

1002-

Sheet

236

of

241

1002-

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
12-6	7:50	1000-578	13 E		NV	AP	P	P	Y	V
	8:16	1001-576	20 E							
	8:50	1000-1001	110 E							
	9:05	1001-1002	33/111 T							
	8:58	1001-1002	78/111 B							
	9:10	1002-1003	88/107 T							
	8:41	1002-1003	19/107 B							
	9:28	1003-1004	99 E							
	10:35	1002-581	7 E							
	10:28	1003-581	16 E							
	10:27	1004-580	16 E							
	11:02	1004-1005	112 L							
	11:39	1007-1008	96 E							
	11:25	1006-1007	25/116 T							
	11:35	1006-1007	91/116 B							

COMMENTS:

* 1002-582 B+VF

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

[Signature]

SIGNATURE:

[Signature]

NYC Department of Environmental Protection NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

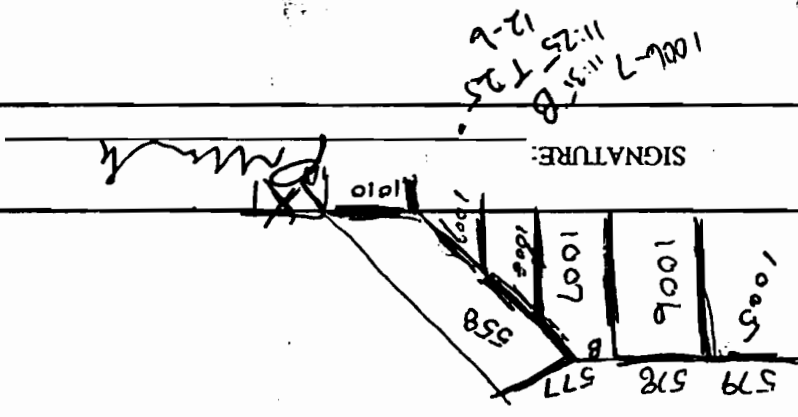
DATE	TIME	SEAM	EQUIP.	TECH.	TEST	REPAIR	REPAIR TEST
		NUMBER	NUMBER	TYPE*	P/F	METHOD**	Y/N
		LENGTH					TYPE*
12-7	7:35	1005-1006	105	NV			V
	7:37	1005-579	26		AP		V
	7:47	1006-578	18				
	7:45	1007-558	22				
	7:47	1008-558	32				
	8:04	1008-1009	59				
	8:04	1009-558	31				
	8:13	1009-1010	31				
	8:14	1010-558	21				
	8:25	1010-559	11				
	8:16	1010-P	11 x 2				

COMMENTS: 1007-577 B+VT RM

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

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Sheet

238

of

241

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
12-7	11:04	951-1011	39 ⁴⁰	40	NV	AT	P	P	Y	V
	12:45	1011-916	19 ⁴⁰	40						
	1:07	1011-1012	23/63 ⁴²	42						
	1:07	1011-1012	13/63 ⁴⁰	40						
	1:05	1011-1012	29/63 ⁴⁰	40						
	10:13	1012-1013	62 ⁴⁶	46						
	1:09	1013-915	19 ⁴⁰	40						
	1:19	1013-914	19 ⁴²	42						
	11:21	1014-914	7 ⁴⁰	40						
	1:20	1013-1014	20 ⁴⁰	40						
	1:30	1013-1015	16 ⁴¹	41						
	1:32	1015-1016	19 ⁴²	42						
	2:02	1017-1014	29 ³⁰	30						
	2:13	1017-1015	17 ⁴⁰	40						
	2:14	1017-1016	26 ⁴²	42						

COMMENTS:

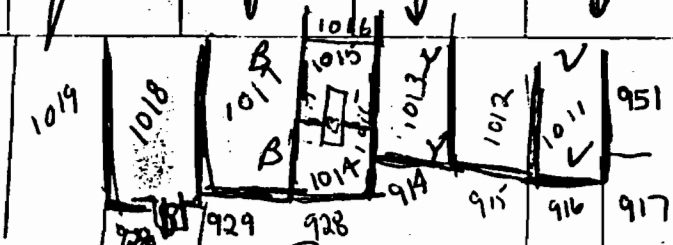
* 1011-917
* 951-1011 / Bottom 22' B+VT1014-1015
* around outlet > B + VT

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

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NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.:

876-HP

Sheet 239 of 241

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			P/F	TYPE*		Y/N	TYPE*

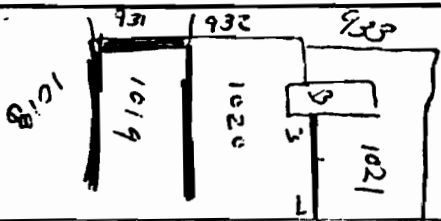
12-7	2:03	1014-928	20'	40	NV		↑			V
	2:01	1017-929	14	40			↑			
	2:31	1017-1018	65	44			↑			
	2:50	1018-930	9	40			↑			
	2:49	1018-1019	63	46-45			↑			
	2:48	1019-931	19	40-39			↑			
	3:47	1019-1020	20/58	40-40			↑			
	3:48	1019-1020	38/58	40-42			↑			
	3:59	1021-1020	15/35	42			↑			
	3:58	1021-1020	20/35	44			↑			

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

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SIGNATURE:



NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
12-14	8:50	573-1054	ENT		NV	AP		P	Y	✓
	8:52	1054-526	ENT							
	8:58	1054-1041	ENT							
	9:00	1041-525	ENT							
	9:05	1041-1042	ENT							
	9:09	1042-524	ENT							
	9:14	1042-1043	ENT							
	9:17	1043-516	ENT							
	9:22	1043-1044	ENT							
	9:27	1044-1045	ENT							
	9:30	1044-523	ENT							
	10:02	1045-1046	ENT							
	10:07	1046-1047	ENT							
	10:15	1047-522	ENT							
	10:22	1047-1048	ENT							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

Paul G. [Signature]

SIGNATURE:

Paul [Signature]

PANEL REPLACEMENT DATA

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/11/96	Pm	R32/R120	21'		CK	AP	P	B+P	Y	V
		R33/R120	28'							
		R33/R119	20'							
		R35/R118	22'							
		R36/R117	22'							
		R37/R116	22'							
		R39/R115	22'							
		R40/R113	22'							
		R42/R112	22'							
		R43/R111	22'							
		R45/R108	22'							
		R46/R107	22'							
		R48/R107	8'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

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SIGNATURE: 

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: _____

876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR Y/N	REPAIR TEST TYPE*
		NUMBER	LENGTH			TYPE*	P/F			

6/11/96	Am	S71/Patch	63'	CK	CK	AF	P	B+P	Y	V
		R121/Patch	43'							
		R122/Patch	26'							
		R102/R121	10'							
		R100/R120	20'							
		R99/R119	20'							
		R97/R118	20'							
		R90/R117	20'							
		R88/R116	20'							
		R124/S73	20'							
		R124/Patch	17'							
		R124/S72	22'							
		R124/S132	26'							
		R123/S131	61'							
		R122/S130	20'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

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SIGNATURE: _____

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/11/96	Am	R113/R115	40'	CEK	CK	AP	P	B+P	Y	V
		R114/R115	22'							
		R114/R116	144'							
		R115/R116	44'							
		R116/R117	185'							
		R117/R118	173'							
		R118/R119	170'							
		R119/R120	162'							
		R120/R121	53'							
		R120/R122	10'							
		R120/R122	118'							
		R122/R123	108'							
		R123/R124	61'							
		R121/R122	22'							
		R123/S71	20'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: Bob Gitt

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-BP

DATE TIME SEAM LENGTH EQUIP. TECH. TEST METHOD** REPAIR TYPE** REPAIR TEST

6/10/96 PM 14' R81/R106 8' R81/R108 13' R82/R108 8' R82/R109 11' R84/R109 9' R84/R112 26' R85/R112

CK AP P B+P Y V

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/10/96	PM	R109/R110	22'		CK	AP	P	B+P	Y	V
		R109/R112	20'							
		R110/R112	112'							
		R111/R112	66'							
		R112/R113	181'							
		R113/R114	143'							
		R67/R107	22'							
		R69/R107	22'							
		R70/R107	22'							
		R72/R106	18'							
		R73/R106	22'							
		R75/R106	22'							
		R76/R106	22'							
		R78/R106	22'							
		R79/R106	8'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: Lab Gitt

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

Sheet _____ of _____

DATE	TIME	SEAM		EQUIP	TECH.	TEST		REPAIR	REPAIR TEST
		NUMBER	LENGTH			TYPE*	P/F	METHOD**	Y/N

6/10/96	4m	R98/722	13'		CK	AP	P	B-P	Y
		R99/722	8'						Y
		R99/721	11'						
		R100/721	10'						
		R100/696	11'						
		R101/696	6'						
		R101/695	15'						
		R103/695	6'						
		R106/697	22'						
		R107/698	80'						
		R106/698	115'						
		R108/698	66'						
		R110/698	22'						
		R108/698	112'						
		R108/699	20'						

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

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SIGNATURE:

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NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/10/96	am	R100/R101	64'		CK	AP	P	B+P	Y	V
		R100/R102	152'							
		R101/R102	22'							
		R101/R103	66'							
		R102/R104	75'							
		R102/R105	78'							
		R103/R104	91'							
		R103/S33	8'							
		R104/R105	91'							
		R105/S71	29'							
		R105/S72	12'							
		R105/S33	32'							
		R104/S33	72'							
		R19/R103	66'							
		R98/TR3	8'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: _____

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NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

Sheet _____ of _____

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP.	TECH.	TEST		REPAIR	REPAIR TEST	
		NUMBER	LENGTH	NUMBER		TYPE*	P/F	METHOD**	Y/N	TYPE*

6/7/96	PM	R92/R94	128'		SP	AP	P	B.P	Y	V
		R91/R92	120'							
		R91/R93	57'							
		R91/R98	97'							
		R91/R97	117'							
		R97/R98	22'							
		R97/R99	117'							
		R98/R99	94'							
		R99/R100	213'							
		R98/R95	9'							
		R98/R96	10'							
		R10/R96	8'							

COMMENTS:

- * V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
- ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

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NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/7/96	am	R88/733	20'		SI	AP	P	B+P	Y	✓
		R88/233	9'							
		R89/TR11	12'							
		R88/TR11	12'							
		TR7/R95	11'							
		TR7/R94	10'							
		TR5/R94	11'							
		TR5/R92	9'							
		TR4/R92	13'							
		TR4/R91	8'							
		TR3/R91	13'							
		R93/R94	16'							
		R92/R93	22'							
		R95/R96	50'							
		R94/R95	93'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: Det Glt

NON-DESTRUCTIVE SEAM TEST LOG

Sheet _____ of _____

PROJECT NO.: 876-BP

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

DATE	TIME	SEAM		EQUIP.	TECH.	TEST		REPAIR	REPAIR TEST
		NUMBER	LENGTH	NUMBER		TYPE*	P/F	METHOD**	Y/N
									TYPE*

6/7/96	4pm	885/887	247'		SP	AP	P	B+P	Y	V
		887/888	248'							
		888/889	165'							
		888/890	70'							
		889/890	22'							
		890/891	43'							
		890/893	34'							
		889/893	10'							
		889/894	45'							
		889/895	45'							
		889/896	45'							
		889/896	14'							
		TR10/896	9'							
		896/896	10'							
		887/734	22'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

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NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/6/96	pm	512/R81	5'		SP	AP	P	B+P	Y	✓
		512/R82	16'							
		737/R82	6'							
		737/R83	9'							
		736/R83	14'							
		736/R85	7'							
		735/R85	29'							
		R68/221	22'							
		R70/220	22'							
		R71/219	22'							
		R73/218	22'							
		R74/217	22'							
		R75/258	22'							
		R77/259	22'							
		R79/260	22'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: _____

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection
PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM	EQUIP.	TECH.	TEST	REPAIR	REPAIR TEST
		NUMBER	NUMBER	TYPE	P/F	METHOD	TYPE

6/6/96	pm	TK6/T	22'	ST	SP	AP	P	B&P	Y	V
		TK8/1'	22'							
		TK9/	22'							
		TK4/5	22'							
		5-11/TK81	6'							
		5-11/TK86	11'							
		5-10/TK86	50'							
		8-11/TK86	95'							
		TK81/TK86	161'							
		TK81/TK82	240'							
		TK82/TK84	147'							
		TK82/TK83	107'							
		TK83/TK84	22'							
		TK83/TK85	90'							
		TK84/TK85	153							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

[Handwritten Signature]

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
6/6/96		TR10/TR11	69'		SP	AP	P	B+P	Y	V
		TR 9/TR11	29'							
		TR11/SE Tie	22'							
		TR11/SSE Tie	22'							
		TR11/SSW Tie	22'							
		TR11/SW Tie	22'							
		Patch ^{SS} 733	22'							
		Patch ^{SSE} 733	22'							
		Patch ^{SSW} 733	22'							
		Patch ^{SW} 733	22'							
		TR1 / T	22'							
		TR2 / T	22'							
		TR3 / T	22'							
		TR4 / T	22'							
		TR5 / T	22'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: *[Signature]*

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

Sheet _____ of _____

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP	TECH.	TEST		REPAIR	REPAIR TEST
		NUMBER	LENGTH	NUMBER		TYPE*	P/F	METHOD**	Y/N
									TYPE*

6/6/96	Am	TR1/699 th	16	84	SP	AP	P	B+P	V
		TR1/722	122'						
		TR3/724	126'						
		TR2/723	123'						
		TR4/725	19'						
		TR4/725 th	103'						
		TR5/727	60'						
		TR5/726	57'						
		TR6/727	22'						
		TR7/728	60'						
		TR6/728	57'						
		TR8/729	37'						
		TR8/7210	69'						
		TR9/7210	22'						

