil Chemical, a major supplier of quality polyethylene, has shipped a lot of material to your facility. The lot identification and analyses are listed below. This data has been supplied by our Quality Control Laboratory located here in Beaumont. If you should need further information or another copy of this report, please call your sales office in ATLANTA, GA Phone: (770)396-4572.

Resin Identification		Resin Analysis	
		Test	Lot Data
Product Type	HYA301	Flow Index (gm/10 min) I21	41.4
Lot Number	Z-50682	Melt Index (gm/10 min) I2	0.38 ✓
Hopper Car Number	ACFX-058596	Density (gms/cc)	0.954 ✓
Quantity Shipped	198,150 LB		
Date Shipped	05/08/1998		
Delivery Note	0080028789		
P.O. Number	6072		
Location Shipped To EVERGREEN, AL			

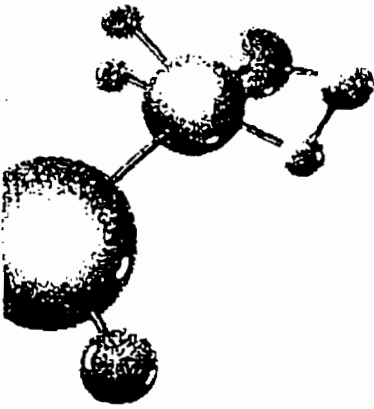
Thank you for your business. If you need additional assistance, please do not hesitate to contact our Sales Representative in your area.

CC: MP-ATLANTA

Fax To: (334) 578-6141 PHILLIP AZAR

PA
5/18 14:55

Page 1 of 1

**SPI****Southern Polymer, Inc.**

6151 Powers Ferry Road, N.W. • Suite 590 • Atlanta, GA 30339 • (770) 916-0607 • FAX (770) 916-0608

**SOUTHERN POLYMER, INC.
SHIPPING NOTICE**

DATE: 04-01-98
COMPANY: EVERGREEN TECHNOLOGIES
ATTENTION: MIKE FORDHAM - ETI
COPY TO: CINDY SEARCY

PRODUCT:	MDPE - PHILLIPS	MDPE - PHILLIPS
CUST PO #:	5188	5188
RC #:	PSPX-2159	PSPX-5875
SHIP DATE:	LATE MARCH	LATE MARCH
INV DATE:	LATE MARCH	04-30-98
NET WEIGHT:	184,500	182,750
LOT #:	PO11544	PO11604
SPI TYPE:	SP 0202	SP 0202
MELT INDEX:	0.21	0.21
DENSITY:	0.940	0.940
PRICE:	0.32/LB DEL	0.32/LB DEL

PA 8 4/15

EVERGREEN
TECHNOLOGIES, INC.

June 16, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10994

Subj: TG600 Geotextile Certificate of Compliance

Customer Order # 2529, PO # NS, Project: Ogden Remediation
TES Order # 365, B/L # 1567

Dear Sir:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 80039.

PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6.0 oz/yd ²
Thickness	ASTM D 5199	65 * Mil
Grab Strength	ASTM D 4632	160 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	65 lbs
Mullen Burst	ASTM D 3786	285 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S. (2)	ASTM D 4751	.212 * mm
Permittivity	ASTM D 4491	(70) * US Std Sieve
Water Permeability	ASTM D 4491	1.8 * 1/sec
Water Flow Rate	ASTM D 4491	0.3 * cm/sec
U.V. Resistance	ASTM D 4355	135 * gpm/sq ft
(150 hours)		70 %

(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

(2) Smaller sieve size number represents the maximum average roll value.

* Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Respectfully,

Philip Azar
Philip Azar
QA Engineer



RECEIVED JUN 22 1998

MD, FFX, ce

5775-B Glenridge Drive / Lakeside Center, Suite 450 / Atlanta, Georgia 30328-5363
Tel. 800-984-9784 / Fax 404-705-9650

200 Miller Sellers Drive / Evergreen, Alabama 36401

06/14/98

PRODUCT GRADE: TG600
 LOT NUMBER: 80039

COLOR: BLACK

ROLL DIM.: 15ft 4in x 1860ft

EVERGREEN TECHNOLOGIES INC.
 MQA/MQC LABORATORY
 EVERGREEN, ALABAMA

REVIEWED BY:
 QA

ENGINEER

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 MD (lbs)	TRAP. TEAR ASTM D4533 CD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			TENS. ELONG. (%)	M.D. (%)	ASTM D4632 C.D. (%)	TENS. ELONG. (%)					PERMIT. (sec-l)	WATER FLOW (gpm/ft2)	
010809	05/20/98	6.9	229.6	150.8	238.1	61.8	377.6	91.5	95.0	105.3	69		
010810	05/20/98	7.0	217.8	155.0	237.0	70.1	353.4						
010812	05/20/98	6.6	214.6	127.1	223.0	58.0	350.6	102.1	97.0	98.9	70		
010814	05/20/98	7.0	225.5	141.3	237.0	61.7	361.2	100.7	94.3	102.3	69		
010816	05/20/98	6.9	221.3	137.8	236.7	61.5	360.9	103.4	95.5	98.7	76		
010819	05/21/98	6.4	222.6	152.4	230.3	62.8	333.3	94.7	95.8	93.6	68		
010821	05/21/98	6.4	213.5	151.3	237.3	64.8	345.4	95.3	89.9	96.2	72		
010823	05/20/98	6.4	211.5	154.8	248.5	71.7	336.1	91.0	98.8	98.9	72	0.352	0.212
010825	05/21/98	6.3	203.5	152.4	214.7	64.4	339.9	91.4	78.1	90.7	65		
010828	05/21/98	6.6	219.5	165.3	248.9	72.3	352.8	102.0	85.0	94.4	65		
010831	05/21/98	6.2	216.0	160.5	234.1	63.8	329.0	98.1	83.5	91.1	66		
010833	05/21/98	6.3	208.2	152.8	239.0	63.9	336.0	101.0	88.0	97.0	69		
010835	05/21/98	6.5	222.2	155.8	245.2	64.5	336.7	95.0	90.5	101.4	73		
010838	05/21/98	6.4	219.7	157.4	261.4	69.8	350.6	96.3	100.3	111.6	69	0.380	
010841	05/22/98	6.3	193.2	153.2	241.7	68.3	342.1	93.7	85.1	92.7	74		0.209
010844	05/21/98	6.6	204.0	165.9	229.6	67.1	341.4	100.0	99.1	98.6	77		
010846	05/21/98	6.2	206.3	146.6	221.6	63.8	359.0	88.1	100.6	104.4	74		
010848	05/21/98	6.3	205.9	151.0	227.0	69.2	348.2	89.2	107.8	106.8	75		
010851	05/23/98	6.3	196.5	120.8	222.4	52.5	345.8	96.3	103.0	96.0	72		
010854	05/23/98	6.3	199.5	118.2	211.8	56.7	352.1	93.4	107.6	105.0	74	0.389	
010857	05/22/98	6.6	215.7	144.4	229.6	63.8	381.1	94.2	75.8	95.9	67		
010860	05/22/98	6.4	207.9	146.6	218.8	61.5	399.5	94.8	109.5	91.3	68		0.221
010863	05/23/98	6.2	222.6	154.9	229.5	59.6	380.5	92.7	77.1	78.7	65		
010866	05/23/98	6.7	204.3	149.2	237.6	65.2	391.3	100.2	78.0	82.9	67		
010868	05/23/98	6.4	194.8	141.3	230.2	58.3	347.2	101.2	106.4	108.4	70		
010871	05/23/98	6.1	214.6	152.3	228.6	60.3	348.2	93.2	107.0	112.4	66	0.394	
010874	05/23/98	6.2	201.8	140.8	204.5	57.0	332.8	93.6	111.3	104.1	67		0.212
010877	05/23/98	6.4	205.5	150.8	230.6	66.6	340.4	98.0	114.2	109.3	73		
010880	05/23/98	6.4	190.5	143.8	220.7	55.9	332.5	92.7	71.0	87.7	68		
010883	05/23/98	6.5	211.1	154.8	210.1	50.1	362.5	94.7	88.0	99.4	68		

GRAB TENSILE/ELONGATION

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	ASTM D4632		C.D. (%)	M. BURST ASTM D3786 (psi)		PUNCTURE RESISTANCE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MD CD (lbs)		THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			TENS. ELONG. (%)	TENS. (lbs)		ASTM D3786 (psi)	ASTM D4833 (lbs)		ASTM D4533 MD (lbs)	CD (lbs)		PERMIT. (sec-1)	PERM. (Kv)	
110886	05/24/98	6.5	193.5	142.3	210.6	60.1	378.2	92.2	72.6	76.1	69	0.407		
110889	05/23/98	6.5	203.9	145.3	234.4	61.2	362.1	95.4	89.2	92.9	69			
110892	05/24/98	6.3	204.0	155.4	224.3	65.8	342.4	92.8	104.5	102.9	67			
110895	05/24/98	6.2	204.3	151.8	227.0	67.8	349.5	86.1	91.5	102.1	68			
110898	05/24/98	6.4	200.1	158.8	227.5	71.8	354.4	92.0	80.5	89.0	70			
110901	05/24/98	6.7	203.9	148.4	220.8	55.3	346.0	102.0	81.4	76.7	69			0.211
110904	05/24/98	6.3	198.8	147.3	215.2	55.7	353.4	87.0	87.6	94.3	66			
110907	05/24/98	6.3	192.3	145.4	199.3	61.2	348.8	89.5	83.0	104.0	67	0.380		
110910	05/24/98	6.4	201.9	154.2	214.4	63.6	372.9	89.9	85.6	97.9	69			
110913	05/24/98	6.5	203.2	155.8	222.9	61.2	360.0	93.4	77.5	85.3	67			
110916	05/25/98	6.6	196.4	153.8	227.4	67.2	308.3	96.1	80.6	112.4	69			
110919	05/25/98	6.5	193.5	144.7	216.7	57.4	329.0	96.8	78.4	115.8	66			
110922	05/25/98	6.6	195.7	143.3	226.4	55.2	361.8	98.1	81.3	98.1	74			
110924	05/25/98	6.5	203.8	147.7	235.8	54.8	348.5	93.0	86.1	99.3	75	2.37	0.606	177.0
110926	05/25/98	6.5	193.3	145.3	223.4	57.5	344.8	97.7	94.3	100.0	81			
110929	05/25/98	6.4	201.7	146.7	232.4	57.7	323.9	95.7	96.9	103.4	80			
110932	05/26/98	6.6	180.0	144.7	218.7	58.4	329.3	92.6	85.1	103.2	82		0.361	
110935	05/26/98	6.0	194.7	145.4	216.2	59.8	326.6	86.7	87.8	100.4	73			
110937	05/26/98	6.4	204.3	149.4	218.5	60.6	350.8	96.3	84.6	104.2	78			
10940	05/26/98	6.3	189.4	149.8	196.2	56.6	319.3	88.4	84.3	93.2	72			
110943	05/26/98	6.3	192.3	140.8	214.0	53.5	342.6	96.1	78.6	91.2	78			
110945	05/26/98	6.5	183.7	140.3	204.3	54.5	343.4	96.7	86.2	90.1	81			
110947	05/26/98	6.7	208.5	147.0	244.0	51.5	390.0	103.2	97.0	98.6	86			0.212
10949	05/27/98	6.9	211.5	149.3	253.6	54.6	391.5	106.5	99.5	100.6	90	0.320		
10952	05/27/98	6.7	200.3	139.7	238.1	53.4	362.9	101.3	91.3	99.2	84			
10955	05/27/98	6.6	197.8	153.0	255.9	59.7	378.6	104.8	97.3	96.0	78			
10957	05/27/98	6.5	206.6	137.3	235.3	49.9	365.0	97.9	88.4	91.0	75			
10959	05/28/98	6.5	173.7	102.7	216.8	50.5	355.0							

AVERAGE =

6.5 204.4 147.2 227.9 61.0 352.9 95.5 90.8 97.7 72 2.37 0.399 177.0 0.213

STD. DEVIATION =

-0.2 -11.4 -10.6 -13.4 -5.6 -19.4 -4.8 -10.5 -8.5 -5 0.00 -0.082 0.0 -0.004

EVERGREEN
TECHNOLOGIES, INC.

June 16, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10994

Subj: NS1400 Certificate of Compliance

Customer Order # 2529, PO # NS, Project: Ogden Remediation
TES Order # 365, B/L # 1567

Dear Sir:

This letter certifies that NS1400, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, Inc. (ETI), meets or exceeds the minimum requirements listed below and was shipped from Lot # 83031.

PROPERTY	TEST PROCEDURE	VALUE (1)
Mass/Area	ASTM D 3776	.170 lbs/ft ²
Transmissivity (2)	ASTM D 4716	10 x10 ⁻⁴ m ² /sec
Thickness	ASTM D 1777	200 Mil
Ultimate Tensile Strength (md)	ASTM D 1682	48 lb/in
Ultimate Tensile Strength (xmd)	ASTM D 1682	13.7 lb/in
Carbon Black Content	ASTM D 1603	2 %

Resin Information

A minimum 97% virgin polyethylene is used to produce NS1400. Railcar Numbers MBLX-53042, HDPE; , PSPX-5875, MDPE.

PROPERTY	TEST PROCEDURE	VALUE
Melt Flow Range	ASTM D 1238	0.1 - 1.0 g/10 min
Density Range	ASTM D 1505	0.932 - 0.970 g/cc

(1) Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 which meet or exceed the minimum values listed).

(2) Transmissivity test parameters were set at gradient of 1.0, pressure load of 15,000 pounds per square foot (psf), with a configuration of metal plate / sample / metal plate.

This certification is based on testing conducted by ETI Quality Assurance & Quality Control testing laboratory at the time of manufacturing. ETI issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Respectfully,

Philip Azar
QA Engineer



5775-B Glenridge Drive / Lakeside Center, Suite 450 / Atlanta, Georgia 30328-5363

Tel. 800-984-9784 / Fax 404-705-9650

200 Miller Sellers Drive / Evergreen, Alabama 36401

Tel. 334-578-9003 / Fax 334-578-6141

RECEIVED JUN 22 1998

MD, FFY, CL

Evergreen Technologies
Quality Control Laboratory
Evergreen Alabama

Production Lot Number : 83031

Bill of Lading Number: 1567

Product Type: NS1400

Sales Order Number: 2529

DIMENSION: 14 x 1400

TES Number: 365

Strip Tensile ASTM D 5035

Roll Number	Test Date	MD Tensile (lb/in)	CD Tensile (lb/in)	Mass/Area	Thickness	Carbon Black	Transmissivity(1) ASTM D 4716 m2/sec(E-04)
				ASTM D 5261 (lb/ft ²)	ASTM D 5199 (mil)	Content ASTM D 4218 (%)	
8301421	6/1/98	53.7	15.4	0.173	216.0	2.2	
8301422	5/31/98	52.0	14.9	0.175	217.0	2.3	11.7
8301425	5/31/98	51.4	14.3	0.171	214.0	2.5	
8301428	5/31/98	52.6	15.4	0.176	209.0	2.4	
8301431	5/31/98	51.1	18.2	0.175	212.0	2.3	
8301433	5/31/98	50.7	16.9	0.174	215.0	2.5	
8301435	5/31/98	51.1	15.4	0.172	211.0	2.5	
8301437	6/1/98	49.7	17.2	0.178	215.0	2.5	
8301439	6/1/98	49.5	16.5	0.175	215.0	2.3	14.4
8301441	6/1/98	52.5	16.2	0.169	210.0	2.3	
8301443	6/1/98	51.4	14.9	0.173	211.0	2.6	
8301445	6/1/98	54.3	15.1	0.171	213.0	2.2	
8301448	6/1/98	50.2	14.2	0.175	213.0	2.4	
8301451	6/1/98	50.4	17.6	0.173	214.0	2.3	
8301454	6/1/98	49.1	17.3	0.176	212.0	2.5	
8301456	6/1/98	48.2	15.8	0.172	213.0	2.5	12.7
8301458	6/1/98	54.9	18.5	0.179	214.0	2.4	
8301460	6/1/98	49.8	15.8	0.175	209.0	2.4	
Average =		51.3	16.1	0.174	212.9	2.4	12.9
Std. Dev. =		1.8	1.3	0.002	2.3	0.1	1.4

(1) Transmissivity Tested at 15,000 psf; gradient = 1; configuration = metal plate/ sample/ metal plate.