COMMENTS:

- * V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
- ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

[Handwritten Signature]

Sheet

of

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
5/30/96		R57/Tie in	22'							
		R58/Tie in								
		R59/Tie in								
		R60/Tie in								
		R61/Tie in								
		R62/Tie in								
		R63/Tie in								
		R64/Tie in								
		R65/Tie in								
		R66/Tie in								
5/31/96		R56/R80	29'							
		R65/R80	22'							
		R66/R80	22'							
		R67/R80	22'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM	NUMBER	LENGTH	EQUIP.	TECH.	TEST	REPAIR	REPAIR TEST
5/30/96			R36	11c in	22'				
			R37	11c in					
			R38	11c in					
			R40	11c in					
			R41	11c in					
			R43	11c in					
			R44	11c in					
			R46	11c in					
			R47	11c in					
			R49	11c in					
			R50	11c in					
			R52	11c in					
			R53	11c in					
			R55	11c in					
			R56	11c in					

COMMENTS:

V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

Sheet

of

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
5/30/96		R72/R73	126'							
		R71/R73	116'							
		R73/R75	195'							
		R73/R74	46'							
		R75/R76	195'							
		R74/R78	46'							
		R74/R75	22'							
		R76/R78	88'							
		R76/R77 ✓	155'							
		R77/R78 ✓	22'							
		R78/R79 ✓	88'							
		R77/R79 ✓	155'							
		R32/Tie in	22'							
		R33/Tie in								
		R34/Tie in								

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP	TECH	TEST		REPAIR		REPAIR TEST
		NUMBER	LENGTH	NUMBER		TYPE	P/F	METHOD	Y/N	TYPE
5/30/96		R48/R67	22'							
		R49/R67								
		R51/R67								
		R52/R67								
		R53/R67								
		R54/R67								
		R56/R67	22'							
		R67/R69	56'							
		R67/R68	180'							
		R68/R69	22'							
		R69/R70	56'							
		R68/R70	180'							
		R70/R72	126'							
		R70/R71	116'							
		R71/R72	22'							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NO.: 876-HP

*** B - Bead, P - Patch, CS - Cap Strip

SIGNATURE:

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

Sheet of

DATE	TIME	SEAM	NUMBER	LENGTH	EQUIP.	TECH.	TEST	P/F	METHOD	Y/N	REPAIR TEST
------	------	------	--------	--------	--------	-------	------	-----	--------	-----	-------------

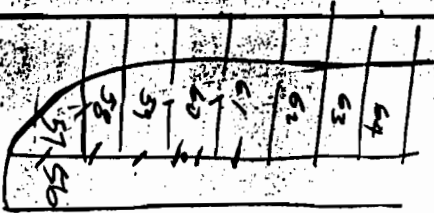
5/28	1:00 PM	R55/R54	20		CT	AT	P				
		R55/R56	58		CT	AT	P				
		R57/R56	21		CT	AT	P				
		R57/R58	43		CT	AT	P				
		R59/R58	49			AT	P				
		R58/R56	20			AT	P				
		R59/R56	21			AT	P				
		R60/R56	9			AT	P				
		R61/R56	12			AT	P				
		R61/R56	21		CT	AT	P				
		R61/R60	63			AT	P				
		R61/R60	54			AT	P				
		R44/R45	22			AT	P				

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

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SIGNATURE:



FORM 97-4087, CONFORM NONDESTRUCT

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

Sheet

of

DATE	TIME	SEAM		EQUIP	TECH.	TEST		REPAIR	REPAIR TEST
		NUMBER	LENGTH	NUMBER		TYPE*	P/F	METHOD**	Y/N
									TYPE*

5/20/92	7:15	R1/S159V	14'	—	CT	AP	P		
	7:16	R2/S160V	10'		CT	AP	P		
	7:17	R3/S185V	22'		CT	AP	P		
	7:18	R4/S187V	22'		CT	AP	P		
	8:36	R1/R2V	15		CT	AP	P		
	8:36	R2/R3V	19		CT	AP	P		
	8:37	R3/R4V	27		CT	AP	P		
	8:37	R4/R5V	36		CT	AP	P		
	8:39	R5/R6V	42		CT	AP	P		
	8:39	R6/R7V	53		CT	AP	P		
	8:40	R7/R8V	51		CT	AP	P		
	8:55	R8/S195V	17		CT	AP	P		
	8:55	R8/S195V	5		CT	AP	P		
	8:55	R8/R9V	42		CT	AP	P		
	8:55	R7/S192V	22'		CT	AP	P		

COMMENTS:

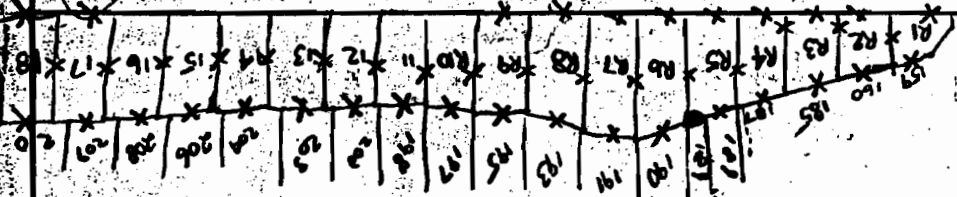
- * V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
- ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

John M. [Signature]

92c4087consformNONDESTR.XLS



2-1-5

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
5/20/96	9:08	R9/EV [✓] S-175 ^{DC}	19'		CT	AP	F			
5/20	9:15	R9/R10 [✓]	46'		CT	AP	P			
5/20	9:21	R5/EV [✓] S-175 ^{DC}	32'		CT		P			
	10:59	R10/EV [✓] S-177 ^{DC}	22'		CT		P			
	11:00	R10/R11 [✓]	47'		CT		P			
	11:00	R11/EV [✓] S-177 ^{DC}	22'		CT		P			
	11:01	R11/R12 [✓]	50'		CT		P			
	11:02	R12/EV [✓] S-200 ^{DC}	22'		CT		P			
	11:02	R12/R13 [✓]	54'		CT		P			
	11:06	R13/EV [✓] S-203 ^{DC}	22'		CT		P			
	11:12	R14/EV [✓] S-204 ^{DC}	22'		CT		P			
	11:20	R14/R15 [✓]	62'		CT		P			
	11:21	R15/EV [✓] S-206 ^{DC}	22'		CT		P			
	11:25	R15/R16 [✓]	68'		CT		P			
5/20/96	11:35	R16/EV [✓]	22'		CT		P			

COMMENTS:

~~11:38 R16/R17 71'~~
~~ETL~~
~~P~~

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B-Bead, P-Patch, CS-Cap Strip

CHK'D BY: _____

SIGNATURE: _____

Yuri Mykolayevych

DATE	TIME	SEAM		EQUIP.	TECH.	TEST		REPAIR METHOD**	Y/N	REPAIR TEST TYPE*
		NUMBER	LENGTH			TYPE*	P/F			
5/20/91	11:38	R16/R17	71'		CT		AT			
	12:35	R17/EV	22'		CT					
	12:35	R17/R18	73'		CT					
	12:40	R17/BN	22'		CT					
	12:40	R18/BN	22'		CT					
	12:55	R18/N	22'		CT					
	13:01	R13/R14	57'		CT					
	13:45	R8/E	22		CT					
	13:45	R7/E	22		CT					
	13:45	R6/E	22		CT					
	13:50	R5/E	22		CT					
	13:55	R4/E	22		CT					
	13:55	R3/E	22		CT					
	14:10	R2/E	22		CT					
5/20/91	14:10	R1/E	22		CT		AT			

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

**** B - Bead, P - Patch, CS - Cap Strip**

CHKD BY:

SIGNATURE:

Yours Truly,
John M. McKelvey

PROJECT NO.: **876-HP**

name: 204087conformNONDISJUNCTIONS

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR	REPAIR TEST
		NUMBER	LENGTH			TYPE	P/F		

5-21	7:30	R12/427	20'	—	CT	AP	P				
	7:35	R13/428	12'								
		R13/429 - C.S.									
	7:37	R14/429	18'								
	7:37	R14/430	3'								
	7:40	R15/430	13'								
	7:40	R15/430	6'								
	7:40	R15/431	3'								
	7:44	R16/431	4'								
	7:44	R16/431	12								
	7:45	R16/476	4'								
	7:45	R17/476	17'								
	7:47	R17/477	1'								
	7:47	R18/477	15'								

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

[Handwritten Signature]

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
5/22/96	8:00	R22/R691	20'		Chan Thalg	APress	P			
	8:00	R24/R692	20'		CT	AP	P			
	7:58	R20/R693	20'		CT		P			
	7:58	R19/R694	21'		CT		P			
	8:55	R23/R690	20'				P			
	8:40	R24/R689	20'				P			
	8:40	R25/R688	17'				P			
	8:45	R25/R687	5'				P			
	7:58	R19/R20	67'				P			
	8:00	R20/R21	68'				P			
	8:00	R21/R22	63'				P			
	8:18	R22/R23	63'				P			
	8:55	R23/R24	64'				P			
	8:40	R24/R25	61'				P			
5/22/96	8:45	R25/R26	61'		Chan Thalg	APress	P			

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

Yuri Mykolayevych

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM	NUMBER	LENGTH	EQUIP	TECH	TEST	P/F	METHOD	Y/N	TYPE
5/22/96	8:45	R26/R687	✓ 13			Chan Thau	Air Pr	P			
	9:00	R26/R686	✓ 7			CT		P			
	9:04	R26/R27	✓ 47					P			
2 parts →	9:25	R27/R28	✓ 60					P/P			
2 parts →	9:45	R28/R29	✓ 73					P/P			
	10:30	R29/R30	✓ 72					P			
	11:00	R30/R31	✓ 43					P			
	9:2	R29/R27	NW 75	✓ 2			Vacuum	—			
		R27/NW	75	✓ 5			Vacuum	—			
	9:25	R27/N	76	✓ 11			Air Pr	P			
	9:25	R28/NW	76	✓ 7				P			
	9:45	R28/NW	(P776)	✓ 2				P			
	9:45	R29/P776	✓ 11					P			
	10:35	R29/P777	✓ 10					P			

COMMENTS

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

CHKD BY:

SIGNATURE:

[Signature]

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
5/22/96	10:35	R30 P777 ^(NW) ✓	8'		Chan Thaly	Air Pres.	P			
	11:05	R30 P778 ^{NE} ✓	13		CT					
	11:00	R31 P778 ^{NW} ✓	6'							
	11:00	R31 P779 ^{NE} ✓	6							
	11:15	R31 P779 ^{ENE} ✓	21							
	11:15	R31 P780 ^(S87) ✓	21							
	11:30	R30 S87 ✓	31							
	11:30	R29 P80 ✓	21							
	11:38	R28 S82 ✓	22							
	12:45	R28 S83 ✓	4							
	12:45	R27 S83 ✓	15							
	12:49	R27 S84 ✓	6							
	12:49	R26 P81 [?] ✓	21							
2 parts SE SW	12:35	R25 S79 ✓	10 & 16 = 26							
	1:15	R24 P78 ✓	22							

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

Yuri Mykolayenko

NON-DESTRUCTIVE SEAM TEST LOG

COMMENTS:

V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
B-Bead, P-Patch, CS-Cap Strip

B - Bead, P - Patch, CS - Cap Strip

CHKD BY:

SIGNATURE:

John M. Edwards

NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/F		Y/N	TYPE*
5/24/96	12:55	R32/S152	✓ 17'	—	CT	AP	P			
↓	2:00	R33/8	✓ 9'		CT	AP	P			
↓	2:00	R33/6	✓ 8'		CT	AP	P			
5/28/96	8:00 am	R32/R33	✓ 218'		C/D	AP	DOPE			
5/24/96	2:02	R33/R34	✓ 42'		CT	AP	P			
↓	2:02	R34/?	✓ 15'		CT	AP	P			
↓	2:05	R34/?	✓ 7'		CT	AP	P			
↓	2:13	R34/R36	✓ 107'		CT	AP	P			
↓	2:05	R36/?	✓ 12'							
↓		R36/?	✓ 3'							
5/28/96		R33/R35	✓ 111'							
↓		R35/R36	✓ 111'							
↓		R36/R37	✓ 214'							
↓		R37/R38	✓ 58'							
↓		R34/R35	✓ 22'							

COMMENTS:

~~R32/R33 55'~~

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY: _____

SIGNATURE: _____

NON-DESTRUCTIVE SEAM TEST LOG

NYC Department of Environmental Protection

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

Sheet of

DATE	TIME	SEAM	NUMBER	LENGTH	EQUIP.	TECH.	TEST	TYPE*	P/F	METHOD**	REPAIR	REPAIR TEST	TYPE*
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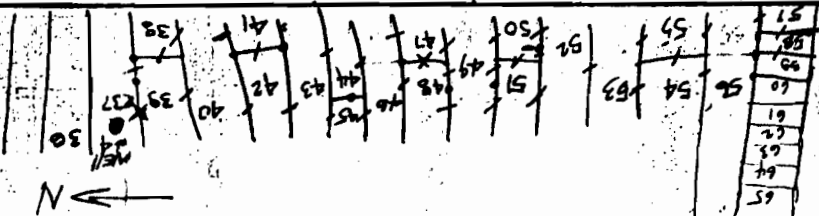
5/28	8:15	R37/38	✓	124'				AP	P				
		R40/39	✓	156				AP	P				
		R42/40	✓	168				AP	P				
		R43/42	✓	171				AP	P				
		R43/45	✓	74				AP	P				
		R43/44	✓	147				AP	P				
		R38/39	✓	20				AP	P				
		R42/41	✓	20				AP	P				
		R48/46	✓	112				AP	P				
		R47/46	✓	109				AP	P				
		R46/44	✓	146				AP	P				
		R45/46	✓	77				AP	P				
		R41/43	✓	39				AP	P				
		R49/47	✓	109				AP	P				
		R40/38	✓	54									
		R41/40	✓	42									
		R43/41	✓	39									