**STAR...****Safety Through Accountability
and Recognition**

Mobil Polyethylene Certificate of Analysis

"QUALITY PEOPLE MAKING QUALITY PRODUCTS"

PHILLIP AZAR
E. T. I.
200 MILLER SELLER DRIVE
EVERGREEN, AL 36401

05/26/1998

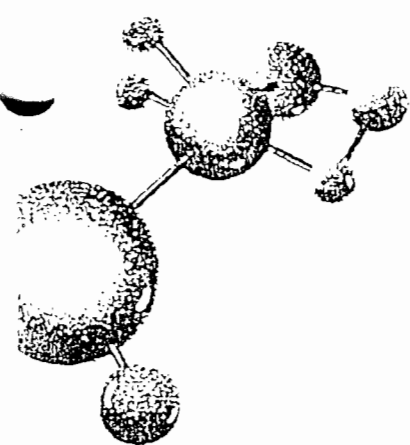
Mobil Chemical, a major supplier of quality polyethylene, has shipped a lot of material to your facility. The lot identification and analyses are listed below. This data has been supplied by our Quality Control Laboratory located here in Beaumont. If you should need further information or another copy of this report, please call your sales office in ATLANTA, GA Phone: (770)396-4572.

Resin Identification		Resin Analysis	
		Test	Lot Data
Product Type	HYA301	Flow Index (gm/10 min) I21	43.0
Lot Number	Z-50620	Melt Index (gm/10 min) I2	0.40
Hopper Car Number	MBLX-053042	Density (gms/cc)	0.953
Quantity Shipped	159,400 LB		
Date Shipped	05/01/1998		
Delivery Note	0080028173		
P.O. Number	5906		
Location Shipped To EVERGREEN, AL			

Thank you for your business. If you need additional assistance, please do not hesitate to contact our Sales Representative in your area.

CC: MP-ATLANTA

Fax To: (334) 578-6141 PHILLIP AZAR


SPI

Southern Polymer, Inc.

6151 Powers Ferry Road N.W. • Suite 590 • Atlanta, GA 30339 • (770) 916-0607 • FAX (770) 916 0608

SOUTHERN POLYMER, INC.
SHIPPING NOTICE

DATE: 04-01-98
COMPANY: EVERGREEN TECHNOLOGIES
ATTENTION: MIKE FORDHAM - ETI
COPY TO: CINDY SEARCY

PRODUCT:	MDPE - PHILLIPS	MDPE - PHILLIPS
CUST PO #:	5188	5188
RC # :	PSPX-2159	PSPX-5875
SHIP DATE:	LATE MARCH	LATE MARCH
INV DATE:	LATE MARCH	04-30-98
NET WEIGHT:	184,500	182,750
LOT #:	PO11544	PO11604
SPI TYPE:	SP 0202	SP 0202
MELT INDEX:	0.21	0.21
DENSITY:	0.940	0.940
PRICE:	0.32/LB DEL	0.32/LB DEL

PA 8 4/15

**EVERGREEN
TECHNOLOGIES, INC.**

July 12, 1998

Ogden Remediation
166 Route 303
West Nyack, NY 10994
Attn: Mike Diana

Subj: NS1300 Certificate of Compliance

Customer Order # 2677, PO # 75P112300, Project: Ogden Remediation
TES Order # 365, B/L # 1696

Dear Sir:

This letter certifies that NS1300, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, Inc. (ETI), meets or exceeds the minimum requirements listed below and was shipped from Lot # 83028.

PROPERTY	TEST PROCEDURE	VALUE (1)
Mass/Area	ASTM D 5261	.146 lbs/ft ²
Transmissivity (2)	ASTM D 4716	7 x10 ⁻⁴ m ² /sec
Thickness	ASTM D 5199	157 Mil
Ultimate Tensile Strength (md)	ASTM D 5035	35 lb/in
Ultimate Tensile Strength (xmd)	ASTM D 5035	12 lb/in
Carbon Black Content	ASTM D 4218	2 %

Resin Information

A minimum 97% virgin polyethylene is used to produce NS1400. Railcar Numbers ACFX-58596, HDPE; , PSPX-5875, MDPE.

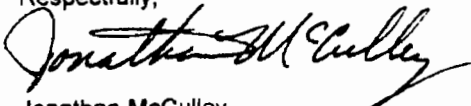
PROPERTY	TEST PROCEDURE	VALUE
Melt Flow Range	ASTM D 1238	0.1 - 1.0 g/10 min
Density Range	ASTM D 1505	0.932 - 0.970 g/cc

(1) Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 which meet or exceed the minimum values listed).

(2) Transmissivity test parameters were set at gradient of 1.0, pressure load of 15,000 pounds per square foot (psf), with a configuration of metal plate / sample / metal plate.

This certification is based on testing conducted by ETI Quality Assurance & Quality Control testing laboratory at the time of manufacturing. ETI issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Respectfully,



Jonathan McCulley
QA / QC Supervisor



5775-B Glenridge Drive / Lakeside Center, Suite 450 / Atlanta, Georgia 30328-5363

Tel. 800-984-9784 / Fax 404-705-9650

200 Miller Sellers Drive / Evergreen, Alabama 36401

Tel. 334-578-9003 / Fax 334-578-6141

Evergreen Technologies
Quality Control Laboratory
Evergreen Alabama

Production Lot Number : 83028
Product Type: NS1300
DIMENSION: 14 x 300

Strip Tensile ASTM D 5035				Mass/Area	Thickness	Carbon Black	
Roll Number	Test Date	MD Tensile (lb/in)	CD Tensile (lb/in)	ASTM D 5281 (lb/ft ²)	ASTM D 5199 (mil)	Content ASTM D 4218 (%)	Transmissivity(1) ASTM D 4716 m2/sec(E-04)
8301257	5/28/98	50.0	12.9	0.159	206.0	2.4	
8301266	5/28/98	37.0	12.6	0.157	202.0	2.5	7.7
8301273	5/28/98	43.3	12.6	0.154	202.0	2.0	
8301281	5/28/98	46.5	12.6	0.149	198.0	2.4	
8301285	5/28/98	54.3	24.2	0.147	200.0	2.4	
8301288	5/23/98	57.8	24.2	0.146	198.0	2.3	
8301297	5/29/98	41.7	13.7	0.154	200.0	2.5	8.0
8301299	5/29/98	43.4	12.6	0.150	198.0	2.3	
Average =		46.8	15.7	0.152	200.5	2.4	7.9
Std. Dev. =		6.9	5.3	0.005	2.8	0.1	0.2

(1) Transmissivity Tested at 15,000 psf; gradient = 1; configuration = metal plate/ sample/ metal plate.

STRAIGHT BILL OF LADING—SHORT FORM—ORIGINAL—NOT NEGOTIABLE

NAME OF CARRIER HORNADY	CARRIER'S NO. 45-1313	DATE 7/08/98	SHIPPER'S NO. 1696
-----------------------------------	---------------------------------	------------------------	------------------------------

RECEIVED, subject to the classifications and lawfully fixed tariffs in effect on the date of issue of this Bill of Lading.
The property described below in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said carrier (the word carrier being understood throughout the contract as the person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any property over all or any portion of said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a full-carrier shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

FROM: SHIPPER (ORIGIN)	EVERGREEN TECHNOLOGIES, INC. 200 MILLER SELLERS DRIVE EVERGREEN, AL 36401	TO: CONSIGNEE	OGDEN REMEDIATION 166 ROUTE 303 WEST NYACK NY10994
		STREET	
		DESTINATION	ZIP

DELIVERING CARRIER	ROUTE	VEHICLE NUMBER	NO. PACKAGES	HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS	ERG #	WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	CHARGES (FOR CARRIER USE)
			27		NTFY: MIKE DIANA (914) 358 2720 24HRS PRIOR TO DELIVERY NS1300 BLACK 14 X 300 4200FT2 FEDEx CERTS TO ATTN: MIKE DIANA AT: OGDEN REMEDIATION; 166 RT 303; WEST NYACK NY 10994 FAX: 914 358 2790 TES: 365 TMP: 24132 FR: 161275		21,600	65	
SHIPPING DATE/TIME: 7/08/98 16:44 ORDER # 2677 PO# 752P112300 ***TOTAL WEIGHT***									

Lot # 83028

21,600

ACADEMIA SUPPLIED ☐ YES ☐ NO	DRIVER'S SIGNATURE	EMERGENCY RESPONSE PHONE NO.
MIT C.O.D. TO: COD Amt \$		C.O.D. FEE: ☐ Prepaid ☐ Collect \$

the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ per

Subject to Section 7 of conditions, if the shipment is to be delivered to the consignee without receipt on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Shipper's imprint in lieu of stamp: not a part of bill of lading provided by the Interstate Commerce Commission.

(Signature of Consignor)

TOTAL CHARGES \$
Freight charges are PREPAID unless marked collect ☐ Check box if charges are

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation.

EVERGREEN TECHNOLOGIES, INC. 200 MILLER SELLERS DRIVE • EVERGREEN, AL 36401 Permanent post office address of shipper	Shipper, Per <i>Ben Ward</i>	Agent, Per <i>Tommy Pepp</i>
--	------------------------------	------------------------------

+ MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATIONS

RUN DATE: JUL 08, 1998 - 16:39

EVERGREEN TECHNOLOGIES, INC

ORDER NUMBER: 2677 CUSTOMER: TEN700 OGDEN REMEDIATION

166 ROUTE 303

PO NUMBER: 752P112300

WEST NYACK

NY10994

LN	ROLL-#	LOT	ITEM-NUMBER	LN	ROLL-#	LOT	ITEM-NUMBER
1	8301266	83028	NS1300168300				
2	8301267		NS1300168300				
3	8301268		NS1300168300				
4	8301269		NS1300168300				
5	8301271		NS1300168300				
6	8301272		NS1300168300				
7	8301273		NS1300168300				
8	8301275		NS1300168300				
9	8301276		NS1300168300				
10	8301278		NS1300168300				
11	8301279		NS1300168300				
12	8301280		NS1300168300				
13	8301282		NS1300168300				
14	8301283		NS1300168300				
15	8301284		NS1300168300				
16	8301285		NS1300168300				
17	8301288		NS1300168300				
18	8301289		NS1300168300				
19	8301290		NS1300168300				
20	8301291		NS1300168300				
21	8301292		NS1300168300				
22	8301293		NS1300168300				
23	8301295		NS1300168300				
24	8301296		NS1300168300				
25	8301297		NS1300168300				
26	8301298		NS1300168300				
27	8301299	83028	NS1300168300				

↑



STAR...  **Safety Through Accountability
and Recognition**

Mobil Polyethylene Certificate of Analysis

"QUALITY PEOPLE MAKING QUALITY PRODUCTS"

PHILLIP AZAR
E. T. I.
200 MILLER SELLER DRIVE
EVERGREEN, AL 36401

05/11/1998

Mobil Chemical, a major supplier of quality polyethylene, has shipped a lot of material to your facility. The lot identification and analyses are listed below. This data has been supplied by our Quality Control Laboratory located here in Beaumont. If you should need further information or another copy of this report, please call your sales office in ATLANTA, GA Phone: (770) 396-4572.

Resin Identification		Resin Analysis	
		Test	Lot Data
Product Type	HYA301	Flow Index (gm/10 min) I21	41.4
Lot Number	Z-50682	Melt Index (gm/10 min) I2	0.38 ✓
Hopper Car Number	ACFX-058596	Density (gms/cc)	0.954 ✓
Quantity Shipped	198,150 LB		
Date Shipped	05/08/1998		
Delivery Note	0080028789		
P.O. Number	6072		
Location Shipped To EVERGREEN, AL			

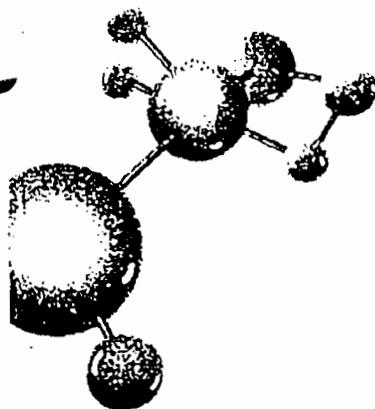
Thank you for your business. If you need additional assistance, please do not hesitate to contact our Sales Representative in your area.

CC: MP-ATLANTA

Fax To: (334) 578-6141 PHILLIP AZAR

PA
5/18 14:55

Page 1 of 1

**SPI****Southern Polymer, Inc.**

6151 Powers Ferry Road, N.W. • Suite 590 • Atlanta, GA 30339 • (770) 916-0607 • FAX (770) 916-0609

**SOUTHERN POLYMER, INC.
SHIPPING NOTICE**

DATE: 04-01-98
COMPANY: EVERGREEN TECHNOLOGIES
ATTENTION: MIKE FORDHAM - ETI
COPY TO: CINDY SEARCY

PRODUCT:	MDPE - PHILLIPS	MDPE - PHILLIPS
CUST PO #:	5188	5188
RC # :	PSPX-2159	PSPX-5875
SHIP DATE:	LATE MARCH	LATE MARCH
INV DATE:	LATE MARCH	04-30-98
NET WEIGHT:	184,500	182,750
LOT #:	PO11544	PO11604
SPI TYPE:	SP 0202	SP 0202
MELT INDEX:	0.21	0.21
DENSITY:	0.940	0.940
PRICE:	0.32/LB DEL	0.32/LB DEL

PA 8 4/15

THE TENSAR CORPORATION GEOCOMPOSITE DC4205 - DOUBLE-SIDED WITH TG600 GEOTEXTILES

Geocomposite DC4205 shall consist of Tensar NS1405 geonet bonded on both sides to 6 oz non-woven polypropylene geotextiles (continuous filament). The geocomposite shall have a high compressive strength in order to ensure maximum flow capacity under high confining pressures. The bonding process shall not introduce adhesives or other foreign products. The geocomposite shall be resistant to all forms of biological or chemical degradation normally encountered in a soil environment. The geocomposite shall be made from the geonet and geotextile products whose property requirements are listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min (per ASTM D1238) and a density range of 0.932 to 0.963 grams/cc (per ASTM D792 or D1505). The geocomposite is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
GEOTEXTILE PROPERTIES					
• Grab Tensile Strength	ASTM D 4632	N (lbs)	712 (160)	MARV	Per ASTM D4759
• AOS	ASTM D 4751	mm (US Std. Sieve)	0.25 (60)	MARV	
• Mass/Unit Area	ASTM D 5261 (or ASTM D 3776)	g/m ² (oz/sy)	203 (6.0)	MARV	
• Water Permeability	ASTM D 4491	cm/sec	0.3	MARV	
• Water Flow Rate	ASTM D 4491	m ³ /sec/m ² (gpm/ft ²)	0.09 (135)	MARV	
• U.V. Resistance	ASTM D 4355	%	70		
CORE NET PROPERTIES (97% minimum virgin polyethylene resin with 2-3% carbon black)					
• MD Ultimate Tensile Strength	ASTM D 5035	kN/m (ppi)	8.4 (48)	MARV	50,000 SF
• Thickness	ASTM D 5199	mm (in)	5.0 (200)	MARV	
• Carbon Black	ASTM D 4218 (OR ASTM D 1603)	(% weight)	(2.0)	MARV	
FINISHED GEOCOMPOSITE PROPERTIES					
• Peel Adhesion	ASTM F 904 (modified) ²	g/in	454	MARV	50,000 SF
• Transmissivity ³ normal pressure = 15000psf; i=1.0	ASTM D 4716 metal plate/composite/metal plate	m ² /sec (E-04)	1.0	MARV	200,000 SF (or per project req.)
• Geotextile overlap at edges and unbonded area		mm (in)	75 (3.0)	minimum	Each roll
• Roll Length		m (ft)	68.6 (225)	minimum	
• Roll Width		m (ft)	4.0 (13.0)	minimum	
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	388 (855)	typical	N/A
• Roll Diameter		m (in)	0.8 (31)	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
Packaging and Labeling					
• Black polyethylene bag secured with nylon ties. Bag thickness		mm (mils)	0.12 (5.0)	nominal	
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Peel adhesion ASTM F 904 - 2 inch wide strip. Reported value per specimen is average of all computed points between 1" and 5" of separation.