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance
 ** B - Bead, P - Patch, CS - Cap Strip

SIGNATURE:

CHK'D BY:



NYC Department of Environmental Protection

NON-DESTRUCTIVE SEAM TEST LOG

PROJECT NAME: Pelham Bay Landfill

PROJECT NO.: 876-HP

DATE	TIME	SEAM		EQUIP. NUMBER	TECH.	TEST		REPAIR METHOD**	REPAIR TEST	
		NUMBER	LENGTH			TYPE*	P/E		Y/N	TYPE*
5/28	9:20 AM	R50/R49	48		AP	AP	P			
		R48/R47 ✓	21			AP	P			
		R49 ^{LOWER} / R48 ✓	32			AP	P			
		49 ^{GAPOR} / 48 ✓	84			AP	P			
		R51 ^{UPPER} / R49 ✓	129			AP	P			
		R51 ^{LOWER} / R49 ✓	40			AP	P			
		R51 / R50 ✓	21			AP	P			
		R50 / R49 ✓	48			AP	P			
		R52 / R50	33			AP	P			
		R52 / R50	7			AP	P			
		R52 / R51 ✓	177			AP	P			
		R53 / R52 ✓	237			AP	P			
		R55 / 53 ✓	61			AP	P			
		R54 / 53 ✓	177			AP	P			
		R54 / 56 ✓	178			AP	P			

COMMENTS:

* V-Vacuum, S-Spark, AP-Air Pressure, VI-Visual, I-Impact, AL-Air Lance

** B - Bead, P - Patch, CS - Cap Strip

CHK'D BY:

SIGNATURE:

B-5 HDPE Geomembrane Trial Seam Log

**HDPE GEOMEMBRANE
TRIAL SEAM LOG - WEEKLY DATA SUMMARY
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Dates	Equipment Type*	Number of Peel/Shear Tests Conducted	Peel Test Break Value Range **	Shear Test Break Value Range **
5/3/95 to 5/4/95	E, F	24	65 (E) to 161.0 (F)	164.2 (E) to 199.2 (F)
5/8/95 to 5/12/95	E, F	30	79.7 (E) to 195.6 (F)	140.1 (F) to 202 (F)
5/15/95 to 5/18/95	E, F	54	81.4 (E) to 170.2 (F)	159 (E) to 205.3 (F)
5/22/95 to 5/25/95	E, F	72	74 (E) to 154 (F)	153 (F) to 193 (F)
5/30/95 to 6/2/95	E, F	58	77.1 (E) to 151 (E)	154.5 (E) to 191 (F)
6/5/95 to 6/9/95	E, F	52	97 (F) to 153 (E)	142 (F) to 187 (F)
6/12/95 to 6/16/95	E, F	36	98 (E) to 144 (F)	154 (F) to 184 (E)
6/19/95 to 6/23/95	E, F	62	81 (E) to 153 (F)	140 (F) to 178 (E)
6/28/95 to 6/30/95	E, F	44	95 (F) to 159 (E)	145 (F) to 200 (E)
7/3/95 to 7/7/95	E, F	64	93 (E) to 146 (E)	152 (F) to 194 (F)
7/10/95 to 7/14/95	E, F	72	81 (E) to 143 (E)	127 (F) to 173 (F)
7/17/95 to 7/20/95	E, F	48	85 (F) to 143.0 (E)	141 (E) to 181.0 (E)
7/24/95 to 7/28/95	E, F	76	69 (E) to 137 (E)	137 (F) to 174 (F)
7/31/95 to 8/4/95	E, F	66	67 (E) to 138 (E)	127 (E) to 180 (F)
8/7/95 to 8/11/95	E, F	74	88 (E) to 148 (E)	136.1 (F) to 174 (F)
8/14/95 to 8/18/95	E, F	86	74 (E) to 142 (F)	140.4 (E) to 172 (F)
8/21/95 to 8/25/95	E, F	68	82 (E) to 148 (E)	143 (E) to 182 (F)
8/28/95 to 9/1/95	E, F	58	76 (?) to 145 (E)	150 (E) to 188 (E)
9/5/95 to 9/8/95	E, F	54	80 (E) to 155 (F)	153 (E) to 195 (E)
9/11/95 to 9/15/95	E, F	70	33 (F) to 155 (F)	152 (E) to 194 (E)
9/18/95 to 9/22/95	E, F	68	88 (E) to 163 (E)	111 (E) to 214 (F)
9/25/95 to 9/29/99	E, F	48	82 (F) to 155 (F)	146 (E) to 199 (E)
10/2/95 to 10/6/95	E, F	34	73 (E) to 153 (F)	142 (E) to 187 (F)
10/10/95 to 10/13/95	E, F	72	69 (E) to 160 (F)	146 (E) to 209 (F)
10/16/95 to 10/20/95	E, F	88	86 (E) to 168 (F)	157 (F) to 213 (F)
10/23/95 to 10/27/95	E, F	72	80 (E) to 189 (F)	148 (E) to 203 (E)
10/30/95 to 11/3/95	E, F	38	94 (E) to 158 (E)	156 (E) to 208 (E)

**HDPE GEOMEMBRANE
TRIAL SEAM LOG - WEEKLY DATA SUMMARY
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Dates	Equipment Type*	Number of Peel/Shear	Peel Test	Shear Test
		Tests Conducted	Break Value Range **	Break Value Range **
11/6/95 to 11/10/95	E, F	58	81 (E) to 170 (F)	131 (E) to 218 (F)
11/13/95 to 11/18/95	E, F	90	66 (E) to 178 (F)	147 (E) to 228 (F)
11/20/95 to 11/25/95	E, F	116	60 (E) to 184 (E)	152 (E) to 239 (F)
11/27/95 to 12/1/95	E, F	86	79 (E) to 169 (F)	109 (E) to 218 (F)
12/4/95 to 12/8/95	E, F	114	72 (E) to 175 (E)	160 (F) to 226 (E)
12/12/95 to 12/15/95	E, F	34	93 (E) to 172 (F)	155 (E) to 275 (E)
12/18/95	E, F	12	85 (E) to 155 (F)	158(E) to 227 (F)
4/11/96 to 4/12/96	E	6	88 (E) to 109 (E)	121 (E) to 151 (E)
4/15/96 to 4/18/96	E	11	72 (E) to 123 (E)	141 (E) to 166 (E)
4/22/96	E	2	108 (E) to 112 (E)	154 (E) to 156 (E)
5/1/96 to 5/2/96	E	16	98 (E) to 142 (E)	164 (E) to 188 (E)
5/16/96 to 5/17/96	E, F	18	110 (F) to 149 (E)	146 (F) to 174 (F)
5/20/96 to 5/24/96	E, F	54	81 (E) to 169 (E)	118 (E) to 165 (F)
5/28/96 to 5/31/96	E, F	46	80 (E) to 165 (E)	134 (F) to 199 (F)
6/4/96 to 6/7/96	S/S, S/T, T/T, E, F	64	82 (S/S) to 146 (S/S)	140 (S/S) to 174 (E)
6/10/96 to 6/11/96	S/S, S/S-E	12	106 (S/S) to 147 (S/S-E)	145 (S/S) to 167 (S/S-E)
11/13/96	E, F	10	75 (E) to 143 (F)	183(E) to 225 (F)

* Equipment Type

E = Extrusion

F = Fusion

S/S =

S/T =

** Passing Values

Peel Test >= 60 ppi

Shear Test >= 108 ppi

B-6 HDPE Geomembrane Contractor Destructive Seam Strength Testing

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-1	05/03/1995	131	Pass	195		
DS-2	05/03/1995	132	Pass	193		
DS-3	05/03/1995	136	Pass	190		
DS-4	05/04/1995	142	Pass	184		
DS-5	05/04/1995	130	Pass	185		
DS-6	05/04/1995	119	Pass	179		
DS-7	05/04/1995	127	Pass	180		
DS-8	05/08/1995	145	Pass	193		
DS-9	05/08/1995	130	Pass	174		
DS-10	05/08/1995	138	Pass	194		
DS-11	not provided	118	Pass	178		
DS-12	not provided	124	Pass	168		
DS-13	not provided	132	Pass	178		
DS-14	not provided	127	Pass	191		
DS-15	not provided	144	Pass	189		
DS-16	not provided	146	Pass	177		
DS-17	05/15/1995	135	Pass	186		
DS-18	not provided	132	Pass	179		
DS-19	not provided	129	Pass	167		
DS-20	not provided	131	Pass	171		
DS-21	not provided	135	Pass	199		
DS-22	not provided	123	Pass	172	1 of 5 peel tests below spec (88)	
DS-23	not provided	133	Pass	172		
DS-24	not provided	133	Pass	178		
DS-25	not provided	133	Pass	171		
DS-26	not provided	131	Pass	183		
DS-27	05/17/1995	130	Pass	196		
DS-28	05/17/1995	135	Pass	189		
DS-29	05/22/1995	128	Pass	173		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-30	05/22/1995	134	Pass	175		
DS-31	05/22/1995	130	Pass	166		
DS-32	05/22/1995	138	Pass	166		
DS-33	05/22/1995	131	Pass	172		
DS-34	05/22/1995	122	Pass	166		
DS-35	05/22/1995	139	Pass	165		
DS-36	05/22/1995	131	Pass	168		
DS-37	05/22/1995	124	Pass	163		
DS-38	05/24/1995	136	Pass	174		
DS-39	05/24/1995	138	Pass	176		
DS-40	05/24/1995	92	Pass	166		2 of 5 peel tests below spec (88)
DS-41	?05/24/1995	132	Pass	175		
DS-42	?05/24/1995	117	Pass	168		
DS-43	?05/24/1995	118	Pass	182		
DS-44	05/24/1995	118	Pass	173		
DS-44A	06/02/1995	110	Pass	167		Peel tests failed, no shear test conducted
DS-44B	06/02/1995	114	Fail	--		
DS-44C	not provided	113	Pass	170		
DS-44D	05/24 and 06/08/95	79	Fail	--		3 of 3 peel tests failed, no shear test conducted
DS-44E	05/24 and 06/08/95	138	Pass	193		
DS-45	05/24/1995	112	Pass	174		
DS-46	05/24/1995	124	Pass	175		
DS-47	05/24/1995	115	Pass	170		
DS-48	05/24/1995	86	Pass	165		
DS-49	05/24/1995	124	Pass	173		
DS-50	05/24/1995	51	Fail	--		3 of 4 peel tests failed, no shear test conducted
DS-50A	05/30/1995	91	Fail	--		Peel tests failed, no shear test conducted
DS-50B	05/30/1995	92	Fail	--		Peel tests failed, no shear test conducted
DS-50C	05/30/1995	128	Pass	172		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-50D	05/30/1995	114	Pass	168		
DS-51	05/30/1995	127	Pass	172		
DS-52	05/30/1995	128	Pass	163		
DS-53	05/30/1995	109	Pass	158		
DS-54	05/30/1995	130	Pass	161		
DS-55	05/30/1995	129	Pass	175		
DS-56	06/01/1995	114	Pass	163		
DS-57	06/01/1995	123	Pass	169		
DS-58	06/01/1995	126	Pass	173		
DS-59	06/01/1995	124	Pass	164		
DS-60	06/01/1995	122	Pass	166		
DS-61	06/01/1995	115	Pass	167		
DS-62	06/01/1995	122	Pass	156		
DS-63	06/01/1995	129	Pass	168		
DS-64	06/01/1995	119	Pass	166		
DS-65	06/02/1995	116	Pass	163		
DS-66	not provided	127	Pass	159		
DS-67	not provided	118	Pass	165		
DS-68	not provided	117	Pass	165		
DS-69	not provided	105	Pass	164	1 of 5 peel tests below spec (88)	
DS-70	not provided	125	Pass	167		
DS-71	06/05/1995	125	Pass	168		
DS-72	05/24 and 06/8/95	131	Pass	177		
DS-73	06/08/1995	130	Pass	184		
DS-74	06/08/1995	129	Pass	182		
DS-75	06/08/1995	120	Pass	178		
DS-76	06/09/1995	126	Pass	186		
DS-77	06/09/1995	131	Pass	178		
DS-78	06/09/1995	120	Pass	178		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-79	06/16/1995	122	Pass	161		
DS-80	06/16/1995	123	Pass	170		
DS-81	06/16/1995	125	Pass	170		
DS-82	06/16 and 06/19/95	130	Pass	183		
DS-83	06/16 and 06/19/95	120	Pass	178		
DS-84	06/16 and 06/19/95	130	Pass	177		
DS-85	06/19/1995	124	Pass	180		
DS-86	06/21/1995	123	Pass	168		
DS-87	06/21/1995	129	Pass	163		
DS-88	06/21/1995	130	Pass	166		
DS-89	06/21/1995	127	Pass	167		
DS-90	06/21/1995	131	Pass	172		
DS-91	06/28/1995	131	Pass	181		
DS-92	06/28/1995	127	Pass	182		
DS-93	06/28/1995	130	Pass	172		
DS-94	06/28/1995	128	Pass	172		
DS-95	06/28/1995	125	Pass	163		
DS-96	06/28/1995	119	Pass	163		
DS-97	06/30/1995	124	Pass	171		
DS-98	06/30/1995	129	Pass	179		
DS-99	06/30/1995	125	Pass	175		
DS-100	06/30/1995	118	Pass	179		
DS-101	06/30/1995	136	Pass	167		
DS-102	06/30/1995	119	Pass	174		
DS-103	06/30/1995	124	Pass	172		
DS-104	06/30/1995	120	Pass	174		
DS-105	06/30/1995	118	Pass	160		
DS-106	07/03/1995	123	Pass	176		
DS-107	07/03/1995	118	Pass	167		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-108	07/03/1995	117	Pass	166		
DS-109	07/03/1995	117	Pass	168		
DS-110	07/03/1995	118	Pass	165		
DS-111	07/05 and 07/06/95	121	Pass	168		
DS-112	07/05 and 07/06/95	118	Pass	165		
DS-113	07/05 and 07/06/95	128	Pass	166		
DS-114	07/06/1995	130	Pass	167		
DS-115	07/06/1995	121	Pass	166		
DS-116	07/06/1995	122	Pass	160		
DS-117	07/06/1995	105	Pass	162		
DS-118	07/06/1995	115	Pass	159		
DS-119	07/06/1995	120	Pass	165		
DS-120	07/06 and 07/07/95	119	Pass	160		
DS-121	07/06 and 07/07/95	123	Pass	161		
DS-122	07/06 and 07/07/95	118	Pass	159		
DS-123	07/07 and 07/10/95	120	Pass	157		
DS-124	07/07 and 07/10/95	116	Pass	158		
DS-125	07/07 and 07/10/95	118	Pass	161		
DS-126	07/10/1995	122	Pass	155		
DS-127	07/10/1995	115	Pass	162		
DS-128	07/10/1995	131	Pass	154		
DS-129	07/10/1995	117	Pass	156		
DS-130	07/14/1995	129	Pass	162		
DS-131	07/14/1995	121	Pass	161		
DS-132	07/14/1995	139	Pass	166		
DS-133	07/12 and 07/14/95	134	Pass	170		
DS-134	07/12 and 07/14/95	132	Pass	153		
DS-135	07/12 and 07/14/95	124	Pass	161		
DS-136	07/12 and 07/13/95	124	Pass	158		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-137	07/12 and 07/13/95	133	Pass	154		
DS-138	07/12 and 07/13/95	124	Pass	157		
DS-139	07/13/1995	124	Pass	159		
DS-140	07/13/1995	113	Pass	150		
DS-141	07/20/1995	121	Pass	151		
DS-142	07/20/1995	118	Pass	154		
DS-143	07/20/1995	118	Pass	159		
DS-144	07/20/1995	123	Pass	168		
DS-145	07/20/1995	122	Pass	163		
DS-146	07/20/1995	132	Pass	168		
DS-147	07/24/1995	114	Pass	159		
DS-148	07/24/1995	118	Pass	162		
DS-149	07/24/1995	121	Pass	157		
DS-150	07/24 and 07/25/95	111	Pass	171		
DS-151	07/24 and 07/25/95	121	Pass	162		
DS-152	07/24 and 07/25/95	119	Pass	152		
DS-153	07/25/1995	121	Pass	161		
DS-154	07/25/1995	114	Pass	155		
DS-155	07/25/1995	127	Pass	159		
DS-156	07/25 and 07/26/95	110	Pass	157		
DS-157	07/25 and 07/26/95	113	Pass	163		
DS-158	07/25 and 07/26/95	113	Pass	164		
DS-159	07/27/1995	122	Pass	151		
DS-160	07/27/1995	125	Pass	151		
DS-161	07/27/1995	126	Pass	159		
DS-162	07/27/1995	118	Pass	158		
DS-163	08/03/1995	119	Pass	174		
DS-164	08/03/1995	111	Pass	147		
DS-165	08/03/1995	118	Pass	149		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-166	08/1 and 08/03/95	120	Pass	145		
DS-167	08/1 and 08/03/95	123	Pass	147		
DS-168	08/1 and 08/03/95	109	Pass	151		
DS-169	08/1 and 08/03/95	113	Pass	151		
DS-170	08/01/1995	112	Pass	156		
DS-171	08/01/1995	117	Pass	149		
DS-172	08/01/1995	129	Pass	153		
DS-173	08/01/1995	108	Pass	151		
DS-174	08/8 and 08/09/95	124	Pass	170		
DS-175	08/8 and 08/09/95	120	Pass	170		
DS-176	08/8 and 08/09/95	128	Pass	162		
DS-177	08/09/1995	117	Pass	159		
DS-178	08/09/1995	119	Pass	158		
DS-179	08/09/1995	119	Pass	152		
DS-180	08/09/1995	124	Pass	151		
DS-181	08/09/1995	114	Pass	149		
DS-182	08/09/1995	128	Pass	158		
DS-183	08/10/1995	107	Pass	152		1 of 5 peel tests below spec (88)
DS-184	08/10/1995	127	Pass	151		
DS-185	08/10/1995	123	Pass	160		
DS-186	08/10/1995	121	Pass	154		
DS-187	08/10/1995	116	Pass	154		
DS-188	08/10/1995	118	Pass	148		
DS-189	08/15/1995	116	Pass	164		
DS-190	08/15/1995	126	Pass	153		
DS-191	08/15/1995	121	Pass	159		
DS-192	08/15/1995	128	Pass	168		
DS-193	08/15/1995	129	Pass	156		
DS-194	08/15/1995	129	Pass	158		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-195	08/16/1995	128	Pass	156		
DS-196	08/16/1995	127	Pass	163		
DS-197	08/16/1995	118	Pass	155		
DS-198	08/16/1995	123	Pass	167		
DS-199	08/16/1995	114	Pass	154		
DS-200	08/16/1995	118	Pass	151		
DS-201	08/16/1995	116	Pass	160		
DS-202	08/16/1995	113	Pass	148		
DS-203	08/16/1995	120	Pass	150		
DS-204	08/16/1995	127	Pass	152		
DS-205	08/16/1995	128	Pass	153		
DS-206	08/16/1995	120	Pass	150		
DS-207	08/18/1995	123	Pass	153		
DS-208	08/22/1995	135	Pass	177		
DS-209	08/22/1995	127	Pass	169		
DS-210	08/22/1995	133	Pass	174		
DS-211	08/23/1995	76	Fail	176		2 of 5 peel tests below spec (88)
DS-211A	08/25/1995	128	Pass	159		
DS-211B	08/25/1995	102	Pass	163		
DS-212	08/23/1995	117	Pass	172		
DS-213	08/23/1995	108	Pass	158		1 of 5 shear tests below spec (113) No Overlap
DS-214	8/24 and 08/25/1995	--	Fail	--		
DS-214A	08/25/1995	123	Pass	166		
DS-214B	08/25/1995	115	Pass	165		
DS-215	8/24 and 08/25/1995	114	Pass	184		
DS-216	8/24 and 08/25/1995	101	Pass	181		1 of 5 peel tests below spec (88) no shear test conducted
DS-217	08/25/1995	104	Fail	--		
DS-217A	08/25/1995	122	Pass	168		
DS-217B	08/25/1995	141	Pass	177		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-218	08/25/1995	118	Pass	173		
DS-219	08/25/1995	114	Pass	167		
DS-220	08/30/1995	130	Pass	186		
DS-221	08/30/1995	135	Pass	167		
DS-222	08/30/1995	126	Pass	174		
DS-223	08/30/1995	133	Pass	179		
DS-224	08/30/1995	134	Pass	183		
DS-225	08/30/1995	121	Pass	190		
DS-226	08/30 and 09/01/1995	123	Pass	173		
DS-227	08/30 and 09/01/1995	134	Pass	169		
DS-228	08/30 and 09/01/1995	125	Pass	170		
DS-229	08/31/1995	137	Pass	182		
DS-230	08/31/1995	133	Pass	166		
DS-231	08/31/1995	125	Pass	155		
DS-232	08/31/1995	125	Pass	167		
DS-233	08/31/1995	130	Pass	159		
DS-234	08/31/1995	127	Pass	162		
DS-235	09/07/1995	151	Pass	196		
DS-236	09/07/1995	137	Pass	201		
DS-237	09/07/1995	133	Pass	202		
DS-238	09/07 and 09/08/1995	137	Pass	189		
DS-239	09/07 and 09/08/1995	153	Pass	191		
DS-240	09/07 and 09/08/1995	150	Pass	187		
DS-241	09/08/1995	116	Pass	187		
DS-242	09/11/1995	130	Pass	189		
DS-243	09/11/1995	116	Pass	190	1 of 5 peel tests below spec (88)	
DS-244	09/11/1995	133	Pass	180		
DS-245	09/11/1995	127	Pass	179		
DS-246	09/11/1995	133	Pass	181		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-247	09/11/1995	135	Pass	181		
DS-248	09/12/1995	137	Pass	178		
DS-249	09/12/1995	122	Pass	164		
DS-250	09/12/1995	126	Pass	157		
DS-251	09/12 and 09/13/1995	129	Pass	183		
DS-252	09/12 and 09/13/1995	126	Pass	156		
DS-253	09/12 and 09/13/1995	137	Pass	189		
DS-254	09/13/1995	127	Pass	193		
DS-255	09/13/1995	124	Pass	158		
DS-256	09/14 and 09/15/1995	156	Pass	186		
DS-257	09/14 and 09/15/1995	141	Pass	184		
DS-258	09/14 and 09/15/1995	140	Pass	184		
DS-259	09/15/1995	136	Pass	178		
DS-260	09/19/1995	144	Pass	197		
DS-261	09/19/1995	142	Pass	196		
DS-262	09/19/1995	114	Fail	--		1 of 4 peel tests failed, no shear test conducted
DS-262A	09/19/1995	102	Fail	--		2 peel tests failed, no shear test conducted
DS-262B	09/19/1995	137	Pass	187		
DS-262C	09/19/1995	111	Fail	--		2 peel tests failed, no shear test conducted
DS-262D	09/19/1995	142	Pass	179		
DS-262E	09/15 and 09/21/1995	122	Pass	175		
DS-263	09/19/1995	138	Pass	186		
DS-264	09/19/1995	141	Pass	190		
DS-265	09/20/1995	118	Pass	182		
DS-266	09/20/1995	120	Pass	180		
DS-267	09/20/1995	104	Pass	177		
DS-268	09/20 and 09/21/1995	115	Pass	177		
DS-269	09/20 and 09/21/1995	115	Pass	181		
DS-270	09/20 and 09/21/1995	148	Pass	166		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION	Pass / Fail	SHEAR EVALUATION	Remarks
		Mean Maximum Tension (PPI)		Mean Maximum Tension (PPI)	
DS-271	09/21/1995	97	Pass	196	
DS-272	09/21/1995	113	Pass	167	
DS-273	09/21/1995	123	Pass	176	
DS-274	09/15 and 09/21/1995	125	Pass	192	
DS-275	09/15 and 09/21/1995	118	Pass	162	
DS-276	09/28/1995	106	Pass	174	
DS-277	09/28/1995	112	Pass	185	
DS-278	09/28/1995	137	Pass	172	
DS-279	09/29/1995	111	Pass	172	
DS-280	09/29/1995	127	Pass	172	
DS-281	09/29/1995	134	Pass	173	
DS-282	10/02/1995	128	Pass	177	
DS-283	10/02/1995	134	Pass	183	
DS-284	10/02/1995	121	Pass	181	
DS-285	10/03/1995	119	Pass	178	
DS-286	10/03/1995	117	Pass	172	
DS-287	10/10/1995	147	Pass	167	
DS-288	10/10/1995	135	Pass	170	
DS-289	10/10/1995	113	Pass	152	
DS-290	10/10/1995	118	Pass	166	
DS-291	10/10/1995	120	Pass	171	
DS-292	10/10/1995	120	Pass	168	
DS-293	10/10 and 10/11/1995	128	Pass	175	
DS-294	10/10 and 10/11/1995	120	Pass	156	
DS-295	10/10 and 10/11/1995	116	Pass	168	
DS-296	10/11/1995	107	Pass	160	
DS-297	10/11/1995	105	Pass	171	1 of 5 peel tests failed, below spec (88)
DS-298	10/18/1995	118	Pass	184	
DS-299	10/18/1995	116	Pass	191	1 of 5 peel tests below spec (88)