³ Transmissivity: Results reported by Tensar are based on standard index test conditions. Actual performance is dependent upon site specific conditions. Please contact Tensar Corporation for site specific transmissivity testing.

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date: 17-JUL-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13717 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2394	3,060 SF
H2395	3,128 SF
H2396	3,038 SF
H2397	3,060 SF
H2398	3,082 SF
H2399	3,128 SF
H2400	3,082 SF
H2401	3,015 SF
H2402	3,128 SF
H2405	3,082 SF
H2406	3,082 SF
H2407	3,150 SF
H2408	3,015 SF
H2410	3,060 SF
H2411	3,105 SF
H2412	3,060 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	H2414	3,082 SF
	H2415	3,082 SF
	H2416	3,060 SF
	H2445	3,082 SF
	H2447	3,172 SF
	H2448	3,082 SF
	H2449	3,128 SF
	H2450	3,082 SF
	H2451	3,150 SF
	H2452	3,060 SF
	H2453	3,105 SF

83,360

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 18-JUL-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13752 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2424 3,038 SF

H2425 3,082 SF

H2426 3,128 SF

H2427 3,128 SF

H2428 3,082 SF

H2429 3,128 SF

H2430 3,128 SF

H2431 3,128 SF

H2432 3,082 SF

H2433 3,060 SF

H2434 3,128 SF

H2435 3,150 SF

H2436 3,105 SF

H2437 3,105 SF

H2438 3,105 SF

H2439 3,128 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
	H2440	3,060 SF
	H2441	3,060 SF
	H2442	3,082 SF
	H2443	3,082 SF
	H2444	3,128 SF
	H2446	3,128 SF
	H2454	3,105 SF
	H2455	3,128 SF
	H2456	3,082 SF
	H2457	3,128 SF
	H2458	3,128 SF

		83,816

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 21-JUL-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13857 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H1913	3,010 SF
H1914	3,128 SF
H1915	3,103 SF
H1916	3,076 SF
H1917	3,038 SF
H1918	3,076 SF
H1919	3,071 SF
H1943	3,182 SF
H1944	3,004 SF
H1945	3,136 SF
H1969	3,056 SF
H1971	3,114 SF
H1972	3,056 SF
H1973	3,026 SF
H1974	3,089 SF
H1975	3,107 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H1984	3,038 SF
	H1985	3,056 SF
	H1986	3,094 SF
	H1987	3,139 SF
	H1988	3,024 SF
	H1990	3,067 SF
	H1991	3,064 SF
	H2077	3,038 SF
	H2078	3,172 SF
	H2079	3,128 SF
	H2378	3,105 SF

83,197

Tensor Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 22-JUL-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13887 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2364	3,105 SF
H2365	3,082 SF
H2366	3,128 SF
H2367	3,038 SF
H2368	3,128 SF
H2369	3,105 SF
H2370	3,060 SF
H2371	3,015 SF
H2372	3,082 SF
H2373	3,060 SF
H2374	3,128 SF
H2375	3,172 SF
H2376	3,195 SF
H2377	3,150 SF
H2379	3,082 SF
H2380	3,082 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233

Date:

----- Packing List -----

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H2403	3,105 SF
	H2404	3,060 SF
	H2409	3,060 SF
	H2413	3,060 SF
	H2417	3,060 SF
	H2418	3,060 SF
	H2419	3,015 SF
	H2420	3,105 SF
	H2421	3,105 SF
	H2422	3,082 SF
	H2423	3,082 SF

83,406

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 22-JUL-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13914 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H1992 3,015 SF

H1993 3,082 SF

H1994 3,105 SF

H1999 2,780 SF

H2005 3,105 SF

H2006 3,128 SF

H2007 2,520 SF

H2009 3,128 SF

H2021 3,150 SF

H2033 3,150 SF

H2035 3,105 SF

H2036 3,082 SF

H2037 3,150 SF

H2038 3,150 SF

H2039 3,128 SF

H2048 3,105 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H2050	3,128 SF
	H2051	2,992 SF
	H2053	3,038 SF
	H2055	3,105 SF
	H2056	3,105 SF
	H2057	3,128 SF
	H2068	3,038 SF
	H2071	3,015 SF
	H2072	3,105 SF
	H2074	3,172 SF
	H2076	3,105 SF

82,814

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

11-AUG-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-14776 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H1953	3,071 SF
H1954	3,150 SF
H1955	3,172 SF
H1958	3,143 SF
H1959	2,546 SF
H1960	3,078 SF
H1962	3,089 SF
H2083	3,015 SF
H2090	2,898 SF
H2095	3,105 SF
H2097	3,128 SF
H2098	3,150 SF
H2099	3,082 SF
H2100	3,150 SF
H2101	3,105 SF
H2102	3,105 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

----- Packing List -----

Date:

11-AUG-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-14776 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2103

H2104

H2105

H2106

H2107

H2108

H2286

H2287

H2288

H2289

H2290

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date: 12-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-14843 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H1946	3,164 SF
H1947	3,136 SF
H1948	3,082 SF
H1949	3,238 SF
H1950	3,143 SF
H1951	3,148 SF
H1952	3,150 SF
H1956	3,053 SF
H1957	3,082 SF
H1961	3,116 SF
H1963	3,085 SF
H1964	2,995 SF
H1965	3,049 SF
H1966	3,114 SF
H1967	2,981 SF
H1968	3,022 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H1970	3,105 SF
	H1976	3,087 SF
	H1977	3,058 SF
	H1978	3,121 SF
	H1979	3,107 SF
	H1980	3,038 SF
	H1981	3,051 SF
	H1982	3,123 SF
	H1983	3,172 SF
	H1989	3,004 SF
	H2075	3,082 SF

		83,506

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date: 12-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-14846 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2139	3,060 SF
H2140	3,060 SF
H2141	3,128 SF
H2142	3,150 SF
H2143	3,082 SF
H2144	3,082 SF
H2145	3,105 SF
H2146	3,128 SF
H2147	3,038 SF
H2148	3,105 SF
H2149	3,150 SF
H2150	3,172 SF
H2151	3,082 SF
H2213	3,105 SF
H2215	3,038 SF
H2216	3,116 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H2217	2,820 SF
	H2218	3,150 SF
	H2219	3,038 SF
	H2220	3,053 SF
	H2221	3,195 SF
	H2222	3,128 SF
	H2223	3,218 SF
	H2224	3,150 SF
	H2226	3,150 SF
	H2227	3,015 SF
	H2229	3,060 SF

83,578

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date: 13-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-14888 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2203 2,272 SF

H2204 3,071 SF

H2205 3,150 SF

H2206 3,150 SF

H2207 3,172 SF

H2208 3,082 SF

H2209 3,195 SF

H2210 3,128 SF

H2211 3,015 SF

H2212 3,082 SF

H2214 3,150 SF

H2228 3,107 SF

H2230 2,794 SF

H2231 3,110 SF

H2232 3,146 SF

H2233 3,056 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H2234	2,877 SF
	H2235	3,058 SF
	H2237	3,128 SF
	H2251	3,146 SF
	H2253	3,031 SF
	H2254	3,096 SF
	H2255	3,067 SF
	H2256	2,812 SF
	H2257	3,128 SF
	H2258	3,175 SF
	H2259	3,116 SF

		82,314

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date:

13-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-14889 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING

H2082	3,195 SF
H2084	3,105 SF
H2085	3,128 SF
H2086	3,082 SF
H2087	3,060 SF
H2088	3,082 SF
H2089	3,105 SF
H2091	3,082 SF
H2092	3,128 SF
H2093	3,105 SF
H2094	3,060 SF
H2096	3,150 SF
H2152	3,082 SF
H2236	3,150 SF
H2238	3,058 SF
H2240	3,150 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233

Date:

----- Packing List -----

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H2241	3,150 SF
	H2242	3,071 SF
	H2243	3,121 SF
	H2244	3,134 SF
	H2245	2,766 SF
	H2246	3,053 SF
	H2247	3,130 SF
	H2248	3,141 SF
	H2249	3,013 SF
	H2250	3,110 SF
	H2252	3,031 SF

		83,442

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 20-OCT-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-17266 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	DC4205E66AP2	13.5FT X 225FT NS1405/ETI TG600-6 OZ. 2-SIDED DRAINAGE COMPOSITE PEEL 454/AVG UNBONDED 3 INCH, OVERLAP 3 INCH SPECIAL TESTING
H2109		3,105 SF
H2110		3,105 SF
H2111		3,105 SF
H2112		3,128 SF
H2113		3,128 SF
H2114		3,172 SF
H2116		3,105 SF
H2118		3,105 SF
H2132		3,082 SF
H2133		3,128 SF
H2134		3,060 SF
H2153		2,919 SF
H2154		3,128 SF
H2155		3,038 SF
H2156		3,038 SF
H2157		3,082 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
-----	-----	-----
	H2158	2,952 SF
	H2159	3,089 SF
	H2160	2,967 SF
	H2161	3,105 SF
	H2162	3,105 SF
	H2163	3,150 SF
	H2164	2,641 SF
	H2165	3,060 SF
	H2166	3,105 SF
	H2167	3,105 SF
	H2168	3,150 SF

		82,857

DCN QA/DOC-CERT
REV NO 4
REV DATE 11/12/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2
Customer Name Ogden Remediation
Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
H1929	1	H1913	E1062	E1062	7001071	7001064	1152.6	607.3
	2	H1914	E1062		7001071	7001064		
	3	H1915	E1062		7001071	7001064		
	4	H1916	E1062		7001071	7001064		
	5	H1917	E1092	E1092	7001071	7001064		
	6	H1918	E1092		7001071	7001070		
	7	H1919	E1092		7001071	7001070		
H1944	8	H1943	E24	E25	7001062	7001073	1180.4	1068.0
	9	H1944	E39	E40	7001062	7001073		
H1960	10	H1945	E39		7001062	7001073	973.1	813.9
	11	H1946	E39		7001062	7001073		
	12	H1947	E39		7001062	7001073		
	13	H1948	E37	E37	7001062	7001073		
	14	H1949	E37		7001062	7001073		
	15	H1950	E37		7001062	7001063		
	16	H1951	E37		7001060	7001063		
	17	H1952	E48	E49	7001060	7001063		
	18	H1953	E48		7001060	7001063		
	19	H1954	E48		7001060	7001063		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code	DC4205E66AP2	TMP Number	13717, 13752, 13857, 13887, 13914, 14776,
Customer Name	Ogden Remediation		14843, 14846, 14888, 14889, & 17266
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
					Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
	20	H1955	E48		7001060	7001063		
	21	H1956	E48		7001060	7001063		
	22	H1957	E120	E122	7001060	7001063		
	23	H1958	E120		7001060	7001075		
	24	H1959	E120		7001078	7001075		
	25	H1960	56323/A011	56323/A028	7001078	7001075		
111976	26	H1961	56323/A011		7001078	7001075	1272.2	1110.3
	27	H1962	56323/A011		7001078	7001075		
	28	H1963	56323/A011		7001078	7001075		
	29	H1964	56223/A012	53223/A010	7001078	7001075		
	30	H1965	56223/A012		7001078	7001075		
	31	H1966	56223/A012		7001078	7001081		
	32	H1967	56223/A012		7001077	7001081		
	33	H1968	56314/D034	56314/D034	7001077	7001081		
	34	H1969	56314/D034		7001077	7001081		
	35	H1970	56314/D034		7001077	7001081		
	36	H1971	56314/D034		7001077	7001081		
	37	H1972	56314/D033	56314/D034	7001077	7001081		
	38	H1973	56314/D033		7001077	7001081		

DCN QA QCOC-CERT
REV NO 4
REV DATE 11/12/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code	DC4205E66AP2	TMP Number	13717, 13752, 13857, 13887, 13914, 14776,
Customer Name	Ogden Remediation		14843, 14846, 14888, 14889, & 17266
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
	39	H1974	56314/D033		7001077	7001082		
	40	H1975	56314/D033		7001077	7001082		
	41	H1976	56323/A006	56323/A028	7001097	7001082		
H2000	42	H1977	56323/A006		7001097	7001082	1337.0	803.0
	43	H1978	56323/A006		7001097	7001082		
	44	H1979	56323/A006		7001097	7001082		
	45	H1980	56314/D035	56314/D037	7001097	7001082		
	46	H1981	56314/D035		7001097	7001099		
	47	H1982	56314/D035		7001097	7001099		
	48	H1983	56314/D035		7001074	7001099		
	49	H1984	56323/A007	56323/A028	7001074	7001099		
	50	H1985	56323/A007		7001074	7001099		
	51	H1986	56323/A007		7001074	7001099		
	52	H1987	56323/A007		7001074	7001099		
	53	H1988	56323/A005	56323/A028	7001074	7001099		
	54	H1989	56323/A005		7001074	7001099		
	55	H1990	56323/A005		7001074	7001076		
	56	H1991	56323/A005		7001074	7001076		
	57	H1992	56314/D030	56314/D031	7001090	7001076		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2

Customer Name Ogdan Remediation

Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,

14843, 14846, 14888, 14889, & 17266

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC			Finished Product	
					Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	Mid Peel-ASTM F904 (g/in)	Top	Bottom
	58	H1993	56314/D030		7001090	7001076			
	59	H1994	56314/D030		7001090	7001076			
	60	H1999	56314/D036	56314/D037	7001086	7001079			
H2016	61	H2005	56323/A013	56323/A028	7001086	7001079	1167.0		1136.0
	62	H2006	56323/A013		7001086	7001101			
	63	H2007	56323/A013		7001080	7001101			
	64	H2009	E124	E125	7001080	7001101			
H2025	65	H2021	56314/D028	56314/D028	7001091	7001107	923.8		510.8
H2048	66	H2033	56303/A038	56303/B040	7001088	7001109	846.2		676.5
	67	H2035	56314/D037	56314/D037	7001088	7001109			
	68	H2036	56314/D037		7001088	7001109			
	69	H2037	56314/D037		7001088	7001109			
	70	H2038	56314/D037		7001088	7001109			
	71	H2039	56314/D027	56314/D028	7001102	7001098			
	72	H2048	E119	E119	7001089	7001092			
H2063	73	H2050	E119		7001089	7001092	1534.0		948.0
	74	H2051	E1520	E1521	7001089	7001092			
	75	H2053	E1520		7001089	7001092			
	76	H2055	56314/D017	56314/D019	7001128	7001120			

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2

Customer Name Ogdan Remediation

Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
H2079	77	H2056	56314/D017		7001128	7001120		
	78	H2057	56314/D017		7001128	7001120		
	79	H2068	E1112	E1113	7001106	7001131	1437.0	1224.0
	80	H2071	56323/H029	56323/A028	7001106	7001057		
	81	H2072	56323/H029		7001115	7001057		
	82	H2074	56323/H029		7001115	7001057		
	83	H2075	56314/D014	56314/D016	7001115	7001057		
	84	H2076	56314/D014		7001115	7001057		
	85	H2077	56314/D014		7001115	7001057		
	86	H2078	56314/D014		7001115	7001057		
	87	H2079	56314/D010	56314/D010	7001115	7001050		
H2103	88	H2082	56314/D010		7001146	7001050	514.5	1077.8
	89	H2083	56314/D016	56314/D016	7001146	7001050		
	90	H2084	56314/D016		7001146	7001050		
	91	H2085	56314/D016		7001146	7001050		
	92	H2086	56314/D016		7001146	7001050		
	93	H2087	56314/B048	56314/B049	7001146	7001116		
	94	H2088	56314/B048		7001146	7001116		
	95	H2089	56314/B048		7001048	7001116		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2

Customer Name Ogden Remediation

Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,

14843, 14846, 14888, 14889, & 17266

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Ped-ASTM F904 (g/in)	
							Top	Bottom
	96	H2090	56314/B048		7001048	7001116		
	97	H2091	56314/D013	56314/D013	7001048	7001116		
	98	H2092	56314/D013		7001048	7001116		
	99	H2093	56314/D013		7001048	7001116		
	100	H2094	56314/D013		7001048	7001116		
	101	H2095	E131	E131	7001048	7001116		
	102	H2096	E131		7001048	7001116		
	103	H2097	E131		7001118	7001116		
	104	H2098	E131		7001118	7001116		
	105	H2099	56314/D004	56314/D004	7001118	7001116		
	106	H2100	56314/D004		7001118	7001116		
	107	H2101	56314/D004		7001118	7001116		
	108	H2102	56314/D004		7001118	7001116		
	109	H2103	56314/B057	56314/B058	7001118	7001056		
H2115	110	H2104	56314/B057		7001118	7001056	783.8	979.6
	111	H2105	56314/B057		7001059	7001056		
	112	H2106	56314/B057		7001059	7001056		
	113	H2107	E958	E960	7001059	7001056		
	114	H2108	E958		7001059	7001056		