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-300	10/18/1995	113	Pass	183		
DS-301	10/19/1995	123	Pass	184		
DS-302	10/19/1995	125	Pass	169		
DS-303	10/19/1995	123	Pass	176		
DS-304	10/19/1995	123	Pass	174		
DS-305	10/23/1995	124	Pass	182		
DS-306	10/23/1995	108	Pass	176		
DS-307	10/23/1995	114	Pass	178		
DS-308	10/23 and 10/24/1995	125	Pass	174		
DS-309	10/23 and 10/24/1995	130	Pass	176		
DS-310	10/23 and 10/24/1995	104	Pass	162		1 of 5 peel tests failed, below spec (88)
DS-311	10/24 and 10/26/1995	121	Pass	193		
DS-312	10/24 and 10/26/1995	126	Pass	169		
DS-313	10/24 and 10/26/1995	108	Pass	196		
DS-314	10/26/1995	107	Pass	175		
DS-315	10/26/1995	127	Pass	171		
DS-316	10/26/1995	121	Pass	181		
DS-317	10/25 and 10/26/1995	115	Pass	176		
DS-318	10/25 and 10/26/1995	115	Pass	166		
DS-319	10/25 and 10/26/1995	121	Pass	183		
DS-320	10/26/1995	121	Pass	176		
DS-321	10/26/1995	116	Pass	178		
DS-322	10/26/1995	126	Fail	--		2 of 3 peel tests failed, no shear test conducted 1 of 5 tests in each test type failed
DS-322A	10/26 and 10/30/1995	99	Fail	155		
DS-322B	10/26 and 10/30/1995	143	Pass	176		
DS-323	10/26 and 10/30/1995	149	Pass	225		
DS-324	10/30/1995	54	Fail	--		2 peel tests failed, no shear test conducted
DS-324A	10/30/1995	80	Fail	--		2 peel tests failed, no shear test conducted
DS-324B	10/30/1995	117	Pass	200		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-325	11/03 and 11/06/1995	125	Pass	188		
DS-326	11/03 and 11/06/1995	107	Pass	219		Only four shear tests conducted
DS-327	11/03 and 11/06/1995	116	Pass	200		
DS-328	11/01 and 11/03/1995	126	Pass	189		
DS-329	11/01 and 11/03/1995	89	Fail	--		2 of 5 peel tests failed, no shear test conducted
DS-329A	11/01/1995	85	Fail	--		2 of 3 peel tests failed, no shear test conducted
DS-329B	11/01/1995	111	Pass	180		
DS-329C	11/01/1995	136	Pass	185		
DS-330	11/01 and 11/03/1995	123	Pass	182		
DS-331	11/01/1995	123	Pass	176		
DS-332	11/01/1995	130	Pass	178		
DS-333	11/01/1995	110	Pass	194		
DS-334	11/01 and 11/06/1995	119	Pass	194		
DS-335	11/01 and 11/06/1995	128	Pass	197		
DS-336	11/13/1995	93	Fail	--		2 of 3 peel tests failed, no shear test conducted
DS-336A	not provided	52	Fail	--		2 peel tests failed, no shear test conducted
DS-336B	not provided	48	Fail	--		
DS-336C	not provided	132	Fail	221		2 peel tests failed, no shear test conducted
DS-337	11/13/1995	149	Pass	211		
DS-338	11/13/1995	113	Pass	208		
DS-339	11/06/1995	139	Pass	203		
DS-340	11/06/1995	118	Pass	199		
DS-341	11/06/1995	142	Pass	194		
DS-342	11/06/1995	135	Pass	196		
DS-343	11/06/1995	123	Pass	188		
DS-344	11/06/1995	117	Pass	182		
DS-345	11/06/1995	139	Pass	177		
DS-346	11/06/1995	117	Pass	167		
DS-347	11/06/1995	81	Fail	--		2 of 3 peel tests failed, no shear test conducted

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-347A	11/10/1995	108		174		
DS-347B	11/10/1995	110		190		1 of 5 peel tests below spec (88) peeled by hand
DS-348	11/06/1995	--	Fail	--		
DS-349	11/06/1995	123	Pass	186		
DS-350	11/06/1995	122	Pass	165		
DS-351	11/06/1995	125	Pass	192		
DS-352	11/06/1995	110	Pass	180		1 of 5 peel tests failed 2 of 2 peel tests failed, no shear test conducted
DS-353	11/06/1995	26	Fail	--		
DS-354	11/17/1995	151	Pass	226		
DS-355	11/17/1995	143	Pass	226		
DS-356	11/17/1995	127	Pass	209		
DS-357	11/17 and 11/18/1995	139	Pass	176		
DS-358	11/17 and 11/18/1995	129	Pass	221		
DS-359	11/17 and 11/18/1995	122	Pass	212		
DS-360	11/18/1995	130	Pass	174		
DS-361	11/18/1995	139	Pass	194		
DS-362	11/18/1995	128	Pass	197		
DS-363	?11/19/1995	122	Pass	182		
DS-364	?11/19/1995	128	Pass	170		
DS-365	?11/19/1995	103	Pass	183		
DS-366	11/20 and 11/22/1995	136	Pass	183		
DS-367	11/20 and 11/22/1995	149	Pass	197		
DS-368	11/20 and 11/22/1995	134	Pass	181		
DS-369	11/22/1995	136	Pass	191		
DS-370	11/22/1995	124	Pass	147		
DS-371	11/22/1995	120	Pass	152		
DS-372	11/22/1995	132	Pass	187		
DS-373	11/22/1995	104	Pass	157		
DS-374	11/22/1995	121	Pass	150		1 of 5 peel tests below spec (88)

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION		SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)		
DS-375	11/25/1995	133	Pass	190		
DS-376	11/25/1995	116	Pass	178		
DS-377	11/25/1995	128	Pass	164		
DS-378	11/25/1995	134	Pass	184		
DS-379	11/25/1995	134	Pass	180		
DS-380	11/25/1995	130	Pass	185		
		Replacement Panel Weld Test Results				
DS-R1	05/20/1996	104	Pass	149		
DS-R2	05/20/1996	119	Pass	153		
DS-R3	05/20/1996	107	Pass	149		
DS-R4	05/22/1996	111	Pass	147		
DS-R5	05/22/1996	134	Pass	143		
DS-R6	05/22/1996	116	Pass	146		
DS-R7	05/23/1996	122	Pass	156		
DS-R8	05/23/1996	118	Pass	146		
DS-R9	05/23/1996	119	Pass	152		
DS-R10	05/23/1996	114	Pass	160		
DS-R11	05/23/1996	125	Pass	162		
DS-R12	05/23/1996	126	Pass	155		
DS-R13	05/24/1996	119	Pass	189		
DS-R14	05/24/1996	123	Pass	189		
DS-R15	05/24/1996	111	Pass	190		
DS-R16	05/24/1996	131	Pass	197		
DS-R17	not provided	111	Pass	179		
DS-R18	not provided	115	Pass	169		
DS-R19	not provided	119	Pass	167		
DS-R20	not provided	132	Pass	169		
DS-R21	not provided	99	Pass	141	1 of 5 peel tests below spec (88)	
DS-R22	06/03/1996	145	Pass	211		

**HDPE GEOMEMBRANE CONTRACTOR DESTRUCTIVE SEAM STRENGTH TESTING
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

Sample Number	Sample Date	PEEL EVALUATION	SHEAR EVALUATION		Remarks
		Mean Maximum Tension (PPI)	Pass / Fail	Mean Maximum Tension (PPI)	
Replacement Panel Weld Test Results (continued)					
DS-R23	06/03/1996	146	Pass	217	1 of 5 peel tests below spec (88)
DS-R24	05/31/1996	150	Pass	190	
DS-R25	06/04/1996	123	Pass	169	
DS-R26	06/04/1996	125	Pass	166	
DS-R27	06/04/1996	115	Pass	151	
DS-R28	06/05/1996	116	Pass	175	1 of 5 peel tests below spec (88)
DS-R29	06/05/1996	131	Pass	164	
DS-R30	06/05/1996	119	Pass	169	
DS-R31	06/05/1996	132	Pass	158	
DS-R32	06/05/1996	114	Pass	161	
DS-R33	06/06/1996	133	Pass	157	
DS-R34	06/06/1996	120	Pass	159	
DS-R35	06/06/1996	134	Pass	167	
DS-R36	06/07/1996	121	Pass	162	
DS-R37	06/07/1996	123	Pass	162	
DS-R38	06/07/1996	132	Pass	152	
DS-R39	06/07/1996	135	Pass	157	
DS-R40	06/07/1996	142	Pass	148	

B-7 HDPE Geomembrane QA Destructive Seam Field Test Log

**HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
05/04/1995	DS-1	2/3	P	P	P	Y	V
05/04/1995	DS-2	6/7	P	P	P	Y	V
05/04/1995	DS-3	16/17	P	P	P	Y	V
05/04/1995	DS-4	19/20	P	P	P	Y	V
05/04/1995	DS-5	21/22	P	P	P	Y	V
05/04/1995	DS-6	23/24	P	P	P	Y	V
05/04/1995	DS-7	25/26	P	P	P	Y	V
05/08/1995	DS-8	30/31	P	P	P	Y	V
05/08/1995	DS-9	27/43	P	P	P	Y	V
05/09/1995	DS-10	29/30	P	P	P	Y	V
05/09/1995	DS-11	43/44	P	P	P	Y	V
05/09/1995	DS-12	44/45	P	P	P	Y	V
05/09/1995	DS-13	46/47	P	P	P	Y	V
05/09/1995	DS-14	18/49	P	P	P	Y	V
05/09/1995	DS-15	50/51	P	P	P	Y	V
05/09/1995	DS-16	51/52	P	P	P	Y	V
05/09/1995	DS-17	53/54	P	P	P	Y	V
05/15/1995	DS-18	55/56	P	P	P	Y	V
05/15/1995	DS-19	56/57	P	P	P	Y	V
05/18/1995	DS-20	57/58	P	P	P	Y	V
05/18/1995	DS-21	63/64	P	P	P	Y	V
05/18/1995	DS-22	62/63	P	P	P	Y	V
05/18/1995	DS-23	60/61	P	P	P	Y	V
05/18/1995	DS-24	55/56	P	P	P	Y	V
05/18/1995	DS-25	66/19	P	P	P	Y	V
05/18/1995	DS-26	69/70	P	P	P	Y	V
05/22/1995	DS-27	71/72	P	P	P	Y	V
05/22/1995	DS-28	74/75	P	P	P	Y	V
05/22/1995	DS-29	76/77	P	P	P	Y	V
05/22/1995	DS-30	84/85	P	P	P	Y	V
05/22/1995	DS-31	87/88	P	P	P	Y	V
05/22/1995	DS-32	90/91	P	P	P	Y	V
05/22/1995	DS-33	93/94	P	P	P	Y	V
05/22/1995	DS-34	96/97	P	P	P	Y	V
05/22/1995	DS-35	107/108	P	P	P	Y	V
05/22/1995	DS-36	100/101	P	P	P	Y	V
05/22/1995	DS-37	105/106	P	P	P	Y	V
05/24/1995	DS-38	117/124	P	P	P	Y	V
05/24/1995	DS-39	118/119	P	P	P	Y	V
05/24/1995	DS-40	88/120	P	P	P	Y	V
05/24/1995	DS-41	125/126	P	P	P	Y	V
05/24/1995	DS-42	127/128	P	P	P	Y	V
05/24/1995	DS-43	129/130	P	P	P	Y	V
05/24/1995	DS-44	131/132	P	P	P	Y	V

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PAGE 1 OF 11

HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG **PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
05/24/1995	DS-45	133/134	P	P	P	Y	V
05/24/1995	DS-46	135/136	P	P	P	Y	V
05/24/1995	DS-47	137/138	P	P	P	Y	V
05/31/1995	DS-48	90/95	P	P	P	Y	V
05/31/1995	DS-49	139/140	P	P	P	Y	V
05/31/1995	DS-50	141/142	F	F	P	Y	V
05/31/1995	DS-51	143/157	P	P	P	Y	V
05/31/1995	DS-52	158/159	P	P	P	Y	V
05/31/1995	DS-53	116/151	P	P	P	Y	V
05/31/1995	DS-54	155/156	P	P	P	Y	V
06/01/1995	DS-55	74/144	P	P	P	Y	V
06/01/1995	DS-50A	141/142	F	F	P	Y	V
06/01/1995	DS-50B	141/142	F	F	P	Y	V
06/02/1995	DS-56	156/161	P	P	P	Y	V
06/02/1995	DS-57	160/163???	P	P	P	Y	V
06/02/1995	DS-58	164/165	P	P	P	Y	V
06/02/1995	DS-51	166/167	P	P	P	Y	V
06/02/1995	DS-50C	141/140	P	P	P	Y	V
06/02/1995	DS-50D	116/151	P	P	P	Y	V
06/02/1995	DS-60	168/169	P	P	P	Y	V
06/02/1995	DS-61	170/171	P	P	P	Y	V
06/02/1995	DS-62	172/173	P	P	P	Y	V
06/02/1995	DS-63	174/175	P	P	P	Y	V
06/02/1995	DS-64	181/180	P	P	P	Y	V
06/02/1995	DS-65	184/185	P	P	P	Y	V
06/06/1995	DS-44A	131/132	P	P	P	Y	V
06/06/1995	DS-44B	131/132	?	?	P	Y	V
06/06/1995	DS-44C	131/132	P	P	P	Y	V
06/07/1995	DS-66	183/184	P	P	P	Y	V
06/07/1995	DS-67	178/179	P	P	P	Y	V
06/07/1995	DS-68	186/193	P	P	P	Y	V
06/07/1995	DS-69	175/187	P	P	P	Y	V
06/07/1995	DS-70	188/189	P	P	P	Y	V
06/07/1995	DS-71	190/191	P	P	P	Y	V
06/12/1995	44D	131/132	F?	F?	P	Y	V
06/12/1995	44E	134/135	P	P	P	Y	V
06/13/1995	DS-72	206/207	P	P	P	Y	V
06/13/1995	DS-73	208/209	P	P	P	Y	V
06/13/1995	DS-74	213/214	P	P	P	Y	V
06/13/1995	DS-75	217/218	P	P	P	Y	V
06/13/1995	DS-76	219/220	P	P	P	Y	V
06/13/1995	DS-77	221/222	P	P	P	Y	V
06/13/1995	DS-78	157/223	P	P	P	Y	V
06/19/1995	DS-79	225/226	P	P	P	Y	V

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**HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
06/19/1995	DS-80	227/228	P	P	P	Y	V
06/19/1995	DS-81	229/230	P	P	P	Y	V
06/19/1995	DS-82	230/231	P	P	P	Y	V
06/20/1995	DS-83	233/234	P	P	P	Y	V
06/20/1995	DS-84	236/238	P	P	P	Y	V
06/20/1995	DS-85	240/237	P	P	P	Y	V
06/22/1995	DS-86	242/243	P	P	P	Y	V
06/22/1995	DS-87	244/245	P	P	P	Y	V
06/22/1995	DS-88	246/247	P	P	P	Y	V
06/22/1995	DS-89	250/251	P	P	P	Y	V
06/22/1995	DS-90	255/256	P	P	P	Y	V
06/28/1995	DS-91	257/258	P	P	P	Y	V
06/28/1995	DS-92	259/260	P	P	P	Y	V
06/28/1995	DS-93	262/265	P	P	P	Y	V
06/28/1995	DS-94	263/264	P	P	P	Y	V
06/28/1995	DS-95	265/271	P	P	P	Y	V
06/28/1995	DS-96	273/275	P	P	P	Y	V
07/03/1995	DS-97	257/287	P	P	P	Y	V
07/03/1995	DS-98	288/289	P	P	P	Y	V
07/03/1995	DS-99	290/291	P	P	P	Y	V
07/03/1995	DS-100	292/293	P	P	P	Y	V
07/03/1995	DS-101	294/295	P	P	P	Y	V
07/03/1995	DS-102	298/297	P	P	P	Y	V
07/03/1995	DS-103	299/300	P	P	P	Y	V
07/03/1995	DS-104	301/302	P	P	P	Y	V
07/03/1995	DS-105	303/304	P	P	P	Y	V
07/03/1995	DS-106	308/309	P	P	P	Y	V
07/03/1995	DS-107	310/311	P	P	P	Y	V
07/03/1995	DS-108	313/314	P	P	P	Y	V
07/03/1995	DS-109	316/317	P	P	P	Y	V
07/03/1995	DS-110	319/320	P	P	P	Y	V
07/07/1995	DS-111	320/321	P	P	P	Y	V
07/07/1995	DS-112	321/322	P	P	P	Y	V
07/07/1995	DS-113	315/250	P	P	P	Y	V
07/07/1995	DS-114	326/327	P	P	P	Y	V
07/07/1995	DS-115	328/329	P	P	P	Y	V
07/07/1995	DS-116	330/331	P	P	P	Y	V
07/07/1995	DS-117	332/333	P	P	P	Y	V
07/07/1995	DS-118	335/336	P	P	P	Y	V
07/10/1995	DS-119	337/338	P	P	P	Y	V
07/10/1995	DS-120	340/341	P	P	P	Y	V
07/10/1995	DS-121	342/343	P	P	P	Y	V
07/10/1995	DS-122	344/345	P	P	P	Y	V
07/10/1995	DS-123	347/348	P	P	P	Y	V

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PAGE 3 OF 11

**HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
07/10/1995	DS-124	352/353	P	P	P	Y	V
07/10/1995	DS125	345/317	P	P	P	Y	V
07/10/1995	DS-126	354/353	P	P	P	Y	V
07/10/1995	DS-127	358/359	P	P	P	Y	V
07/10/1995	DS-128	361/332	P	P	P	Y	V
07/10/1995	DS-129	356/360	P	P	P	Y	V
07/17/1995	DS-130	84/386	P	P	P	Y	V
07/17/1995	DS-131	387/388	P	P	P	Y	V
07/17/1995	DS-132	392/389	P	P	P	Y	V
07/17/1995	DS-133	117/389	P	P	P	Y	V
07/17/1995	DS-134	299/364	P	P	P	Y	V
07/17/1995	DS-135	367/368	P	P	P	Y	V
07/17/1995	DS-136	365/371	P	P	P	Y	V
07/17/1995	DS-137	373/375	P	P	P	Y	V
07/17/1995	DS-138	376/377	P	P	P	Y	V
07/17/1995	DS-139	380/381	P	P	P	Y	V
07/17/1995	DS-140	382/383	P	P	P	Y	V
07/17/1995	DS141	307/394	P	P	P	Y	V
07/20/1995	DS-142	395/396	P	P	P	Y	V
07/20/1995	DS-143	397/398	P	P	P	Y	V
07/20/1995	DS-144	399/400	P	P	P	Y	V
07/20/1995	DS-145	401/402	P	P	P	Y	V
07/20/1995	DS-146	403/404	P	P	P	Y	V
07/24/1995	DS-147	405/406	P	P	P	Y	V
07/24/1995	DS-148	407/408	P	P	P	Y	V
07/26/1995	DS-149	410/411	P	P	P	Y	V
07/26/1995	DS-150	412/413	P	P	P	Y	V
07/28/1995	DS-151	414/415	P	P	P	Y	V
07/28/1995	DS-152	417/418	P	P	P	Y	V
07/28/1995	DS-153	420/421	P	P	P	Y	V
07/28/1995	DS-154	423/424	P	P	P	Y	V
07/28/1995	DS-155	428/429	P	P	P	Y	V
07/28/1995	DS-156	430/431	P	P	P	Y	V
07/28/1995	DS-157	413??/432	P	P	P	Y	V
07/28/1995	DS-158	433/434	P	P	P	Y	V
07/28/1995	DS-159	242/436	P	P	P	Y	V
07/28/1995	DS-160	438/439	P	P	P	Y	V
07/28/1995	DS-161	440/442	P	P	P	Y	V
07/28/1995	DS-162	B01/440	P	P	P	Y	V
08/04/1995	DS-163	469/468	P	P	P	Y	V
08/04/1995	DS-164	477/478	P	P	P	Y	V
08/04/1995	DS-165	435/474	P	P	P	Y	V
08/04/1995	DS-166	472/471	P	P	P	Y	V
08/04/1995	DS-167	459/460	P	P	P	Y	V

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PAGE 4 OF 11

**HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
08/04/1995	DS-168	456/457	P	P	P	Y	V
08/04/1995	DS-169	452/453	P	P	P	Y	V
08/04/1995	DS-170	450/451	P	P	P	Y	V
08/04/1995	DS-171	446/447	P	P	P	Y	V
08/04/1995	DS-172	444/445	P	P	P	Y	V
08/04/1995	DS-173	442/443	P	P	P	Y	V
08/10/1995	DS-174	480/481	P	P	P	Y	V
08/10/1995	DS-175	481/486	P	P	P	Y	V
08/10/1995	DS-176	499/500	P	P	P	Y	V
08/10/1995	DS-177	503/510	P	P	P	Y	V
08/10/1995	DS-178	70/510	P	P	P	Y	V
08/10/1995	DS-179	505/506	P	P	P	Y	V
08/10/1995	DS-180	507/508	P	P	P	Y	V
08/10/1995	DS-181	508/509	P	P	P	Y	V
08/11/1995	DS-182	54/517	P	P	P	Y	V
08/11/1995	DS-183	516/521	P	P	P	Y	V
08/11/1995	DS-184	517/518	P	P	P	Y	V
08/11/1995	DS-185	528/529	P	P	P	Y	V
08/11/1995	DS-186	526/527	P	P	P	Y	V
08/11/1995	DS-187	524/525	P	P	P	Y	V
08/11/1995	DS-188	530/531	P	P	P	Y	V
08/17/1995	DS-189	532/533	P	P	P	Y	V
08/17/1995	DS-190	534/535	P	P	P	Y	V
08/17/1995	DS-191	536/537	P	P	P	Y	V
08/17/1995	DS-192	538/539	P	P	P	Y	V
08/17/1995	DS-193	540/541	P	P	P	Y	V
08/17/1995	DS-194	509/543	P	P	P	Y	V
08/17/1995	DS-195	544/534	P	P	P	Y	V
08/17/1995	DS-196	547/548	P	P	P	Y	V
08/17/1995	DS-197	500/549	P	P	P	Y	V
08/17/1995	DS-198	501/550	P	P	P	Y	V
08/17/1995	DS-199	502/551	P	P	P	Y	V
08/18/1995	DS-200	554/571	P	P	P	Y	V
08/18/1995	DS-201	572/573	P	P	P	Y	V
08/18/1995	DS-202	563/564	P	P	P	Y	V
08/18/1995	DS-203	560/561	P	P	P	Y	V
08/18/1995	DS-204	565/549	P	P	P	Y	V
08/18/1995	DS-205	538/563	P	P	P	Y	V
08/21/1995	DS-206	578/579	P	P	P	Y	V
08/21/1995	DS-207	581/576?	P	P	P	Y	V
08/22/1995	DS-208	548/584	P	P	P	Y	V
08/22/1995	DS-209	583/587	P	P	P	Y	V
08/22/1995	DS-210	588/583	P	P	P	Y	V
08/28/1995	DS-211	473/590	F	P	P	Y	V

* B-BEAD, P-PATCH, CS-CAP STRIP

** V-VACUUM, S-SPARK, AP-AIR PRESSURE, VI-VISUAL, I-IMPACT, AL-AIR LANCE

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PAGE 5 OF 11

HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG **PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
08/28/1995	DS-212	592/593	P	P	P	Y	V
08/28/1995	DS-213	593/594	P	P	P	Y	V
08/28/1995	DS-214	597/598	F	F	P	Y	V
08/28/1995	DS-215	601/602	P	P	P	Y	V
08/28/1995	DS-216	604/605	P	P	P	Y	V
08/28/1995	DS-217	607/608	?	?	P	Y	V
08/28/1995	DS-218	608/609	P	P	P	Y	V
08/28/1995	DS-219	614/613	P	P	P	Y	V
08/29/1995	DS-211A	4731/590	P	P	P	Y	V
08/29/1995	DS-211B	591 PANEL	P	P	P	Y	V
08/29/1995	DS-217A	607/608	P	P	P	Y	V
08/29/1995	DS-214A	597/598	P	P	P	Y	V
08/29/1995	DS-214B	597/598	P	P	P	Y	V
08/29/1995	DS-217B	610/611	P	P	P	Y	V
09/01/1995	DS-220	475/616	P	P	P	Y	V
09/01/1995	DS-221	619/620	P	P	P	Y	V
09/01/1995	DS-222	620/621	P	P	P	Y	V
09/01/1995	DS-223	622/623	P	P	P	Y	V
09/01/1995	DS-224	626/627	P	P	P	Y	V
09/01/1995	DS-225	627/628	P	P	P	Y	V
09/01/1995	DS-226	601/628	P	P	P	Y	V
09/01/1995	DS-227	630/631	P	P	P	Y	V
09/01/1995	DS-228	631/632	P	P	P	Y	V
09/01/1995	DS-229	76/641	P	P	P	Y	V
09/01/1995	DS-230	647/648	P	P	P	Y	V
09/01/1995	DS-231	644/651	P	P	P	Y	V
09/01/1995	DS-232	17/650	P	P	P	Y	V
09/05/1995	DS-233	634/638	P	P	P	Y	V
09/05/1995	DS-234	63/63???	P	P	P	Y	V
09/08/1995	DS-235	589/653	P	P	P	Y	V
09/08/1995	DS-236	654/655	P	P	P	Y	V
09/08/1995	DS-237	659/660	P	P	P	Y	V
09/08/1995	DS-238	663/664	P	P	P	Y	V
09/08/1995	DS-239	576/668	P	P	P	Y	V
09/08/1995	DS-240	653/671	P	P	P	Y	V
09/08/1995	DS-241	671/672	P	P	P	Y	V
09/13/1995	DS-242	672/673	P	P	P	Y	V
09/13/1995	DS-243	676/677	P	P	P	Y	V
09/13/1995	DS-244	680/681	P	P	P	Y	V
09/13/1995	DS-245	684/685	P	P	P	Y	V
09/13/1995	DS-246	664/682	P	P	P	Y	V
09/13/1995	DS-247	658/676	P	P	P	Y	V
09/13/1995	DS-248	686/687	P	P	P	Y	V
09/13/1995	DS-249	690/691	P	P	P	Y	V

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** V-VACUUM, S-SPARK, AP-AIR PRESSURE, VI-VISUAL, I-IMPACT, AL-AIR LANCE

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PAGE 6 OF 11

**HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
09/13/1995	DS-250	695/696	P	P	P	Y	V
09/13/1995	DS-251	697/698	P	P	P	Y	V
09/13/1995	DS-252	702/703	P	P	P	Y	V
09/13/1995	DS-253	654/693	P	P	P	Y	V
09/13/1995	DS-254	705/706	P	P	P	Y	V
09/13/1995	DS-255	507/706	P	P	P	Y	V
09/19/1995	DS-256	545/701	P	P	P	Y	V
09/19/1995	DS-257	615/710	P	P	P	Y	V
09/19/1995	DS-258	712/713	P	P	P	Y	V
09/19/1995	DS-259	718/719	P	P	P	Y	V
09/22/1995	DS-260	634/720	P	P	P	Y	V
09/22/1995	DS-261	635/720	P	P	P	Y	V
09/22/1995	DS-262	724/722	F	F	P	Y	V
09/22/1995	DS-263	728/729	P	P	P	Y	V
09/22/1995	DS-264	719/730	P	P	P	Y	V
09/27/1995	DS-265	706/731	P	P	P	Y	V
09/27/1995	DS-266	51/52	P	P	P	Y	V
09/27/1995	DS-267	514/515	P	P	P	Y	V
09/27/1995	DS-268	57/59	P	P	P	Y	V
09/27/1995	DS-269	51/510	P	P	P	Y	V
09/27/1995	DS-270	59/52	P	P	P	Y	V
09/27/1995	DS-271	512/514	P	P	P	Y	V
09/27/1995	DS-272	731/520	P	P	P	Y	V
09/27/1995	DS-273	525/526	P	P	P	Y	V
09/27/1995	DS-274	528/530	P	P	P	Y	V
09/27/1995	DS-262A	722/724	F	F	P	Y	V
09/27/1995	DS-262B	722/724	P	P	P	Y	V
09/28/1995	DS-262C	722/724	F	F	P	Y	V
09/28/1995	DS-262D	723/723	P	P	P	Y	V
09/28/1995	DS-262E	715/716	P	P	P	Y	V
09/28/1995	DS-275	530/531	P	P	P	Y	V
09/28/1995	DS-276	533/534	P	P	P	Y	V
09/28/1995	DS-277	537/538	P	P	P	Y	V
09/29/1995	DS-278	S36-692	P	P	P	Y	V
10/03/1995	DS-279	685/745	P	P	P	Y	V
10/03/1995	DS-280	747/748	P	P	P	Y	V
10/03/1995	DS-281	752/753	P	P	P	Y	V
10/03/1995	DS-282	756/757	P	P	P	Y	V
10/03/1995	DS-283	759/760	P	P	P	Y	V
10/03/1995	DS-284	764/765	P	P	P	Y	V
10/03/1995	DS-285	767/768	P	P	P	Y	V
10/03/1995	DS-286	772/771	P	P	P	Y	V
10/11/1995	DS-287	217/540	P	P	P	Y	V
10/11/1995	DS-288	59/540	P	P	P	Y	V