DCN QA-DCQC-CERT
REV NO 4
REV DATE 11/12/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2
Customer Name Ogden Remediation
Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
	115	H2109	E958		7001059	7001056		
	116	H2110	E958		7001059	7001056		
	117	H2111	56314/D022	56314/D022	7001059	7001055		
	118	H2112	56314/D022		7001059	7001055		
	119	H2113	56314/D022		7001059	7001055		
	120	H2114	56314/D022		7001113	7001055		
H2133	121	H2116	56314/B046	56314/B046	7001113	7001055	948.0	762.0
	122	H2118	56314/B046		7001113	7001055		
	123	H2132	56436/B003	56436/B004	7001054	7001049		
	124	H2133	56436/B003		7001054	7001049		
H2148	125	H2134	56436/B003		7001054	7001049	1296.0	810.0
	126	H2139	56314/B017	56314/B019	7001124	7001129		
	127	H2140	56314/B017		7001124	7001129		
	128	H2141	56314/B017		7001124	7001129		
	129	H2142	56314/B017		7001124	7001129		
	130	H2143	56314/B009	56314/B010	7001124	7001129		
	131	H2144	56314/B009		7001124	7001125		
	132	H2145	56314/B009		7001124	7001125		
	133	H2146	56314/B009		7001122	7001125		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2

Customer Name Ogden Remediation

Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,

14843, 14846, 14888, 14889, & 17266

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
H2165	134	H2147	56314/B018	56314/B019	7001122	7001125		
	135	H2148	56314/B018		7001122	7001125		
	136	H2149	56314/B018		7001122	7001125	860.8	964.1
	137	H2150	56314/B018		7001122	7001125		
	138	H2151	56314/B011	56314/B013	7001122	7001125		
	139	H2152	56314/B011		7001122	7001125		
	140	H2153	56314/B011		7001122	7001123		
	141	H2154	56314/B011		7001126	7001123		
	142	H2155	56314/B043	56314/B043	7001126	7001123		
	143	H2156	56314/B043		7001126	7001123		
	144	H2157	56314/B043		7001126	7001123		
	145	H2158	56314/B043		7001126	7001123		
	146	H2159	E156	E158	7001126	7001123		
	147	H2160	E156		7001126	7001123		
	148	H2161	56314/B012	56314/B013	7001126	7001119		
	149	H2162	56314/B012		7001130	7001119		
	150	H2163	56314/B012		7001130	7001119		
	151	H2164	56314/B012		7001130	7001119		
	152	H2165	56314/B003	56314/B004	7001130	7001119		

DCN QA-DU-CC-CERT
REV NO 4
REV DATE 11/12/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2
Customer Name Ogden Remediation
Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC			Finished Product	
					Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	Top	Bottom
H2181	153	H2166	56314/B003		7001130	7001119		1289.4	788.6
	154	H2167	56314/B003		7001130	7001119			
	155	H2168	56314/B003		7001130	7001119			
	156	H2203	E16	E16	7001127	7001152		1270.0	977.8
H2211	157	H2204	E10	E12	7001127	7001152			
	158	H2205	E10		7001127	7001152			
	159	H2206	E10		7001127	7001152			
	160	H2207	E10		7001127	7001152			
	161	H2208	E6	E6	7001127	7001114			
	162	H2209	E6		7001127	7001114			
	163	H2210	E6		7001163	7001114			
	164	H2211	56314/D011	56314/D013	7001163	7001114			
H2226	165	H2212	56314/D011		7001163	7001114		1283.4	811.4
	166	H2213	56314/D011		7001163	7001114			
	167	H2214	56314/D011		7001163	7001114			
	168	H2215	E15	E16	7001163	7001164			
	169	H2216	E15		7001163	7001164			
	170	H2217	E15		7001166	7001164			
	171	H2218	E15		7001166	7001164			

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2 TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
Customer Name Ogden Remediation 14843, 14846, 14888, 14889, & 17266
Project Name Clarkstown Landfill Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	Top	Bottom
	172	H2219	56306/A024	56306/A024	7001166	7001164		
	173	H2220	56306/A024		7001166	7001164		
	174	H2221	56306/A024		7001166	7001164		
	175	H2222	E13	E16	7001166	7001170		
	176	H2223	E13		7001166	7001170		
	177	H2224	E13		7001166	7001170		
	178	H2226	E13		7001169	7001170		
H2241	179	H2227	56314/D029	56314/D031	7001169	7001170	1024.6	912.2
	180	H2228	56314/D029		7001169	7001170		
	181	H2229	56314/D029		7001169	7001170		
	182	H2230	56314/D029		7001169	7001170		
	183	H2231	56314/B010	56314/B013	7001169	7001170		
	184	H2232	56314/B010		7001169	7001168		
	185	H2233	56314/B010		7001169	7001168		
	186	H2234	56314/B010		7001148	7001168		
	187	H2235	56299/D003	56299/D004	7001148	7001168		
	188	H2236	56299/D003		7001148	7001168		
	189	H2237	56299/D003		7001148	7001168		
	190	H2238	E129	E131	7001148	7001168		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

DCN QA-DI QC-CERT
REV NO. 4
REV DATE 11/12/97

Product Code DC4205E66AP2
Customer Name Ogden Remediation
Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC					Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)		
							Top	Bottom	
	191	H2240	E129		7001148	7001173			
	192	H2241	E129		7001148	7001173			
H2256	193	H2242	56346/B011	56346/B014	7001160	7001173	999.5	956.0	
	194	H2243	56346/B011		7001160	7001173			
	195	H2244	56346/B011		7001160	7001173			
	196	H2245	56346/B011		7001160	7001173			
	197	H2246	E143	E143	7001160	7001173			
	198	H2247	E143		7001160	7001173			
	199	H2248	E143		7001160	7001173			
	200	H2249	E189	E196	7001160	7001173			
	201	H2250	E189		7001187	7001171			
	202	H2251	E189		7001187	7001171			
	203	H2252	E189		7001187	7001171			
	204	H2253	E1000	E1002	7001187	7001171			
	205	H2254	E1000		7001187	7001171			
	206	H2255	E1000		7001187	7001171			
	207	H2256	E1000		7001187	7001172			
H2271	208	H2257	E7	E9	7001187	7001172	1240.7	814.3	
	209	H2258	E7		7001186	7001172			

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2

Customer Name Ogden Remediation

Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,

14843, 14846, 14888, 14889, & 17266

Sales Order Number

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MID Peel-ASTM F904 (g/in)	
							Top	Bottom
	210	H2259	E7		7001186	7001172		
H2286	211	H2286	E1111	E1113	7001203	7001021	1462.7	584.0
H2301	212	H2287	E36	E37	7001203	7001021	983.2	1091.8
	213	H2288	E36		7001175	7001021		
	214	H2289	E36		7001175	7001021		
	215	H2290	E36		7001175	7001021		
H2309	216	H2364	E1653	E1653	7001229	7001224	849.0	901.0
	217	H2365	E1653		7001229	7001224		
	218	H2366	E1653		7001229	7001224		
	219	H2367	E1648	E1650	7001229	7001224		
	220	H2368	E1648		7001229	7001179		
	221	H2369	E1648		7001217	7001179		
	222	H2370	E1648		7001217	7001179		
	223	H2371	E1646	E1647	7001217	7001179		
	224	H2372	E1646		7001217	7001179		
	225	H2373	E1646		7001217	7001179		
	226	H2374	E1646		7001217	7001179		
	227	H2375	E9	E9	7001217	7001179		
	228	H2376	E9		7001217	7001204		

DCN QA-DL-QC-CERT
REV NO 4
REV DATE 11/12/97

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code	DC4205E66AP2	TMP Number	13717, 13752, 13857, 13887, 13914, 14776,
Customer Name	Ogden Remediation		14843, 14846, 14888, 14889, & 17266
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Material QC				Finished Product	
			Core Net Roll Number	QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
	229	H2377	E9		7001217	7001204		
	230	H2378	E986	E987	7001227	7001204		
	231	H2379	E986		7001227	7001204		
	232	H2380	E986		7001227	7001204		
	233	H2394	E1652	E1653	7001191	7001201	858.0	1239.0
	234	H2395	E1652		7001191	7001201		
	235	H2396	E1677	E1677	7001191	7001201		
	236	H2397	E1677		7001191	7001201		
	237	H2398	E1677		7001191	7001201		
	238	H2399	E1677		7001191	7001202		
	239	H2400	E1678	E1680	7001191	7001202		
	240	H2401	E1678		7001183	7001202		
	241	H2402	E1678		7001183	7001202		
	242	H2403	E1678		7001183	7001202		
	243	H2404	E1679	E1680	7001183	7001202	1564.0	601.4
	244	H2405	E1679		7001183	7001202		
	245	H2406	E1679		7001183	7001202		
	246	H2407	E1679		7001183	7001202		
	247	H2408	E1684	E1686	7001183	7001214		

Product Code DC4205E66AP2

Customer Name Ogden Remediation

Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14838, 14889, & 17266

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	QC Core Net Sample Roll Number	Material QC		Finished Product	
					Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	Mid Peel-ASTM F904 (g/in)	
							Top	Bottom
	248	H2409	E1684		7001183	7001214		
	249	H2410	E1684		7001182	7001214		
	250	H2411	E1684		7001182	7001214		
	251	H2412	E1685	E1686	7001182	7001214		
	252	H2413	E1685		7001182	7001214		
	253	H2414	E1685		7001182	7001214		
	254	H2415	E1685		7001182	7001214		
	255	H2416	E1686	E1686	7001182	7001199		
	256	H2417	E1686		7001182	7001199		
	257	H2418	E1686		7001204	7001199		
H2430	258	H2419	E1686		7001204	7001199	1039.3	507.8
	259	H2420	E1687	E1689	7001204	7001199		
	260	H2421	E1687		7001204	7001199		
	261	H2422	E1687		7001204	7001199		
	262	H2423	E1687		7001204	7001199		
	263	H2424	E1683	E1683	7001204	7001206		
	264	H2425	E1683		7001204	7001206		
	265	H2426	E1683		7001208	7001206		
	266	H2427	E1683		7001208	7001206		

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

DCN: QA-DQCC-CERT
REV NO. 4
REV DATE 11/12/97

Product Code DC4205E66AP2
Customer Name Ogden Remediation
Project Name Clarkstown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	Material QC			Finished Product
				QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	
	267	H2428	E1675	E1677	7001208	7001206	MD Peel-ASTM F904 (g/in)
	268	H2429	E1675		7001208	7001206	Top Bottom
	269	H2430	E1675		7001208	7001206	
H2444	270	H2431	E1675		7001208	7001206	976.3 666.7
	271	H2432	E1647	E1647	7001208	7001197	
	272	H2433	E1647		7001208	7001197	
	273	H2434	E1647		7001208	7001197	
	274	H2435	E1647		7001208	7001197	
	275	H2436	E1676	E1677	7001208	7001197	
	276	H2437	E1676		7001208	7001197	
	277	H2438	E1676		7001208	7001197	
	278	H2439	E1676		7001208	7001197	
	279	H2440	E1682	E1683	7001208	7001210	
	280	H2441	E1682		7001208	7001210	
	281	H2442	E1682		7001142	7001210	
	282	H2443	E1682		7001142	7001210	
	283	H2444	E1681	E1683	7001142	7001210	
H2458	284	H2445	E1681		7001142	7001210	754.2 909.7
	285	H2446	E1681		7001142	7001210	

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net Composite

Product Code DC4205E66AP2
Customer Name Ogdan Remediation
Project Name Clarksdown Landfill

TMP Number 13717, 13752, 13857, 13887, 13914, 14776,
14843, 14846, 14888, 14889, & 17266

Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

QC Sample Roll Number	Roll Count	Production Roll Number	Core Net Roll Number	Material QC			Finished Product	
				QC Core Net Sample Roll Number	Primary (Top) Geotextile Roll No.	Secondary (Bottom) Geotextile Roll No.	MD Peel-ASTM F904 (g/in)	
							Top	Bottom
	286	H2447	E1681		7001142	7001210		
	287	H2448	E1674	E1674	7001142	7001137		
	288	H2449	E1674		7001142	7001137		
	289	H2450	E1674		7001141	7001137		
	290	H2451	E1674		7001141	7001137		
	291	H2452	E1649	E1650	7001141	7001137		
	292	H2453	E1649		7001141	7001137		
	293	H2454	E1649		7001141	7001137		
	294	H2455	E1649		7001141	7001137		
	295	H2456	E1645	E1647	7001141	7001137		
	296	H2457	E1645		7001141	7001145		
	297	H2458	E1645		7001141	7001145		

David Hall

12-4-98

David Hall

Date

Quality Assurance Laboratory Supervisor

DCN QA-NSQC-CERT
REV NO 3
REV DATE 08/07/96

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

Product Code	NS130565	TMP Number	13717, 13752, 13857, 13887,
Customer Name	Ogden Remediation		13914, 14776, 14843, 14846,
Project Name	Clarkstown Landfill		14888, 14889, & 17266
		Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing		Finished Product QC Testing				
QC Core Net Sample Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) MD ASTM D5035	Ultimate Tensile Strength (kN/m) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
56223/A010	W50852	2.535	10.07	3.28	0.818	5.53
56229/D004	C60905M05A	2.561	10.30	3.00	0.846	5.55
56303/B040	P09351	2.390	10.77	3.77	0.877	5.47
56306/A024	C60906M03A	2.646	9.66	3.48	0.823	5.43
56314/B004	C60927M05A	2.680	10.60	3.30	0.870	5.48
56314/B010	C60927M05A	2.598	10.30	3.70	0.870	5.55
56314/B013	C60927M05A	2.969	9.23	3.23	0.868	5.50
56314/B019	C60927M05A	2.988	10.55	3.29	0.855	5.49
56314/B043	C60927M05A	2.380	10.40	3.40	0.849	5.48
56314/B046	C60927M05A	2.480	11.04	3.20	0.855	5.57
56314/B049	C60927M05A	2.754	10.65	3.54	0.857	5.47
56314/B058	C60927M05A	2.756	10.59	3.03	0.874	5.49
56314/D004	C60927M05A	2.390	9.98	3.19	0.847	5.53

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

DCN 001100000000
REV NO 3
REV DATE 08/07/96

Product Code NS130565
Customer Name Ogden Remediation
Project Name Clarkstown Landfill
TMP Number 13717, 13752, 13857, 13887,
13914, 14776, 14843, 14846,
14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing			
QC Core Net Sample Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) MD ASTM D5035	Ultimate Tensile Strength (kN/m) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
56314/D010	C60927M05A	2.702	10.78	3.15	0.842	5.50
56314/D013	C60927M05A	2.527	10.65	3.15	0.861	5.59
56314/D016	C60927M05A	2.45	10.30	3.72	0.86	5.55
56314/D019	C60927M05A	2.332	10.06	3.17	0.877	5.57
56314/D022	C60927M05A	2.477	10.72	3.21	0.882	5.50
56314/D028	C60927M05A	2.440	8.69	3.47	0.852	5.49
56314/D031	C60927M05A	2.313	10.19	3.05	0.842	5.59
56314/D034	C60927M05A	2.430	10.04	3.18	0.853	5.52
56314/D037	C60927M05A	2.145	10.91	3.30	0.845	5.47
56323/A028	P09351	2.478	9.29	2.90	0.840	5.43
56346/B014	C60927M04A	2.430	10.30	3.50	0.860	5.34
E6	P09351	2.424	9.98	3.57	0.849	5.48
E9	P09351	2.430	10.03	3.32	0.807	5.31

IDENTIFICATION CERT
REV NO 3
REV DATE 08/07/96

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

Product Code	NS130565	TMP Number	13717, 13752, 13857, 13887,
Customer Name	Ogden Remediation		13914, 14776, 14843, 14846,
Project Name	Clarkstown Landfill		14888, 14889, & 17266
		Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing		Finished Product QC Testing				
QC Core Net Sample Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) MD ASTM D5035	Ultimate Tensile Strength (kN/m) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E12	P09351	2.510	10.45	3.14	0.859	5.40
E16	P09351	2.590	9.14	3.39	0.848	5.47
E25	P09351	2.378	9.60	3.40	0.842	5.36
E37	P09351	2.258	9.90	3.50	0.873	5.53
E40	P09351	2.360	9.86	3.27	0.874	5.53
E49	P09351	2.554	9.99	3.16	0.854	5.53
E119	P09351	2.730	10.29	3.29	0.883	5.41
E122	C60928M04A	2.828	8.95	3.40	0.837	5.34
E125	C60928M04A	2.793	10.35	3.19	0.876	5.36
E131	C60928M04A	2.552	10.90	3.01	0.886	5.43
E143	C60928M04A	2.348	10.18	2.85	0.891	5.45
E158	C60928M04A	2.585	10.32	3.18	0.898	5.43
E196	C60928M04A	2.278	9.83	3.46	0.881	5.51

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

Product Code	NS130565	TMP Number	13717, 13752, 13857, 13887,
Customer Name	Ogden Remediation		13914, 14776, 14843, 14846,
Project Name	Clarkstown Landfill		14888, 14889, & 17266
		Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing		Finished Product QC Testing				
QC Core Net Sample Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) MD ASTM D5035	Ultimate Tensile Strength (kN/m) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E960	C60930M04A	2.632	9.50	3.30	0.922	5.55
E987	C61001M01A	2.785	10.95	3.11	0.931	5.51
E1002	C61001M01A	2.503	10.59	2.99	0.940	5.55
E1062	C61001M01A	2.784	10.10	2.90	0.903	5.55
E1092	C61001M02A	2.861	8.80	2.83	0.880	5.44
E1113	C61001M02A	2.709	10.02	3.03	0.887	5.50
E1521	P09775	2.278	9.50	3.40	0.880	5.38
E1647	P09775	2.495	9.70	3.10	0.736	5.33
E1650	P09775	2.511	10.11	2.40	0.860	5.30
E1653	P09775	2.555	10.30	3.50	0.860	5.31
E1674	P09775	2.546	9.70	2.60	0.868	5.51
E1677	P09775	2.741	9.40	3.00	0.851	5.25
E1680	P09775	2.539	9.60	3.20	0.870	5.41

QC CERTIFICATE
REV NO 3
REV DATE 08/07/98

The Tensar Corporation Quality Control Test Data

Product Type: Core Net for Composite Production

TMP Number 13717, 13752, 13857, 13887,
13914, 14776, 14843, 14846,
14888, 14889, & 17266
Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

Product Code NS130565
Customer Name Ogden Remediation
Project Name Clarkstown Landfill

Raw Material QC Testing		Finished Product QC Testing				
QC Core Net Sample Roll Number	Resin Lot Number	Carbon Black (%)	Ultimate Tensile Strength (kN/m) MD	Ultimate Tensile Strength (kN/m) XMD	Mass/Area (kg/m ²)	Thickness (mm)
		ASTM D4218	ASTM D5035	ASTM D5035	ASTM D5261-92	ASTM D5199
E1683	P09775	2.721	9.10	2.80	0.865	5.43
E1686	P09775	2.596	8.90	2.90	0.867	5.35
E1689	P09775	2.525	10.20	3.30	0.886	5.41



David Hall

Quality Assurance Laboratory Supervisor

12-4-98

Date

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 10/7/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

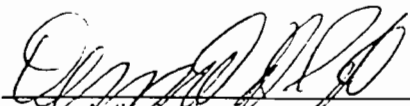
Resin Certification Report

Vendor: Solvay Resin Type: HDIG
Resin Lot Number: C60905M05A
Railcar Number: ELTX 3043

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.877</u>	<u>0.871</u>	<u>0.893</u>	<u>0.872</u>
MFI:	<u>0.876</u>	<u>0.872</u>	<u>0.872</u>	<u>0.868</u>
Density:	<u>0.955</u>	<u>0.958</u>	<u>0.958</u>	<u>0.957</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>	<u>0.958</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.887</u>	<u>0.853</u>	<u>0.858</u>	<u>0.849</u>
MFI:	<u>0.843</u>	<u>0.859</u>	<u>0.854</u>	<u>0.852</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.958</u>	<u>0.957</u>
Density:	<u>0.957</u>	<u>0.957</u>	<u>0.957</u>	<u>0.958</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 10/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60906M03A
Railcar Number: ELTX 3012

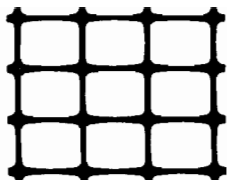
Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.871</u>	<u>0.859</u>	<u>0.883</u>	<u>0.878</u>
MFI:	<u>0.887</u>	<u>0.880</u>	<u>0.887</u>	<u>0.876</u>
Density:	<u>0.954</u>	<u>0.956</u>	<u>0.955</u>	<u>0.954</u>
Density:	<u>0.954</u>	<u>0.956</u>	<u>0.955</u>	<u>0.952</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.892</u>	<u>0.858</u>	<u>0.859</u>	<u>0.878</u>
MFI:	<u>0.862</u>	<u>0.955</u>	<u>0.853</u>	<u>0.865</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.954</u>	<u>0.952</u>
Density:	<u>0.953</u>	<u>0.953</u>	<u>0.954</u>	<u>0.954</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60927M04A
Railcar Number: ELTX 3385

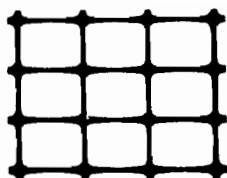
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.828</u>	<u>0.802</u>	<u>0.829</u>	<u>0.875</u>
MFI:	<u>0.826</u>	<u>0.820</u>	<u>0.804</u>	<u>0.806</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.957</u>	<u>0.958</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.957</u>	<u>0.957</u>

Compartment:	B1	B2	B3	B4
MFI:	<u>0.835</u>	<u>0.863</u>	<u>0.825</u>	<u>0.824</u>
MFI:	<u>0.795</u>	<u>0.794</u>	<u>0.806</u>	<u>0.796</u>
Density:	<u>0.957</u>	<u>0.956</u>	<u>0.956</u>	<u>0.956</u>
Density:	<u>0.959</u>	<u>0.956</u>	<u>0.955</u>	<u>0.957</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60

Resin Lot Number: C60927M05A

Railcar Number: ELTX 3415

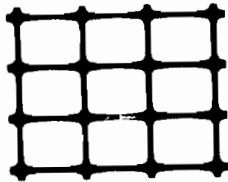
Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.735</u>	<u>0.738</u>	<u>0.720</u>	<u>0.741</u>
MFI:	<u>0.693</u>	<u>0.753</u>	<u>0.706</u>	<u>0.680</u>
Density:	<u>0.950</u>	<u>0.949</u>	<u>0.949</u>	<u>0.949</u>
Density:	<u>0.949</u>	<u>0.949</u>	<u>0.950</u>	<u>0.950</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.738</u>	<u>0.738</u>	<u>0.741</u>	<u>0.758</u>
MFI:	<u>0.711</u>	<u>0.698</u>	<u>0.663</u>	<u>0.726</u>
Density:	<u>0.949</u>	<u>0.948</u>	<u>0.957</u>	<u>0.956</u>
Density:	<u>0.949</u>	<u>0.956</u>	<u>0.956</u>	<u>0.955</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/16/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

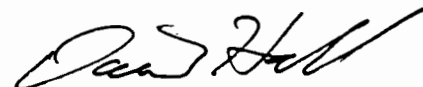
Resin Certification Report

Vendor: Solvay Resin Type: HDIG
Resin Lot Number: C60928M04A
Railcar Number: ELTX 3385

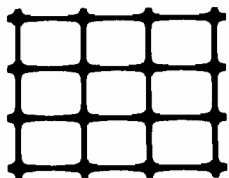
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.653</u>	<u>0.632</u>	<u>0.668</u>	<u>0.642</u>
MFI:	<u>0.647</u>	<u>0.650</u>	<u>0.671</u>	<u>0.643</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.957</u>	<u>0.958</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.957</u>	<u>0.957</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.680</u>	<u>0.651</u>	<u>0.622</u>	<u>0.650</u>
MFI:	<u>0.692</u>	<u>0.643</u>	<u>0.639</u>	<u>0.636</u>
Density:	<u>0.957</u>	<u>0.956</u>	<u>0.956</u>	<u>0.956</u>
Density:	<u>0.959</u>	<u>0.956</u>	<u>0.955</u>	<u>0.957</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/25/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

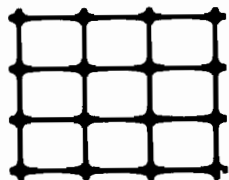
Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C60930M04A
Railcar Number: ELTX 3402

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.467</u>	<u>0.499</u>	<u>0.521</u>	<u>0.519</u>
MFI:	<u>0.422</u>	<u>0.516</u>	<u>0.516</u>	<u>0.508</u>
Density:	<u>0.953</u>	<u>0.950</u>	<u>0.951</u>	<u>0.950</u>
Density:	<u>0.951</u>	<u>0.951</u>	<u>0.952</u>	<u>0.951</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.604</u>	<u>0.572</u>	<u>0.594</u>	<u>0.521</u>
MFI:	<u>0.567</u>	<u>0.600</u>	<u>0.554</u>	<u>0.512</u>
Density:	<u>0.947</u>	<u>0.950</u>	<u>0.950</u>	<u>0.952</u>
Density:	<u>0.948</u>	<u>0.952</u>	<u>0.951</u>	<u>0.952</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 11/25/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

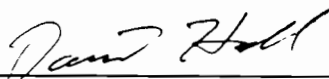
Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C61001M01A
Railcar Number: ELTX 3323

Melt Flow Index (g/10 min.): ASTM D1238 Average rail car melt flow: 0.570
Density (g/cc): ASTM D792 Average rail car density: 0.952

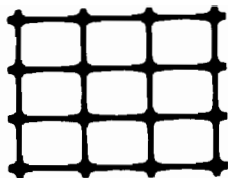
Compartment:	T1	T2	T3	T4
MFI:	<u>0.559</u>	<u>0.586</u>	<u>0.581</u>	<u>0.574</u>
MFI:	<u>0.598</u>	<u>0.563</u>	<u>0.563</u>	<u>0.548</u>
Density:	<u>0.952</u>	<u>0.951</u>	<u>0.953</u>	<u>0.954</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.952</u>	<u>0.949</u>

Compartment:	B1	B2	B3	B4
MFI:	<u>0.563</u>	<u>0.587</u>	<u>0.571</u>	<u>0.553</u>
MFI:	<u>0.568</u>	<u>0.559</u>	<u>0.556</u>	<u>0.585</u>
Density:	<u>0.954</u>	<u>0.952</u>	<u>0.952</u>	<u>0.953</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.953</u>	<u>0.954</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel: 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 12/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C61001M02A
Railcar Number: ELTX 3441

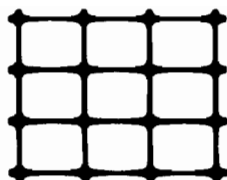
Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.690</u>	<u>0.669</u>	<u>0.686</u>	<u>0.696</u>
MFI:	<u>0.671</u>	<u>0.684</u>	<u>0.669</u>	<u>0.685</u>
Density:	<u>0.946</u>	<u>0.947</u>	<u>0.940</u>	<u>0.949</u>
Density:	<u>0.950</u>	<u>0.953</u>	<u>0.944</u>	<u>0.949</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.685</u>	<u>0.672</u>	<u>0.682</u>	<u>0.669</u>
MFI:	<u>0.638</u>	<u>0.680</u>	<u>0.647</u>	<u>0.681</u>
Density:	<u>0.946</u>	<u>0.946</u>	<u>0.946</u>	<u>0.948</u>
Density:	<u>0.947</u>	<u>0.947</u>	<u>0.944</u>	<u>0.945</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 10/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Southern Polymer Resin Type: HDIG

Resin Lot Number: P09351

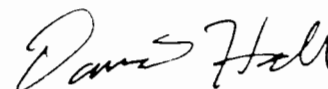
Railcar Number: AFPX 945622

Melt Flow Index (g/10 min.): ASTM D1238

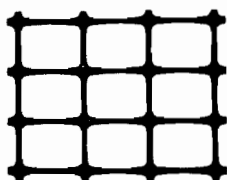
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.653</u>	<u>0.658</u>	<u>0.643</u>	<u>0.674</u>
MFI:	<u>0.663</u>	<u>0.660</u>	<u>0.660</u>	<u>0.666</u>
Density:	<u>0.955</u>	<u>0.958</u>	<u>0.958</u>	<u>0.958</u>
Density:	<u>0.959</u>	<u>0.958</u>	<u>0.958</u>	<u>0.959</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.674</u>	<u>0.659</u>	<u>0.649</u>	<u>0.659</u>
MFI:	<u>0.671</u>	<u>0.670</u>	<u>0.667</u>	<u>0.676</u>
Density:	<u>0.958</u>	<u>0.959</u>	<u>0.957</u>	<u>0.959</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.958</u>

DCN: QA-RMQC-CERT	
Revision No.:	<u>1</u>
Revision Date:	<u>9/27/96</u>



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 1/30/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

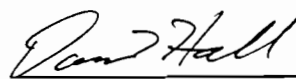
Resin Certification Report

Vendor: Southern Polmer Resin Type: HDIG
Resin Lot Number: P09775
Railcar Number: UTCX48249

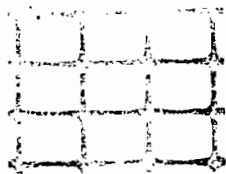
Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.542</u>	<u>0.537</u>	<u>0.544</u>	<u>0.544</u>
MFI:	<u>0.543</u>	<u>0.548</u>	<u>0.533</u>	<u>0.537</u>
Density:	<u>0.950</u>	<u>0.951</u>	<u>0.949</u>	<u>0.947</u>
Density:	<u>0.950</u>	<u>0.950</u>	<u>0.951</u>	<u>0.950</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.530</u>	<u>0.553</u>	<u>0.549</u>	<u>0.547</u>
MFI:	<u>0.546</u>	<u>0.550</u>	<u>0.541</u>	<u>0.547</u>
Density:	<u>0.951</u>	<u>0.949</u>	<u>0.950</u>	<u>0.952</u>
Density:	<u>0.950</u>	<u>0.951</u>	<u>0.951</u>	<u>0.950</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization



Tensor

The Tensor Corporation

10000 W. 10th Ave.

Golden, CO 80601

Date Tested: 7/19/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

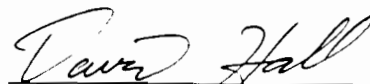
Vendor: Mobil Resin Type: HDIG
Resin Lot Number: W50852
Railcar Number: ACFX 56470

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.454</u>	<u>0.427</u>	<u>0.485</u>	<u>0.533</u>
MFI:	<u>0.461</u>	<u>0.517</u>	<u>0.635</u>	<u>0.514</u>
Density:	<u>0.955</u>	<u>0.954</u>	<u>0.945</u>	<u>0.963</u>
Density:	<u>0.955</u>	<u>0.958</u>	<u>0.962</u>	<u>0.961</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.525</u>	<u>0.478</u>	<u>0.555</u>	<u>0.508</u>
MFI:	<u>0.531</u>	<u>0.470</u>	<u>0.499</u>	<u>0.488</u>
Density:	<u>0.962</u>	<u>0.964</u>	<u>0.964</u>	<u>0.962</u>
Density:	<u>0.961</u>	<u>0.965</u>	<u>0.964</u>	<u>0.962</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96



Authorization

RESIN CERT

Evergreen Technologies

February 13, 1997

Tensar Corporation
1210 Citizens Parkway
Morrow, GA 30260

Subj: TG600 Geotextile Certificate of Compliance

Ref: Clarkstown Project, Order 1347, 1348 & 1350 PO # 7-9030

Dear Sir/Madam:

This letter certifies that TG600, shipped FOB Evergreen, Alabama, manufactured by Evergreen Technologies, meets or exceeds the minimum requirements listed below and was shipped from Lot # 70010.

PROPERTY	TEST PROCEDURE	VALUE(1)
Weight	ASTM D 5261	6 oz/yd ²
Thickness	ASTM D 5199	70 * Mil
Grab Strength	ASTM D 4632	150 lbs
Grab Elongation	ASTM D 4632	50 %
Tear Strength	ASTM D 4533	60 lbs
Mullen Burst	ASTM D 3786	250 psi
Puncture Resistance	ASTM D 4833	80 lbs
A.O.S. (2)	ASTM D 4751	.212 * mm
		(70) * US Std Sieve
Permittivity	ASTM D 4491	1.8 * 1/sec
Water Permeability	ASTM D 4491	0.3 * cm/sec
Water Flow Rate	ASTM D 4491	135 * gpm/sq ft
U.V. Resistance (500 hours)	ASTM D 4355	70 %

(1) Values in weaker principle direction. Unless noted otherwise, these values represent minimum average roll values (i.e. test results from any sampled roll in a lot, tested in accordance with ASTM D 4759-88 shall meet or exceed the minimum values listed).

(2) Smaller sieve size number represents the maximum average roll value.

* Determined at the time of manufacturing, storage and handling conditions which differ from those found in ASTM D 4873-88 may influence these properties.

Unless noted otherwise, this certification is based on testing conducted by Evergreen Technologies Quality Assurance & Quality Control testing laboratories at the time of manufacturing. Evergreen Technologies issues this letter of certification to indicate our commitment to providing our customers with a quality product which will meet or exceed the minimum average roll values in accordance with the applicable American Society for Testing and Materials (ASTM) test method.

Sincerely,

Manoj Tyagi
QA Manager

02/12/97

PRODUCT GRADE: TG 600

LOT NUMBER: 70010

COLOR: BLACK

ROLL DIM.: 15ft 4in x 1860ft

EVERGREEN TECHNOLOGIES INC.
MQA/MQC LABORATORY
EVERGREEN, ALABAMA

REVIEWED BY:

QA production is progress
ENGINEER

TEST ROLLS LOT SUMMARY

Page No. 1

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE ASTM D4833 (lbs)	TRAP. TEAR		THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS		A.O.S. ASTM D4751 (mm)
			M.D. TENS. ELONG. (lbs) (%)	C.D. TENS. ELONG. (lbs) (%)	ASTM D4632				ASTM D4533 MD	CD		PERMIT. (sec-1)	PERM. (Kv) (cm/sec)	
7001017	02/06/97	6.7	193.6 141.8	244.0 63.8	244.0	340.4	100.1	88.9	113.4		92	0.338		0.242
7001018	02/06/97	6.7	189.2 142.8	240.2 58.5	341.7									
7001019	02/06/97	6.8	193.8 152.1	230.6 55.0	350.2		102.2	98.3	102.5		88			
7001021	02/06/97	6.3	189.0 150.8	243.7 54.3	337.8									
7001022	02/06/97	6.5	176.8 134.9	225.5 50.1	350.3		99.1	86.8	108.2		86			
7001023	02/06/97	6.7	189.5 151.3	242.6 60.8	379.5									
7001024	02/06/97	6.3	177.4 155.3	237.1 61.7	353.1									
7001025	02/06/97	6.6	184.6 151.8	228.3 51.6	393.7		108.3	103.8	96.2					
7001027	02/06/97	6.5	197.3 136.3	236.3 50.1	361.2		106.0	101.9	115.0		90			
7001028	02/06/97	6.5	182.1 126.7	229.7 55.0	352.6		99.2	99.4	106.7		77			
7001031	02/06/97	6.4	186.1 134.1	233.7 50.5	341.6		93.3	100.1	100.8		81			
7001034	02/07/97	6.4	185.5 134.6	247.2 52.2	360.3		101.4	94.0	110.8		80		0.365	0.250
7001037	02/07/97	6.1	175.8 131.3	236.8 50.9	345.6		90.6	103.2	94.0		72			
7001039	02/07/97	6.3	179.9 144.4	237.9 54.7	328.4		91.1	91.5	98.5		78			
7001040	02/07/97	6.1	192.6 148.3	240.3 53.9	328.7									
7001041	02/07/97	6.3	189.2 155.8	226.5 51.8	334.7		94.4	87.8	112.2		76			
7001042	02/07/97	6.4	186.8 159.8	229.9 57.4	348.5									
7001043	02/07/97	6.5	182.3 157.5	229.6 51.4	355.4		92.0	87.0	101.1		70			
7001044	02/07/97	6.7	213.5 139.2	269.6 58.9	358.7		105.6	85.4	101.8		74			
7001045	02/07/97	6.5	210.8 166.5	253.2 58.9	362.6									
7001046	02/07/97	6.6	194.6 164.3	246.0 56.0	371.7		98.8	90.5	99.4		70			
7001047	02/07/97	6.4	214.3 171.2	235.9 54.7	360.3									
7001048	02/07/97	6.4	202.8 159.8	260.7 57.8	357.7		95.5	89.0	104.6		70			
7001049	02/07/97	6.6	210.8 169.0	259.3 58.5	375.8									
7001050	02/07/97	6.6	197.2 173.2	258.8 68.4	365.1		96.9	83.9	98.6		82	0.323		0.250
7001054	02/07/97	6.6	184.0 176.8	234.8 66.9	348.5		94.1	83.8	95.6		75			
7001057	02/08/97	6.4	197.8 175.6	242.3 75.2	345.4		95.9	82.0	95.6		71			
7001060	02/08/97	6.4	200.2 182.2	241.8 68.6	342.9		96.1	82.6	97.4		76			
7001062	02/08/97	6.7	200.8 171.3	238.0 63.5	351.9		101.7	86.6	98.5		77			
7001064	02/08/97	6.5	204.3 172.8	244.1 62.5	357.4		96.6	91.2	105.0		70	0.303		0.250

LOT NUMBER: 70010

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE RESISTANCE ASTM D4933 (lbs)	TEAR THICKNESS		HYDRAULIC TESTS	A.O.S. ASTM D4751 (mm)
			TENS. (lbs)	ELONG. (%)	M.D. (lbs)	C.D. (lbs)			TRAP. TENS. (lbs)	CD (lbs)	ASTM D4933 (mil)	ASTM D4933 (psi)
7001134	02/10/97	6.3	175.9	178.6	231.3	64.4	317.5	91.6	74.8	93.2	76	
7001137	02/10/97	6.1	175.5	179.3	228.2	66.1	327.9	98.8	77.4	101.2	75	
7001139	02/10/97	6.5	187.7	160.3	232.6	58.3	335.1	98.5	84.8	98.2	80	
7001142	02/11/97	6.0	175.9	156.3	213.2	55.9	298.8	91.4	82.0	98.6	72	
7001145	02/11/97	6.0	175.2	151.6	214.2	53.8	320.2	91.7	83.0	96.5	73	
7001146	02/11/97	6.0	174.9	150.8	232.1	52.1	321.4					
7001147	02/11/97	6.0	174.7	145.7	231.9	52.2	323.1					
7001148	02/11/97	6.2	176.9	148.9	224.6	50.3	324.1	93.9	79.2	107.2	76	
7001149	02/11/97	6.2	183.2	154.0	226.0	54.8	341.6	96.5				
7001151	02/11/97	6.3	175.9	157.7	218.1	54.4	331.4	92.8	80.3	109.7	82	
7001154	02/11/97	6.1	175.7	150.0	223.6	54.8	339.2	90.6	82.3	103.7	76	
7001155	02/11/97	6.2	179.8	147.5	228.3	53.2	335.0					
7001157	02/11/97	6.2	177.9	151.3	226.3	56.3	329.9	89.5	90.2	109.7	80	
7001160	02/11/97	6.2	178.6	153.6	222.9	57.4	321.8	92.7	83.0	105.5	76	
7001162	02/11/97	6.2	175.4	154.7	231.3	59.1	334.7	93.5	81.7	96.2	80	
7001164	02/11/97	6.2	167.5	157.3	209.7	56.2	331.5					
7001165	02/11/97	6.2	174.4	161.6	216.9	61.6	333.2					
7001166	02/11/97	6.4	179.1	165.6	236.1	57.8	340.2	92.2	74.0	93.7	76	
7001169	02/11/97	6.2	172.7	161.4	226.6	58.4	325.5	89.8	74.9	101.0	71	
7001172	02/11/97	6.2	162.2	154.5	220.0	58.3	324.8	93.6	69.9	101.5	79	
7001173	02/12/97	6.3	166.0	155.4	227.1	59.8	325.4					
7001174	02/12/97	6.3	173.4	156.8	234.7	56.0	336.0	84.9	82.9	105.4	70	
7001175	02/12/97	6.2	175.7	155.1	219.6	53.9	341.3					
7001176	02/12/97	6.1	172.7	158.1	218.5	54.1	349.5					
7001177	02/12/97	6.2	169.4	158.9	214.8	54.8	330.2	92.6	78.7	100.2	71	
7001178	02/12/97	6.1	169.1	155.8	223.4	54.9	341.8					
7001179	02/12/97	6.3	167.7	156.3	223.4	53.2	340.3					
7001182	02/12/97	6.0	172.0	155.1	224.2	54.4	325.7	94.7	76.5	95.7	70	
7001183	02/12/97	6.1	171.8	150.8	214.7	53.0	338.6					
7001185	02/12/97	6.3	174.0	157.3	214.9	54.2	334.3	95.3	71.5	101.5	71	
7001186	02/12/97	6.3	173.0	152.9	215.2	52.8	350.6					
7001187	02/12/97	6.4	176.1	155.9	229.4	57.3	348.9					
7001188	02/12/97	6.2	178.0	153.3	221.0	54.7	330.6	91.5	81.8	99.8	73	
7001190	02/12/97	6.3	174.3	161.6	220.5	54.2	350.1	93.0	74.8	90.0	65	
7001193	02/12/97	6.3	165.9	166.0	216.8	53.1	337.9	87.5	71.5	94.9	71	
7001196	02/12/97	6.2	173.7	164.1	220.8	58.6	335.1	93.0	70.7	92.5	71	
7001199	02/13/97	6.1	168.9	166.7	218.2	58.6	329.7	94.6	78.3	92.3	77	
7001202	02/13/97	6.2	172.6	164.9	225.5	59.0	336.9	95.3	76.5	99.7	78	

ROLL NO.	TEST DATE	WEIGHT ASTM D5261 (oz/yd2)	GRAB TENSILE/ELONGATION				M. BURST ASTM D3786 (psi)	PUNCTURE RESISTANCE ASTM D4833 (lbs)	TRAP. TEAR ASTM D4533 MO CD (lbs)	THICKNESS ASTM D5199 (mils)	HYDRAULIC TESTS ASTM D4691 PERMIT. PRESS. (KV) (sec-1)	WATER FLOW (gpm/ft2)	A.O.S. ASTM D4751 (mm)
			TENS. ELONG. (lbs) (%)	TENS. ELONG. (lbs) (%)	C.D. ASTM D4632	N.D. ASTM D4632							
7001204	02/13/97	6.2	174.6	153.3	222.1	53.3	334.5	94.5	74.2	95.8	79		
7001205	02/13/97	6.5	174.7	155.1	239.0	51.8	341.8						
7001206	02/13/97	6.3	178.1	154.0	222.7	53.8	330.3						
7001207	02/13/97	6.4	168.1	155.3	214.7	52.3	315.7	90.3	84.4	101.1	79		
7001208	02/13/97	6.4	179.5	146.8	231.5	50.8	347.8	92.8					
7001210	02/13/97	6.1	172.0	148.7	232.7	52.8	334.6	97.2	83.8	107.8	81		
7001212	02/13/97	6.3	178.8	168.2	215.3	55.2	326.8	92.6	73.0	92.1	81		
7001217	02/13/97	6.3	178.0	166.6	226.2	58.7	270.2	93.0	74.9	103.4	79		
7001221	02/14/97	7.0	191.4	163.8	225.3	64.3	288.8	88.1	86.1	108.9	77		
7001223	02/14/97	6.4	159.3	185.5	229.9	55.2	300.4	89.6	76.4	108.3	79		
7001225	02/14/97	6.5	175.4	160.8	236.3	50.0	277.2	95.0	88.7	110.6	84		
7001227	02/14/97	6.5	163.1	148.6	228.2	50.0	276.1						
7001229	02/14/97	6.9	172.5	151.7	231.1	54.5	289.4	98.1	84.4	116.9	87		
7001229	02/14/97	6.6	185.4	153.1	224.3	56.3	323.5						

AVERAGE = 6.3 182.4 163.3 230.7 58.3 335.2 93.7 83.1 101.4 76 0.00 0.000 0.0 0.000
 STD. DEVIATION = 0.2 12.1 14.5 11.0 5.5 19.0 5.1 8.7 5.7 7 0.00 0.000 0.0 0.000

THE TENSAR CORPORATION GEONET NS130551

The geonet NS130551 shall be an integrally formed polyethylene net structure. It shall have high tensile strength to resist installation damage and loading on steep slopes. It shall also have a high compressive strength to maintain a high transmissivity under high loading conditions. The drainage net shall also be resistant to ultraviolet degradation. The drainage net shall conform to the property requirements listed below. The resin used in the production of the geonet shall be a minimum 97% virgin polyethylene with a melt flow range between 0.1 to 1.0 grams/10 min. (per ASTM D1238) and a density range of 0.932 to 0.970 grams/cc (per ASTM D792 or D1505). The geonet is delivered to the job site in roll form with each roll having unique identification and QA traceability.

PROPERTY	APPROVED TEST METHODS	UNITS	VALUE	SPECIFICATION ¹	TEST FREQUENCY
QA CERTIFIED TEST PARAMETERS					
Mechanical Properties					
• Transmissivity ² normal pressure = 15,000psf, i=1.0	ASTM D 4716-95 metal plate/net/metal plate	m ² /sec (E-04)	7	MARV	200,000 SF (or per project req.)
• MD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	5.9 (33)	MARV	50,000 SF
• XMD Ultimate Tensile Strength	ASTM D 5035-95	kN/m (ppi)	2.2 (12)	MARV	
• Thickness	ASTM D 5199-91	mm (mil)	4.0 (157)	MARV	
• Roll length	direct measure	m (ft)	91.5 (300.0)	min	Each roll
• Roll width	direct measure	m (ft)	4.2 (14.0)	min	
UV Stabilization					
• Carbon Black	ASTM D 4218-91 (OR ASTM D 1603-94)	(% weight)	(2.0)	MARV	50,000 SF
PRODUCT INFORMATION					
• Roll Weight		kg (lbs)	300 (660)	typical	N/A
• Roll Diameter		m (in)	N/A	typical	
• Core I.D.		mm (in)	100 (4)	nominal	
• Labeling					
• Labeling: Product code, geotextile type, roll dimensions, finished product Lot and roll number.					

Notes

¹ MARV is defined as the one-sided 97.5% confidence limit obtained through long-term production data (mean - 2*standard deviation). It represents the minimum allowable sample roll average for each specific test.

² Transmissivity results reported by The Tensar Corporation are based on standard index test conditions. Actual performance is dependent upon site specific conditions. Please contact the Tensar Corporation for site specific transmissivity testing.

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date: 18-JUL-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13784 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET
	E2147	4,200 SF
	E2148	4,200 SF
	E2149	4,200 SF
	E2150	4,200 SF
	E2151	4,200 SF
	E2152	4,200 SF
	E2153	4,200 SF
	E2154	4,200 SF
	E2155	4,200 SF
	E2156	4,200 SF
	E2157	4,200 SF
	E2158	4,200 SF
	E2159	4,200 SF
	E2160	4,200 SF
	E2161	4,200 SF
	E2162	4,200 SF
	E2164	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2165	4,200 SF
	E2166	4,200 SF
	E2912	4,200 SF
	E2913	4,200 SF
	E2914	4,200 SF
	E2915	4,200 SF
	E2916	4,200 SF
	E2917	4,200 SF
	E2918	4,200 SF
	E2919	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233

Date: 21-JUL-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-13806 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

E2012 4,200 SF

E2014 4,200 SF

E2015 4,200 SF

E2016 4,200 SF

E2017 4,200 SF

E2018 4,200 SF

E2019 4,200 SF

E2020 4,200 SF

E2025 4,200 SF

E2026 4,200 SF

E2027 4,200 SF

E2028 4,200 SF

E2029 4,200 SF

E2030 4,200 SF

E2031 4,200 SF

E2032 4,200 SF

E2033 4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2034	4,200 SF
	E2035	4,200 SF
	E2040	4,200 SF
	E2041	4,200 SF
	E2042	4,200 SF
	E2043	4,200 SF
	E2044	4,200 SF
	E2045	4,200 SF
	E2046	4,200 SF
	E2106	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date:

21-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-15189 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

E2037 4,200 SF

E2038 4,200 SF

E2098 4,200 SF

E2557 4,200 SF

E2558 4,200 SF

E2559 4,200 SF

E2575 4,200 SF

E2576 4,200 SF

E2577 4,200 SF

E2578 4,200 SF

E2579 4,200 SF

E2580 4,200 SF

E2581 4,200 SF

E2587 4,200 SF

E2588 4,200 SF

E2597 4,200 SF

E2598 4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2599	4,200 SF
	E2600	4,200 SF
	E2601	4,200 SF
	E2602	4,200 SF
	E2603	4,200 SF
	E2604	4,200 SF
	E2605	4,200 SF
	E2606	4,200 SF
	E2607	4,200 SF
	E2618	4,200 SF

113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date:

21-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-15208 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

E2021	4,200 SF
E2022	4,200 SF
E2023	4,200 SF
E2024	4,200 SF
E2039	4,200 SF
E2099	4,200 SF
E2100	4,200 SF
E2101	4,200 SF
E2102	4,200 SF
E2103	4,200 SF
E2104	4,200 SF
E2105	4,200 SF
E2544	4,200 SF
E2547	4,200 SF
E2551	4,200 SF
E2552	4,200 SF
E2553	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2554	4,200 SF
	E2555	4,200 SF
	E2556	4,200 SF
	E2582	4,200 SF
	E2583	4,200 SF
	E2585	4,200 SF
	E2586	4,200 SF
	E2594	4,200 SF
	E2595	4,200 SF
	E2596	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date: 22-AUG-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-15251 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

E2002 4,200 SF

E2003 4,200 SF

E2004 4,200 SF

E2005 4,200 SF

E2010 4,200 SF

E2013 4,200 SF

E2036 4,200 SF

E2050 4,200 SF

E2053 4,200 SF

E2062 4,200 SF

E2067 4,200 SF

E2070 4,200 SF

E2078 4,200 SF

E2079 4,200 SF

E2082 4,200 SF

E2203 4,200 SF

E2204 4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2209	4,200 SF
	E2210	4,200 SF
	E2211	4,200 SF
	E2282	4,200 SF
	E2286	4,200 SF
	E2287	4,200 SF
	E2293	4,200 SF
	E2296	4,200 SF
	E2300	4,200 SF
	E2394	4,200 SF

113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233

Date: 26-SEP-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-16576 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET
	E1215	4,200 SF
	E1222	4,200 SF
	E1233	4,200 SF
	E1457	4,200 SF
	E2202	4,200 SF
	E2214	4,200 SF
	E2270	4,200 SF
	E2271	4,200 SF
	E2272	4,200 SF
	E2273	4,200 SF
	E2274	4,200 SF
	E2275	4,200 SF
	E2277	4,200 SF
	E2284	4,200 SF
	E2304	4,200 SF
	E2305	4,200 SF
	E2306	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2324	4,200 SF
	E2325	4,200 SF
	E2326	4,200 SF
	E2327	4,200 SF
	E2328	4,200 SF
	E2329	4,200 SF
	E2330	4,200 SF
	E2331	4,200 SF
	E2332	4,200 SF
	E2452	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date:

29-SEP-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-16616 T1
Sales Order Number: TES-365

Line	Item Code	Description
----	-----	-----
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET
	E2472	4,200 SF
	E2474	4,200 SF
	E2475	4,200 SF
	E2476	4,200 SF
	E2477	4,200 SF
	E2478	4,200 SF
	E2479	4,200 SF
	E2490	4,200 SF
	E2491	4,200 SF
	E2492	4,200 SF
	E2493	4,200 SF
	E2494	4,200 SF
	E2495	4,200 SF
	E2496	4,200 SF
	E2499	4,200 SF
	E2507	4,200 SF
	E2508	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2509	4,200 SF
	E2510	4,200 SF
	E2511	4,200 SF
	E2512	4,200 SF
	E2513	4,200 SF
	E2524	4,200 SF
	E2528	4,200 SF
	E2529	4,200 SF
	E2530	4,200 SF
	E2531	4,200 SF

		113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 29-SEP-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK, NY 10994
United States

WEST NYACK, NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-16618 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET
E2107		4,200 SF
E2108		4,200 SF
E2109		4,200 SF
E2110		4,200 SF
E2463		4,200 SF
E2464		4,200 SF
E2465		4,200 SF
E2480		4,200 SF
E2481		4,200 SF
E2532		4,200 SF
E2533		4,200 SF
E2534		4,200 SF
E2535		4,200 SF
E2536		4,200 SF
E2537		4,200 SF
E2538		4,200 SF
E2539		4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date:

----- Packing List -----

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2540	4,200 SF
	E2541	4,200 SF
	E2542	4,200 SF
	E2543	4,200 SF
	E2545	4,200 SF
	E2546	4,200 SF
	E2548	4,200 SF
	E2549	4,200 SF
	E2550	4,200 SF
	E2584	4,200 SF

113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233
----- Packing List -----

Date: 10-OCT-97

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-17031 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

E2429	4,200 SF
E2430	4,200 SF
E2431	4,200 SF
E2432	4,200 SF
E2433	4,200 SF
E2434	4,200 SF
E2435	4,200 SF
E2436	4,200 SF
E2439	4,200 SF
E2440	4,200 SF
E2441	4,200 SF
E2442	4,200 SF
E2443	4,200 SF
E2444	4,200 SF
E2445	4,200 SF
E2446	4,200 SF
E2447	4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2448	4,200 SF
	E2449	4,200 SF
	E2450	4,200 SF
	E2451	4,200 SF
	E2456	4,200 SF
	E2457	4,200 SF
	E2458	4,200 SF
	E2459	4,200 SF
	E2460	4,200 SF
	E2462	4,200 SF

113,400

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770)968-3255x233

Date:

13-OCT-97

----- Packing List -----

40179-HQ
Bill OGDEN REM SVS CO
To: 166 ROUTE 303

40179-CLRKTWN
Ship OGDEN REM SVS CO
To: 166 ROUTE 303

WEST NYACK,NY 10994
United States

WEST NYACK,NY 10994
United States

Customer PO: 7-52-P2112300
Customer contact:

Shipment Number: TMP-17056 T1
Sales Order Number: TES-365

Line	Item Code	Description
1	NS130551	14FTx300FT NS1305 (DN3) HDPE DRAINAGE NET BLACK SPECIAL ALL VIRGIN HDPE NET

E1456 4,200 SF

E2063 4,200 SF

E2201 4,200 SF

E2315 4,200 SF

E2316 4,200 SF

E2408 4,200 SF

E2409 4,200 SF

E2410 4,200 SF

E2411 4,200 SF

E2412 4,200 SF

E2413 4,200 SF

E2414 4,200 SF

E2415 4,200 SF

E2416 4,200 SF

E2417 4,200 SF

E2418 4,200 SF

E2419 4,200 SF

Tensar Environmental Systems
1210 CITIZENS PARKWAY
MORROW, GA 30260
(770) 968-3255x233
----- Packing List -----

Date:

Bill
To:

Ship
To:

Customer PO:
Customer contact:

Shipment Number:
Sales Order Number:

Line	Item Code	Description
----	-----	-----
	E2420	4,200 SF
	E2421	4,200 SF
	E2422	4,200 SF
	E2423	4,200 SF
	E2424	4,200 SF
	E2425	4,200 SF
	E2426	4,200 SF
	E2427	4,200 SF
	E2428	4,200 SF
	E2473	4,200 SF

		113,400

QC DATA CHECK
REV NO 3
REV DATE 10/20/97

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251,
Customer Name	Ogden Remediation		16576, 16616, 16618, 17031, & 17056
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (kN/m) MD ASTM D5035	Ultimate Tensile Strength (kN/m) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E1216	1	E1215	C61001M02A	2.700	7.30	3.10	0.689	4.43
E1225	2	E1222	C61001M02A	2.500	8.10	2.80	0.689	4.48
	3	E1233	C61001M02A					
F1461	4	E1456	P09833	2.404	7.51	2.94	0.690	4.55
	5	E1457	P09833					
E2010	6	E2002	H6YF43	2.490	6.90	2.90	0.676	4.50
	7	E2003	H6YF43					
	8	E2004	H6YF43					
	9	E2005	H6YF43					
	10	E2010	H6YF43					
E2014	11	E2012	H6SN43	2.447	8.00	3.00	0.685	4.56
	12	E2013	H6SN43					
	13	E2014	H6SN43					
E2015	14	E2015	H6SN43	2.442	7.30	2.70	0.661	4.53
E2024	15	E2016	H6SN43	2.399	7.20	2.90	0.682	4.55
	16	E2017	H6SN43					
	17	E2018	H6SN43					
	18	E2019	H6SN43					
	19	E2020	H6SN43					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

QC CERT
REV NO 3
REV DATE 10/20/97

Product Code NS130551
Customer Name Ogdan Remediation
Project Name Clarkstown Landfill

TMP Number 13784, 13806, 15189, 15208, 15251,
16576, 16616, 16618, 17031, & 17056

Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2033	20	E2021	H6SN43					
	21	E2022	H6SN43					
	22	E2023	H6SN43					
	23	E2024	H6SN43					
	24	E2025	H6SN43	2.412	7.46	2.76	0.675	4.55
	25	E2026	H6SN43					
	26	E2027	H6SN43					
	27	E2028	H6SN43					
	28	E2029	H6SN43					
	29	E2030	H6SN43					
	30	E2031	H6SN43					
	31	E2032	H6SN43					
	32	E2033	H6SN43					
E2042	33	E2034	H6SN43	2.379	7.50	2.77	0.672	4.58
	34	E2035	H6SN43					
	35	E2036	H6SN43					
	36	E2037	H6SN43					
	37	E2038	H6SN43					
	38	E2039	H6SN43					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

DCN QA 0500 CERT
REV N - 1
REV DATE 10/20/97

Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251,
Customer Name	Ogden Remediation		16576, 16616, 16618, 17031, & 17056
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing				Finished Product QC Testing				
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2051	39	E2040	H6SN43					
	40	E2041	H6SN43					
	41	E2042	H6SN43					
	42	E2043	H6SN43	2.443	7.57	2.55	0.692	4.53
	43	E2044	H6SN43					
	44	E2045	H6SN43					
	45	E2046	H6SN43					
	46	E2050	H6SN43					
E2060	47	E2053	H6SN43	2.513	7.09	2.74	0.690	4.50
E2069	48	E2062	H6SN43	2.463	7.47	2.96	0.679	4.46
	49	E2063	H6SN43					
	50	E2067	H6SN43					
E2078	51	E2070	H6SN43	2.539	7.27	2.68	0.683	4.45
	52	E2078	H6SN43					
E2087	53	E2079	H6SN43	2.409	7.72	2.87	0.689	4.48
	54	E2082	H6SN43					
E2105	55	E2098	H6SN43	2.421	7.17	2.72	0.678	4.48
	56	E2099	H6SN43					
	57	E2100	H6SN43					

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

QC DATA: ACCEPT
REV NO. 1
REV DATE 10/20/97

Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251,
Customer Name	Ogden Remediation		16576, 16616, 16618, 17031, & 17056
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing					Finished Product QC Testing			
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
	58	E2101	H6SN43					
	59	E2102	H6SN43					
	60	E2103	H6SN43					
	61	E2104	H6SN43					
	62	E2105	H6SN43					
F2114	63	E2106	H6SN43	2.470	7.36	2.78	0.675	4.51
	64	E2107	H6SN43					
	65	E2108	H6SN43					
	66	E2109	H6SN43					
	67	E2110	H6SN43					
E2150	68	E2147	H6SN43	2.495	7.70	3.00	0.681	4.52
	69	E2148	H6SN43					
	70	E2149	H6SN43					
	71	E2150	H6SN43					
E2159	72	E2151	H6SN43	2.378	7.90	3.20	0.700	4.48
	73	E2152	H6SN43					
	74	E2153	H6SN43					
	75	E2154	H6SN43					
	76	E2155	H6SN43					

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

QC DATA CERT
REV NO 3
REV DATE 10/20/97

Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251,
Customer Name	Ogden Remediation		16576, 16616, 16618, 17031, & 17056
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
	77	E2156	H6SN43					
	78	E2157	H6SN43					
	79	E2158	H6SN43					
	80	E2159	H6SN43					
E2168	81	E2160	H6SN43	2.434	7.80	3.20	0.676	4.48
	82	E2161	H6SN43					
	83	E2162	H6SN43					
	84	E2164	H6SN43					
	85	E2165	H6SN43					
	86	E2166	H6SN43					
E2204	87	E2201	H6SN43	2.495	7.00	2.80	0.685	4.40
	88	E2202	H6SN43					
	89	E2203	H6SN43					
	90	E2204	H6SN43					
E2213	91	E2209	H6SN43	2.493	7.30	2.90	0.681	4.48
	92	E2210	H6SN43					
	93	E2211	H6SN43					
E2217	94	E2214	H6SN43	2.493	7.30	2.90	0.681	4.48
E2278	95	E2270	B7BE22	3.855	7.09	2.64	0.689	4.67

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

TMP Number 13784, 13806, 15189, 15208, 15251,

16576, 16616, 16618, 17031, & 17056

Product Code NS130551

Customer Name Ogden Remediation

Sales Order Number TES 0365

Project Name Clarkstown Landfill

Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
	96	E2271	B7BE22					
	97	E2272	B7BE22					
	98	E2273	B7BE22					
	99	E2274	B7BE22					
	100	E2275	B7BE22					
	101	E2277	B7BE22					
E2287	102	E2282	B7BE22	2.382	7.04	2.92	0.672	4.67
	103	E2284	B7BE22					
	104	E2286	B7BE22					
	105	E2287	B7BE22					
E2296	106	E2293	B7BE22	2.466	6.88	2.82	0.689	4.74
	107	E2296	B7BE22					
E2305	108	E2300	B7BE22	2.380	7.40	2.58	0.693	4.72
	109	E2304	B7BE22					
	110	E2305	B7BE22					
E2314	111	E2306	B7BE22	2.403	7.12	2.40	0.688	4.82
E2323	112	E2315	B7BE22	2.428	7.29	2.83	0.691	4.85
	113	E2316	B7BE22					
E2332	114	E2324	B7BE22	2.992	7.03	2.64	0.676	4.72

DCN 011773C CERT
REV NO 3
REV DATE 10/20/97

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251,
Customer Name	Ogden Remediation		16576, 16616, 16618, 17031, & 17056
Project Name	Clarksfown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
	115	E2325	B7BE22					
	116	E2326	B7BE22					
	117	E2327	B7BE22					
	118	E2328	B7BE22					
	119	E2329	B7BE22					
	120	E2330	B7BE22					
	121	E2331	B7BE22					
	122	E2332	B7BE22					
E2395	123	E2394	B7BE22	3.223	7.32	2.61	0.685	4.66
E2413	124	E2408	B7BE22	2.963	7.70	2.53	0.699	4.75
	125	E2409	B7BE22					
	126	E2410	B7BE22					
	127	E2411	B7BE22					
	128	E2412	B7BE22					
	129	E2413	B7BE22					
E2422	130	E2414	B7BE22	3.316	6.95	2.68	0.680	4.59
	131	E2415	B7BE22					
	132	E2416	B7BE22					
	133	E2417	B7BE22					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

Product Code NS130551

TMP Number 13784, 13806, 15189, 15208, 15251,

16576, 16616, 16618, 17031, & 17056

Customer Name Ogden Remediation

Sales Order Number TES 0365

Project Name Clarkstown Landfill

Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2431	134	E2418	B7BE22					
	135	E2419	B7BE22					
	136	E2420	B7BE22					
	137	E2421	B7BE22					
	138	E2422	B7BE22					
	139	E2423	B7BE22	3.213	7.40	2.33	0.694	4.72
	140	E2424	B7BE22					
E2440	141	E2425	B7BE22					
	142	E2426	B7BE22					
	143	E2427	B7BE22					
	144	E2428	B7BE22					
	145	E2429	B7BE22					
	146	E2430	B7BE22					
	147	E2431	B7BE22					
E2440	148	E2432	B7BE22	2.561	7.16	2.54	0.690	4.70
	149	E2433	B7BE22					
	150	E2434	B7BE22					
	151	E2435	B7BE22					
	152	E2436	B7BE22					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

DCN 041503-CERT
REV NO 3
REV DATE 10/20/97

Product Code NS130551 TMP Number 13784, 13806, 15189, 15208, 15251,
Customer Name Ogden Remediation 16576, 16616, 16618, 17031, & 17056
Project Name Clarkstown Landfill Sales Order Number TES 0365
Purchase Order Number 7-52-P2112300

Raw Material QC Testing									Finished Product QC Testing			
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199				
E2149	153	E2439	B7BE22									
	154	E2440	B7BE22									
	155	E2441	B7BE22	2.522	7.23	2.50	0.688	4.63				
	156	E2442	B7BE22									
	157	E2443	B7BE22									
	158	E2444	B7BE22									
	159	E2445	B7BE22									
	160	E2446	B7BE22									
	161	E2447	B7BE22									
	162	E2448	B7BE22									
	163	E2449	B7BE22									
E2458	164	E2450	B7BE22	2.554	7.57	2.65	0.681	4.62				
	165	E2451	B7BE22									
	166	E2452	B7BE22									
	167	E2456	B7BE22									
	168	E2457	B7BE22									
	169	E2458	B7BE22									
E2467	170	E2459	B7BE22	2.657	7.20	2.47	0.684	4.59				
	171	E2460	B7BE22									

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

Product Code NS130551

Customer Name Ogden Remediation

Project Name Clarkstown Landfill

TMP Number 13784, 13806, 15189, 15208, 15251,
16576, 16616, 16618, 17031, & 17056

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2476	172	E2462	B7BE22					
	173	E2463	B7BE22					
	174	E2464	B7BE22					
	175	E2465	B7BE22					
	176	E2472	B7BE22	2.726	7.50	2.63	0.708	4.74
E2485	177	E2473	B7BE22					
	178	E2474	B7BE22					
	179	E2475	B7BE22					
	180	E2476	B7BE22					
	181	E2477	B7BE22	2.498	7.52	2.65	0.700	4.69
E2494	182	E2478	B7BE22					
	183	E2479	B7BE22					
	184	E2480	B7BE22					
	185	E2481	B7BE22					
	186	E2490	B7BE22	2.583	7.63	2.42	0.691	4.69
	187	E2491	B7BE22					
	188	E2492	B7BE22					
	189	E2493	B7BE22					
	190	E2494	B7BE22					

TEST CERT
REV NO 1
REV DATE 10/20/97

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251, 16576, 16616, 16618, 17031, & 17056
Customer Name	Ogden Remediation	Sales Order Number	TES 0365
Project Name	Clarkstown Landfill	Purchase Order Number	7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2503	191	E2495	B7BE22	2.527	6.85	2.55	0.677	4.62
	192	E2496	B7BE22					
	193	E2499	B7BE22					
E2512	194	E2507	B7BE22	2.644	7.34	2.40	0.697	4.66
	195	E2508	B7BE22					
	196	E2509	B7BE22					
	197	E2510	B7BE22					
	198	E2511	B7BE22					
	199	E2512	B7BE22					
E2521	200	E2513	B7BE22	2.412	7.56	2.42	0.688	4.66
E2530	201	E2524	B7BE22	2.486	6.63	2.59	0.671	4.60
	202	E2528	B7BE22					
	203	E2529	B7BE22					
	204	E2530	B7BE22					
E2539	205	E2531	B7BE22	2.596	7.29	2.59	0.690	4.57
	206	E2532	B7BE22					
	207	E2533	B7BE22					
	208	E2534	B7BE22					
	209	E2535	B7BE22					

The Tensar Corporation Quality Control Test Data
Product Type: Drainage Net

Product Code NS130551

TMP Number 13784, 13806, 15189, 15208, 15251,

16576, 16616, 16618, 17031, & 17056

Customer Name Ogden Remediation

Sales Order Number TES 0365

Project Name Clarkstown Landfill

Purchase Order Number 7-52-P2112300

Raw Material QC Testing				Finished Product QC Testing				
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2548	210	E2536	B7BE22					
	211	E2537	B7BE22					
	212	E2538	B7BE22					
	213	E2539	B7BE22					
	214	E2540	B7BE22	2.696	7.75	2.63	0.699	4.57
	215	E2541	B7BE22					
	216	E2542	B7BE22					
	217	E2543	B7BE22					
	218	E2544	B7BE22					
	219	E2545	B7BE22					
	220	E2546	B7BE22					
	221	E2547	B7BE22					
	222	E2548	B7BE22					
E2557	223	E2549	B7BE22	2.262	7.91			
	224	E2550	B7BE22			2.82	0.687	4.55
	225	E2551	B7BE22					
	226	E2552	B7BE22					
	227	E2553	B7BE22					
	228	E2554	B7BE22					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

QC CERTIFICATE
REV NO 3
REV DATE 10/20/97

TMP Number 13784, 13806, 15189, 15208, 15251,

Product Code NS130551

16576, 16616, 16618, 17031, & 17056

Customer Name Ogden Remediation

Sales Order Number TES 0365

Project Name Clarkstown Landfill

Purchase Order Number 7-52-P2112300

Raw Material QC Testing			Finished Product QC Testing					
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
	229	E2555	B7BE22					
	230	E2556	B7BE22					
	231	E2557	B7BE22					
E2566	232	E2558	B7BE22	2.406	7.93	3.32	0.675	4.60
	233	E2559	B7BE22					
E2575	234	E2575	B7BE22	2.340	8.42	2.93	0.690	4.46
E2584	235	E2576	B7BE22	2.350	7.56	2.57	0.668	4.66
	236	E2577	B7BE22					
	237	E2578	B7BE22					
	238	E2579	B7BE22					
	239	E2580	B7BE22					
	240	E2581	B7BE22					
	241	E2582	B7BE22					
	242	E2583	B7BE22					
	243	E2584	B7BE22					
E2593	244	E2585	B7BE22	2.467	7.88	2.84	0.693	4.62
	245	E2586	B7BE22					
	246	E2587	B7BE22					
	247	E2588	B7BE22					

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

Product Code NS130551

Customer Name Ogdan Remediation

Project Name Clarkstown Landfill

TMP Number 13784, 13806, 15189, 15208, 15251,
16576, 16616, 16618, 17031, & 17056

Sales Order Number TES 0365

Purchase Order Number 7-52-P2112300

Raw Material QC Testing				Finished Product QC Testing				
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
E2602	248	E2594	B7BE22	2.535	7.55	2.41	0.680	4.51
	249	E2595	B7BE22					
	250	E2596	B7BE22					
	251	E2597	B7BE22					
	252	E2598	B7BE22					
	253	E2599	B7BE22					
	254	E2600	B7BE22					
	255	E2601	B7BE22					
	256	E2602	B7BE22					
E2611	257	E2603	B7BE22	2.424	7.75	2.81	0.687	4.54
	258	E2604	B7BE22					
	259	E2605	B7BE22					
	260	E2606	B7BE22					
	261	E2607	B7BE22					
E2619	262	E2618	P09440	2.363	7.66	3.10	0.689	4.33
E2914	263	E2912	P09440	2.623	7.20	3.48	0.678	4.50
	264	E2913	P09440					
	265	E2914	P09440					
E2919	266	E2915	P09440	2.903	7.62	3.26	0.689	4.42

The Tensar Corporation Quality Control Test Data

Product Type: Drainage Net

QC CERT
REV NO
REV DATE 10/20/97

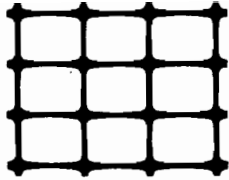
Product Code	NS130551	TMP Number	13784, 13806, 15189, 15208, 15251,
Customer Name	Ogden Remediation		16576, 16616, 16618, 17031, & 17056
Project Name	Clarkstown Landfill	Sales Order Number	TES 0365
		Purchase Order Number	7-52-P2112300

Raw Material QC Testing				Finished Product QC Testing				
QC Sample Lot Number	Roll Count	Shipped Roll Number	Resin Lot Number	Carbon Black (%) ASTM D4218	Ultimate Tensile Strength (k/Nm) MD ASTM D5035	Ultimate Tensile Strength (k/Nm) XMD ASTM D5035	Mass/Area (kg/m ²) ASTM D5261-92	Thickness (mm) ASTM D5199
	267	E2916	P09440					
	268	E2917	P09440					
	269	E2918	P09440					
	270	E2919	P09440					


David Hall
Quality Assurance Laboratory Supervisor

12 - 4 - 98
Date

1 kN/m = 68.54 lbs/ft
1 kg/m² = 0.2048 lbs/ft²



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255

ate Tested: 2/19/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

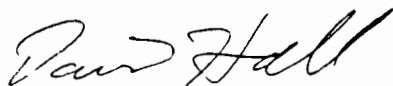
Vendor: Signature Resin Type: HDIG
Resin Lot Number: B7BE22
Railcar Number: ACFX 96314

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

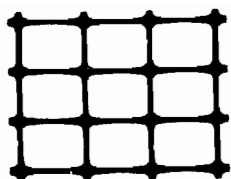
Compartment:	T1	T2	T3	T4
MFI:	<u>0.756</u>	<u>0.780</u>	<u>0.810</u>	<u>0.774</u>
MFI:	<u>0.795</u>	<u>0.764</u>	<u>0.817</u>	<u>0.752</u>
Density:	<u>0.952</u>	<u>0.953</u>	<u>0.952</u>	<u>0.952</u>
Density:	<u>0.952</u>	<u>0.953</u>	<u>0.950</u>	<u>0.953</u>

Compartment:	B1	B2	B3	B4
MFI:	<u>0.752</u>	<u>0.779</u>	<u>0.773</u>	<u>0.739</u>
MFI:	<u>0.792</u>	<u>0.769</u>	<u>0.821</u>	<u>0.771</u>
Density:	<u>0.953</u>	<u>0.952</u>	<u>0.953</u>	<u>0.956</u>
Density:	<u>0.952</u>	<u>0.952</u>	<u>0.953</u>	<u>0.956</u>

DCN: QA-RMQC-CERT
Revision No: 1
Revision Date: 9/27/96



Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 12/2/96
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

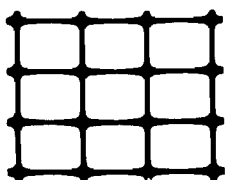
Vendor: Solvay Resin Type: HDIG A60
Resin Lot Number: C61001M02A
Railcar Number: ELTX 3441

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.690</u>	<u>0.669</u>	<u>0.686</u>	<u>0.696</u>
MFI:	<u>0.671</u>	<u>0.684</u>	<u>0.669</u>	<u>0.685</u>
Density:	<u>0.946</u>	<u>0.947</u>	<u>0.940</u>	<u>0.949</u>
Density:	<u>0.950</u>	<u>0.953</u>	<u>0.944</u>	<u>0.949</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.685</u>	<u>0.672</u>	<u>0.682</u>	<u>0.669</u>
MFI:	<u>0.638</u>	<u>0.680</u>	<u>0.647</u>	<u>0.681</u>
Density:	<u>0.946</u>	<u>0.946</u>	<u>0.946</u>	<u>0.948</u>
Density:	<u>0.947</u>	<u>0.947</u>	<u>0.944</u>	<u>0.945</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization



Tensor

The Tensor Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255
Fax 770 • 961 • 8239

Date Tested: 2/11/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Signature Resin Type: HDIG

Resin Lot Number: H6SN43

Railcar Number: ACFX 55920

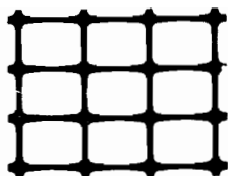
Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.446</u>	<u>0.473</u>	<u>0.358</u>	<u>0.422</u>
MFI:	<u>0.444</u>	<u>0.340</u>	<u>0.349</u>	<u>0.435</u>
Density:	<u>0.945</u>	<u>0.944</u>	<u>0.944</u>	<u>0.947</u>
Density:	<u>0.945</u>	<u>0.944</u>	<u>0.943</u>	<u>0.945</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.479</u>	<u>0.467</u>	<u>0.552</u>	<u>0.573</u>
MFI:	<u>0.484</u>	<u>0.581</u>	<u>0.497</u>	<u>0.436</u>
Density:	<u>0.946</u>	<u>0.945</u>	<u>0.944</u>	<u>0.949</u>
Density:	<u>0.947</u>	<u>0.948</u>	<u>0.946</u>	<u>0.947</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 2/11/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

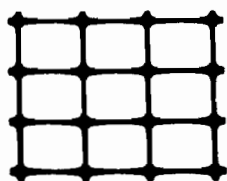
Vendor: Signature Resin Type: HDIG
Resin Lot Number: H6YF43
Railcar Number: ACFX 67609

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.692</u>	<u>0.685</u>	<u>0.696</u>	<u>0.679</u>
MFI:	<u>0.658</u>	<u>0.744</u>	<u>0.699</u>	<u>0.653</u>
Density:	<u>0.950</u>	<u>0.951</u>	<u>0.947</u>	<u>0.955</u>
Density:	<u>0.951</u>	<u>0.951</u>	<u>0.951</u>	<u>0.952</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.730</u>	<u>0.698</u>	<u>0.696</u>	<u>0.682</u>
MFI:	<u>0.677</u>	<u>0.657</u>	<u>0.677</u>	<u>0.686</u>
Density:	<u>0.950</u>	<u>0.953</u>	<u>0.951</u>	<u>0.952</u>
Density:	<u>0.953</u>	<u>0.953</u>	<u>0.953</u>	<u>0.954</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel 770 • 968 • 3255

Date Tested: 2/26/97
Tested By: Monica

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

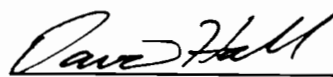
Resin Certification Report

Vendor: Southern Polmer Resin Type: HDIG
Resin Lot Number: P09440
Railcar Number: AFPX 945823

Melt Flow Index (g/10 min.): ASTM D1238
Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.724</u>	<u>0.751</u>	<u>0.727</u>	<u>0.749</u>
MFI:	<u>0.722</u>	<u>0.708</u>	<u>0.745</u>	<u>0.711</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.960</u>	<u>0.960</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.960</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.714</u>	<u>0.713</u>	<u>0.730</u>	<u>0.733</u>
MFI:	<u>0.726</u>	<u>0.729</u>	<u>0.712</u>	<u>0.723</u>
Density:	<u>0.959</u>	<u>0.959</u>	<u>0.959</u>	<u>0.956</u>
Density:	<u>0.958</u>	<u>0.957</u>	<u>0.957</u>	<u>0.960</u>

DCN	QA-RMQC-CERT
Revision No.:	<u>1</u>
Revision Date:	<u>9/27/96</u>


Authorization



Tensar

The Tensar Corporation

1210 Citizens Parkway
Morrow, Georgia 30260
Tel. 770 • 968 • 3255
Fax 770 • 960 • 1734

Date Tested: 1/21/97
Tested By: MONICA

T1	T2	T3	T4
B1	B2	B3	B4

RailCar Compartments

Resin Certification Report

Vendor: Southern Polymer

Resin Type: HDIG

Resin Lot Number: P09833

Railcar Number: PSPX 1017

Melt Flow Index (g/10 min.): ASTM D1238

Density (g/cc): ASTM D792

Compartment:	T1	T2	T3	T4
MFI:	<u>0.655</u>	<u>0.673</u>	<u>0.678</u>	<u>0.664</u>
MFI:	<u>0.658</u>	<u>0.664</u>	<u>0.684</u>	<u>0.652</u>
Density:	<u>0.954</u>	<u>0.956</u>	<u>0.955</u>	<u>0.956</u>
Density:	<u>0.954</u>	<u>0.953</u>	<u>0.955</u>	<u>0.955</u>
Compartment:	B1	B2	B3	B4
MFI:	<u>0.690</u>	<u>0.659</u>	<u>0.672</u>	<u>0.694</u>
MFI:	<u>0.666</u>	<u>0.667</u>	<u>0.683</u>	<u>0.673</u>
Density:	<u>0.955</u>	<u>0.955</u>	<u>0.956</u>	<u>0.956</u>
Density:	<u>0.956</u>	<u>0.956</u>	<u>0.955</u>	<u>0.957</u>

DCN: QA-RMQC-CERT
Revision No.: 1
Revision Date: 9/27/96

Authorization