* B-BEAD, P-PATCH, CS-CAP STRIP

** V-VACUUM, S-SPARK, AP-AIR PRESSURE, VI-VISUAL, I-IMPACT, AL-AIR LANCE

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HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG **PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
10/11/1995	DS-289	510/551	P	P	P	Y	V
10/11/1995	DS-290	539/541	P	P	P	Y	V
10/11/1995	DS-291	544/546	P	P	P	Y	V
10/11/1995	DS-292	560/561	P	P	P	Y	V
10/11/1995	DS-293	557/558	P	P	P	Y	V
10/11/1995	DS-294	562/563	P	P	P	Y	V
10/11/1995	DS-295	565/567	P	P	P	Y	V
10/11/1995	DS-296	569/571	P	P	P	Y	V
10/11/1995	DS-297	573/575	P	P	P	Y	V
10/11/1995	DS-298	802/380	P	P	P	Y	V
10/19/1995	DS-299	195/800	P	P	P	Y	V
10/19/1995	DS-300	808/300	P	P	P	Y	V
10/20/1995	DS-301	812/206	P	P	P	Y	V
10/20/1995	DS-302	811/365	P	P	P	Y	V
10/20/1995	DS-303	813/356	P	P	P	Y	V
10/20/1995	DS-304	814/232	P	P	P	Y	V
10/25/1995	DS-305	39/92	P	P	P	Y	V
10/25/1995	DS-306	94/96	P	P	P	Y	V
10/25/1995	DS-307	100/101	P	P	P	Y	V
10/25/1995	DS-308	105/106	P	P	P	Y	V
10/25/1995	DS-309	110/111	P	P	P	Y	V
10/25/1995	DS-310	353/111	P	P	P	Y	V
10/25/1995	DS-311	112/113	P	P	P	Y	V
10/25/1995	DS-312	115/55	P	P	P	Y	V
11/08/1995	DS-324C	765/829	BLOWN OUT				
10/26/1995	DS-313	115/117	P	P	P	Y	V
10/26/1995	DS-314	120/121	P	P	P	Y	V
10/26/1995	DS-315	126/127	P	P	P	Y	V
10/26/1995	DS-316	130/131	P	P	P	Y	V
10/26/1995	DS-317	135/136	P	P	P	Y	V
10/26/1995	DS-318	133/74	P	P	P	Y	V
10/30/1995	DS-319	159/158	P	P	P	Y	V
10/30/1995	DS-320	130/153	P	P	P	Y	V
10/30/1995	DS-321	145/146	P	P	P	Y	V
10/30/1995	S322	S156/415	F	F	P	Y	V
10/31/1995	DS-322A	414/154	P	P	P	Y	V
10/31/1995	DS-322B	157/415	P	P	P	Y	V
10/31/1995	DS-323	825/826	P	P	P	Y	V
10/31/1995	DS-324C	827/767	F	F	P	Y	V
11/07/1995	DS-324A	828/766	F	F	P	Y	V
11/07/1995	DS-324B	S165/5-138	P	P	P	Y	V
11/03/1995	DS-325	167/169	P	P	P	Y	V
11/03/1995	DS-326	166/168	P	P	P	Y	V
11/03/1995	DS-327	165/167	P	P	P	Y	V

* B-BEAD, P-PATCH, CS-CAP STRIP

** V-VACUUM, S-SPARK, AP-AIR PRESSURE, VI-VISUAL, I-IMPACT, AL-AIR LANCE

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HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG **PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
11/03/1995	DS-328	165/167	P	P	P	Y	V
11/03/1995	DS-329	137/165	F	F	P	Y	V
11/16/1995	DS-329A	165/137	F	F	P	Y	V
11/16/1995	DS-329B	165/166	P	P	P	Y	V
11/16/1995	DS-329C	165/38	P	P	P	Y	V
11/03/1995	DS-330	138/165	P	P	P	Y	V
11/03/1995	DS-331	138/165	P	P	P	Y	V
11/03/1995	DS-332	165/166	P	P	P	Y	V
11/03/1995	DS-333	165/166	P	P	P	Y	V
11/07/1995	DS-334	165/166	P	P	P	Y	V
11/03/1995	DS-335	166/168	P	P	P	Y	V
11/16/1995	DS-336	838/763	F	F	P	Y	V
11/16/1995	DS-337	838/839	P	P	P	Y	V
11/16/1995	DS-338	840/842	P	P	P	Y	V
11/16/1995	DS-336A	824/763	F	F	P	Y	V
11/16/1995	DS-336B	842/767	F	F	P	Y	V
11/16/1995	DS-336C		P	P	P	Y	V
11/08/1995	DS-339	166/170	P	P	P	Y	V
11/08/1995	DS-340	170/171	P	P	P	Y	V
11/08/1995	DS-341	172/173	P	P	P	Y	V
11/08/1995	DS-342	S-91/S-174	P	P	P	Y	V
11/08/1995	DS-343	163/179	P	P	P	Y	V
11/08/1995	DS-344	182/184	P	P	P	Y	V
11/16/1995	DS-345	185/186	P	P	P	Y	V
11/16/1995	DS-346	189/190	P	P	P	Y	V
11/16/1995	DS-347	173/191	F	F	P	Y	V
11/16/1995	DS-348	195/197 EXT PA1	F	F	P	Y	V
11/16/1995	DS-349	198/426	P	P	P	Y	V
11/16/1995	DS-350	202/204	P	P	P	Y	V
11/16/1995	DS-351	208/210	P	P	P	Y	V
11/16/1995	DS-352	209/476	P	P	P	Y	V
11/16/1995	DS-353	204/429	F	F	P	Y	V
11/21/1995	DS-354	478/843	P	P	P	Y	V
11/21/1995	DS-355	846/848	P	P	P	Y	V
11/21/1995	DS-356	853/854	P	P	P	Y	V
11/21/1995	DS-357	847/858	P	P	P	Y	V
11/21/1995	DS-358	857/864	P	P	P	Y	V
11/21/1995	DS-359	619/850	P	P	P	Y	V
11/21/1995	DS-360	857/865	P	P	P	Y	V
11/21/1995	DS-361	866/868	P	P	P	Y	V
11/21/1995	DS-362	868/869	P	P	P	Y	V
11/21/1995	DS-363	866/869	P	P	P	Y	V
11/22/1995	DS-364	S-210/S-211	P	P	P	Y	V
11/22/1995	DS-365	S-216/875	P	P	P	Y	V

* B-BEAD, P-PATCH, CS-CAP STRIP

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HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG **PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
11/21/1995	DS-366	867/877	P	P	P	Y	V
11/28/1995	DS-367	842/886	P	P	P	Y	V
11/28/1995	DS-368	768/886	P	P	P	Y	V
11/28/1995	DS-369	887/888	P	P	P	Y	V
11/28/1995	DS-370	S211/S221	P	P	P	Y	V
11/28/1995	DS-371	S217/837	P	P	P	Y	V
11/28/1995	DS-372	889/893	P	P	P	Y	V
11/28/1995	DS-373	5225/889	P	P	P	Y	V
11/28/1995	DS-274	5214/5224	P	P	P	Y	V
11/28/1995	DS-375	885/909	P	P	P	Y	V
11/28/1995	DS-376	ELL BOOT ON 90	P	P	P	Y	V
11/28/1995	DS-377	723/912	P	P	P	Y	V
11/28/1995	DS-378	912/913	P	P	P	Y	V
11/28/1995	DS-379	915/916	P	P	P	Y	V
11/28/1995	DS-380	914/915	P	P	P	Y	V
11/30/1995	DS-381	774/923	P	P	P	Y	V
11/30/1995	DS-382	914/928	P	P	P	Y	V
11/30/1995	DS-383	913/928	P	P	P	Y	V
11/30/1995	DS-384	929/930	P	P	P	Y	V
11/30/1995	DS-385	930/931	P	P	P	Y	V
11/30/1995	DS-386	932/933	P	P	P	Y	V
11/30/1995	DS-387	934/935	P	P	P	Y	V
11/30/1995	DS-388	940/941	P	P	P	Y	V
11/30/1995	DS-389	939/940	P	P	P	Y	V
11/30/1995	DS-390	935/936	P	P	P	Y	V
12/08/1995	DS-391	623/943	P	P	P	Y	V
12/08/1995	DS-392	920/948	P	P	P	Y	V
12/08/1995	DS-393	948/949	P	P	P	Y	V
12/06/1995	DS-394	EXT 911 - 942	P	P	P	Y	V
12/08/1995	DS-399	958/926	P	P	P	Y	V
12/08/1995	DS-396		P	P	P	Y	V
12/07/1995	DS-400	959/960	P	P	P	Y	V
12/07/1995	DS-401	962/963	P	P	P	Y	V
12/07/1995	DS-402	964/965	P	P	P	Y	V
12/07/1995	DS-403	966/771					LEFT SAMPLE IN FIELD, EXTRA
12/07/1995	DS-404	966/967	P	P	P	Y	V
12/08/1995	DS-406	976/977	P	P	P	Y	V
12/08/1995	DS-407	980/981	P	P	P	Y	V
12/08/1995	DS-409	983/984	P	P	P	Y	V
12/07/1995	DS-410	986/987	F	P	P	Y	V
12/06/1995	DS-395	935/952	P	P	P	Y	V
12/06/1995	DS-397		P	P	P	Y	V
12/06/1995	DS-408	745/981	P	P	P	Y	V
12/06/1995	DS-414	668/1000	P	P	P	Y	V

* B-BEAD, P-PATCH, CS-CAP STRIP

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PAGE 10 OF 11

**HDPE GEOMEMBRANE QA DESTRUCTIVE SEAM FIELD TEST LOG
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

DATE	SAMPLE NUMBER	SEAM	PEAL	SHEAR	REPAIR METHOD *	REPAIR TEST	
						Y/N	TYPE**
12/08/1995	DS-405	970/973	P	P	P	Y	V
12/07/1995	DS-415	1001/1002	P	P	P	Y	V
12/08/1995	DS-410A	986/987	P	P	P	Y	V
12/08/1995	DS-410B	986/987	P	P	P	Y	V
12/06/1995	DS-411	989/990	P	P	P	Y	V
12/08/1995	DS-412	993/994	P	P	P	Y	V
12/08/1995	DS-413	998/999	P	P	P	Y	V
12/07/1995	DS-416	951/1011	P	P	P	Y	V
12/05/1995	DS-398		P	P	P	Y	V
12/07/1995	DS-417	579/1005	P	P	P	Y	V
12/07/1995	DS-418	1010/558	P	P	P	Y	V
12/08/1995	DS-419	1012/1013	P	P	P	Y	V
12/08/1995	DS-420	1018/929	P	P	P	Y	V
12/18/1995	DS-421	573/1041	P	P	P	Y	V
12/18/1995	422	1044/1045	P	P	P	Y	V
12/18/1995	423	521/1049	P	P	P	Y	V
01/03/1996	424		F	F	P	Y	V
01/03/1996	DS-404A	966/967	F	F			
01/03/1996	DS-404B	966/967	F	F			
01/03/1996	DS-411A	989/990	F	F			
01/03/1996	DS-411B	989/990	F	F			
01/03/1996	DS-424A	EXTRUSION P	F	F			
01/03/1996	DS-424B	EXTRUSION P	F	F			

* B-BEAD, P-PATCH, CS-CAP STRIP

** V-VACUUM, S-SPARK, AP-AIR PRESSURE, VI-VISUAL, I-IMPACT, AL-AIR LANCE

B-8 HDPE Geomembrane Independent Laboratory Seam Strength Testing

Destructive Laboratory Peel and Shear Tests
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION

SEAM	MACHINE NUMBER	SAMPLE NUMBER	DATE SAMPLE D	PEEL TEST P=Pass F=Fail	SHEAR TEST P=Pass F=Fail	BREAK TYPE FTB=Film Tear Bond	COMMENTS
2/3	1067	DS-1	5/4/95	P	P	FTB	Adhesion-Break for 3 of 5 Peel tests
6/7	1067	DS-2	5/4/95	P	P	FTB	
16/17	1020	DS-3	5/4/95	P	P	FTB	
19/20	1067	DS-4	5/8/95	P	P	FTB	
21/22	1067	DS-5	5/8/95	P	P	FTB	
23/24	1067	DS-6	5/8/95	P	P	FTB	
25/26	1067	DS-7	5/8/95	P	P	FTB	
30/31	1020	DS-8	5/16/95	P	P	FTB	
27/43	1020	DS-9	5/16/95	P	P	FTB	
29/30	1067	DS-10	5/16/95	P	P	FTB	
43/44	1067	DS-11	5/16/95	P	P	FTB	
44/45	1020	DS-12	5/16/95	P	P	FTB	
46/47	1067	DS-13	5/16/95	P	P	FTB	
18/49	1020	DS-14	5/9/95	P	P	FTB	
50/51	1020	DS-15	5/15/95	P	P	FTB	
51/52	1067	DS-16	5/16/95	P	P	FTB	
53/54	1067	DS-17	5/16/95	P	P	FTB	
55/56	1020	DS-18	5/15/95	P	P	FTB	
56/57	1067	DS-19	5/15/95	P	P	FTB	
57/58	1020	DS-20	5/15/95	P	P	FTB	
63/64	1020	DS-21	5/16/95	P	P	FTB	
62/63	1020	DS-22	5/16/95	P	P	FTB	
60/61	1020	DS-23	5/23/95	P	P	FTB	
55/56	1067	DS-24	5/17/95	P	P	FTB	
19/66	1060	DS-25	5/17/95	P	P	FTB	
69/70	1067	DS-26	5/18/95	P	P	FTB	
71/72	1020	DS-27	5/22/95	P	P	FTB	
74/75	1020	DS-28	5/22/95	P	P	FTB	
76/77	1020	DS-29	5/22/95	P	P	FTB	
84/85	1067	DS-30	5/22/95	P	P	FTB	
87/88	1067	DS-31	5/22/95	P	P	FTB	
90/91	1067	DS-32	5/22/95	P	P	FTB	
93/94	1067	DS-33	5/22/95	P	P	FTB	
96/97	1067	DS-34	5/22/95	P	P	FTB	
107/108	1020	DS-35	5/22/95	P	P	FTB	
100/101	1067	DS-36	5/22/95	P	P	FTB	
105/106	1060	DS-37	5/22/95	P	P	FTB	
117/124	1067	DS-38	-	P	P	FTB	
118/119	1067	DS-39	-	P	P	FTB	
120/88	1060	DS-40	-	P	P	FTB	
125/126	1020	DS-41	5/25/95	P	P	FTB	
127/128	1067	DS-42	5/24/95	P	P	FTB	
129/130	1100	DS-43	-	P	P	FTB	
131/132	1060	DS-44	-	F	P	FTB	Adhesion-Break for 2 of 5 Peel tests

Destructive Laboratory Peel and Shear Tests
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION

SEAM	MACHINE NUMBER	SAMPLE NUMBER	DATE SAMPLE D	PEEL TEST P=Pass F=Fail	SHEAR TEST P=Pass F=Fail	BREAK TYPE FTB=Film Tear Bond	COMMENTS
131/132	1060	DS-44A	5/24/95	P	P	FTB	
131/132	1060	DS-44C	5/24/95	F	P	FTB	Adhesion-Break for 4 of 5 Peel tests
134/135	1060	DS-44E	5/24/95	P	P	FTB	
133/134	1100	DS-45	-	P	P	FTB	
135/136	1067	DS-46	-	P	P	FTB	
137/138	1100	DS-47	-	P	P	FTB	
98/95	278	DS-48	5/31/95	P	P	FTB	
139/140	1060	DS-49	5/31/95	P	P	FTB	
140/141	1100	DS-50C	5/25/95	P	P	FTB	
116/151	1100	DS-50D	5/30/95	F	P	FTB	Adhesion-Break for 3 of 5 Peel tests
143/157	1100	DS-51	5/31/95	P	P	FTB	
158/159	1067	DS-52	5/31/95	P	P	FTB	
116/151	1100	DS-53	5/31/95	P	P	FTB	
155/156	1067	DS-54	5/31/95	P	P	FTB	
74/77	278	DS-55	6/1/95	P	P	FTB	
156/161	1100	DS-56	6/1/95	P	P	FTB	
162/163	1067	DS-57	6/1/95	P	P	FTB	
164/165	1060	DS-58	6/1/95	P	P	FTB	
166/167	1067	DS-59	6/1/95	P	P	FTB	
168/169	1100	DS-60	6/1/95	P	P	FTB	
170/171	1060	DS-61	6/1/95	P	P	FTB	
172/173	1067	DS-62	6/1/95	P	P	FTB	
-	1067	DS-63	6/2/95	P	P	FTB	
180/181	1060	DS-64	6/2/95	P	P	FTB	
184/185	1100	DS-65	6/2/95	P	P	FTB	
183/184	1060	DS-66	6/2/95	P	P	FTB	
178/179	1100	DS-67	6/2/95	P	P	FTB	
186/193	1100	DS-68	6/5/95	P	P	FTB	
175/187	1100	DS-69	6/5/95	P	P	FTB	
188/189	1100	DS-70	6/5/95	P	P	FTB	
190/191	1100	DS-71	6/5/95	P	P	FTB	
205/207	1100	DS-72	6/8/95	P	P	FTB	
208/209	1060	DS-73	6/8/95	P	P	FTB	
213/214	1067	DS-74	6/9/95	P	P	FTB	
217/218	1100	DS-75	6/9/95	P	P	FTB	
219/220	1060	DS-76	6/9/95	P	P	FTB	
221/222	1067	DS-77	6/9/95	P	P	FTB	
157/223	1100	DS-78	6/9/95	P	P	FTB	
225/226	1100	DS-79	6/16/95	P	P	FTB	
227/228	1060	DS-80	6/16/95	P	P	FTB	
229/230	1067	DS-81	6/16/95	P	P	FTB	
230/231	1060	DS-82	6/16/95	P	P	FTB	
233/234	1067	DS-83	6/19/95	P	P	FTB	
236/238	1100	DS-84	6/19/95	P	P	FTB	

**Destructive Laboratory Peel and Shear Tests
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

SEAM	MACHINE NUMBER	SAMPLE NUMBER	DATE SAMPLE D	PEEL TEST P=Pass F=Fail	SHEAR TEST P=Pass F=Fail	BREAK TYPE FTB=Film Tear Bond	COMMENTS
240/237	1100	DS-85	6/19/95	P	P	FTB	
242/243	1100	DS-86	6/21/95	P	P	FTB	
244/245	1060	DS-87	6/21/95	P	P	FTB	
246/247	1067	DS-88	6/21/95	P	P	FTB	
250/251	1060	DS-89	6/21/95	P	P	FTB	
255/256	1060	DS-90	6/21/95	P	P	FTB	
217/258	1100	DS-91	6/28/95	P	P	FTB	
259/260	1067	DS-92	6/28/95	P	P	FTB	
262/265	1060	DS-93	6/28/95	P	P	FTB	
263/264	1100	DS-94	6/28/95	P	P	FTB	
65/271	1060	DS-95	6/28/95	P	P	FTB	
275/273	1067	DS-96	6/28/95	P	P	FTB	
257/287	1100	DS-97	6/30/95	P	P	FTB	
288/289	1084	DS-98	6/30/95	P	P	FTB	
290/291	1067	DS-99	6/30/95	P	P	FTB	
292/293	1084	DS-100	6/30/95	P	P	FTB	
294/295	1100	DS-101	6/30/95	P	P	FTB	
298/297	1100	DS-102	6/30/95	P	P	FTB	
299/300	1084	DS-103	6/30/95	P	P	FTB	
301/302	1100	DS-104	6/30/95	P	P	FTB	
303/304	1084	DS-105	6/30/95	P	P	FTB	
308/309	1084	DS-106	6/30/95	P	P	FTB	
310/311	1100	DS-107	7/3/95	P	P	FTB	
316/317	1067	DS-109	7/3/95	P	P	FTB	
319/320	1162	DS-110	7/3/95	P	P	FTB	
332/333	1100	DS-117	7/6/95	P	P	FTB	
352/353	-	DS-124	7/7/95	P	P	FTB	
387/388	1084	DS-131	7/14/95	P	P	FTB	
377/376	1084	DS-138	7/13/95	P	P	FTB	
401/402	1084	DS-145	7/20/95	P	P	FTB	
417/418	1084	DS-152	7/25/95	P	P	FTB	
242/436	1162	DS-159	7/27/95	P	P	FTB	
477/478	1100	DS-164	8/3/95	P	P	FTB	
447/446	1100	DS-171	8/1/95	P	P	FTB	
S24/S25	1162	DS-178	8/10/95	P	P	FTB	
70/S10	1100	DS-185	8/9/95	P	P	FTB	
S38/S39	1162	DS-192	8/15/95	P	P	FTB	
S02/S51	1067	DS-199	8/16/95	P	P	FTB	
S78/S79	1067	DS-206	8/18/95	P	P	FTB	
604/605	1067	DS-216	8/25/95	P	P	FTB	
622/623	1162	DS-223	8/30/95	P	P	FTB	
17/650	1067	DS-232	8/31/95	P	P	FTB	
671/672	1100	DS-241	9/8/95	P	P	FTB	
658/676	1100	DS-247	9/11/95	P	P	FTB	

**Destructive Laboratory Peel and Shear Tests
PELHAM BAY LANDFILL CLOSURE AND FINAL REMEDIATION**

SEAM	MACHINE NUMBER	SAMPLE NUMBER	DATE SAMPLE D	PEEL TEST P=Pass F=Fail	SHEAR TEST P=Pass F=Fail	BREAK TYPE FTB=Film Tear Bond	COMMENTS
705/706	1100	DS-255	9/13/95	P	P	FTB	
635/720	1162	DS-261	9/19/95	P	P	FTB	
1/10	1067	DS-269	9/21/95	P	P	FTB	
33/34	1067	DS-276	9/28/95	P	P	FTB	
759/760	-	DS-283	10/2/95	P	P	FTB	
39/41	-	DS-290	10/10/95	P	P	FTB	
73/75	-	DS-297	10/11/95	P	P	FTB	
814/232	1162	DS-304	10/19/95	P	P	FTB	
112/113	1067	DS-311	10/24/95	P	P	FTB	
133/74	1162	DS-318	10/25/95	P	P	FTB	
825/826	1025	DS-323	10/30/95	P	P	FTB	
165/167	1025	DS-328	11/3/95	P	P	FTB	
168/166	1067	DS-335	11/6/95	P	P	FTB	
91/174	1025	DS-342	11/6/95	P	P	FTB	
198/426	1025	DS-349	11/10/95	P	P	FTB	
853/854	1151	DS-356	11/17/95	P	P	FTB	
867/869	1025	DS-363	11/18/95	P	P	FTB	
211/221	1067	DS-370	11/22/95	P	P	FTB	
BOOT/909	63	DS-377	11/25/95	P	P	FTB	
913/928	1219	DS-383	11/27/95	P	P	FTB	
936/935	1162	DS-390	11/28/95	P	P	FTB	
956/957	1067	DS-397	12/1/95	P	P	FTB	
966/967	1151	DS-404	12/4/95	P	P	FTB	Adhesion-Break for 2 of 5 Peel Tests
-	-	DS-404C	4/15/96	P	P	FTB	
989/990	1011	DS-411	12/5/95	F	P	FTB	2 of 5 tests not FTB for Peel Tests
-	-	DS-411C	4/15/96	P	P	FTB	
-	-	DS-411E	4/15/96	P	P	FTB	
-	-	DS-414F	4/15/96	P	P	FTB	
1010/558	-	DS-418	12/6/95	P	P	FTB	
p35/patch	-	DS-424C	5/2/96	P	P	FTB	
p42/1025	-	DS-424D	5/2/96	P	P	FTB	
1/2	W 1016	DSR-1	5/20/96	P	P	FTB	
195/10	W 1016	DSR-2	5/20/96	P	P	FTB	
18/211	W 1016	DSR-3	5/20/96	P	P	FTB	
79/25	W 1016	DSR-4	5/22/96	P	P	FTB	
776/28	W 1150	DSR-5	5/22/96	P	P	FTB	
21/22	W 1016	DSR-6	5/22/96	P	P	FTB	
32/152	W 1016	DSR-10	5/28/96	P	P	FTB	
63/64	W 2010	DSR-16	5/28/96	P	P	FTB	

B-9 Backup Information on Damaged HDPE Geomembrane Area

BRECO MECHANICAL GROUP, INC.

201 Saw Mill River Road
YONKERS, NEW YORK 10701

LETTER OF TRANSMITTAL

(914) 963-3850

(914) 963-3600

TO

WARREN GORDON, P.E.

NYC-DEP

DATE	5/16/96	JOB NO.	8764P
ATTENTION			
RE:			

WE ARE SENDING YOU

☒ Attached☐ Under separate cover via

the following items:

☐ Shop drawings☐ Prints☒ Plans☐ Samples☐ Specifications☐ Copy of letter☐ Change order☒ TOP DAMAGE / REPAIR AREA

COPIES	DATE	NO.	DESCRIPTION
1		3	PLAN / AGTEK GENERATED SURVEY PERFORMED 5/13/96 BY K. SULLIVAN & J. HUMMEL.

THESE ARE TRANSMITTED as checked below:

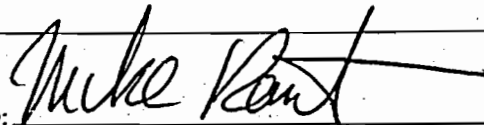
☐ For approval☐ Approved as submitted☐ Resubmit _____ copies for approval☒ For your use☐ Approved as noted☐ Submit _____ copies for distribution☐ As requested☐ Returned for corrections☐ Return _____ corrected prints☐ For review and comment☐ _____☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO

FILE

SIGNED:



TOP DAMAGE

REPAIR AREA

115879.6 ft²

2.66 acres

309680.9 ft²

7.11 acres

SCALE: 1"=100'



GSE Lining Technology, Inc.

19103 Goodie Road
Houston, Texas 77073
800-435-2008
713-443-8564
Fax: 713-473-6010

29 April, 1996

Breco Mechanical Group, Inc.
210 Saw Mill River Road
Yonkers, NY 10701
Fax: 914/963-3989

Attn: Mark SanAngelo

Re: Repair at Pelham Bay Landfill
Revision to (8 April) Procedure

We have received the comments from NYCDEP (dated 25 April) and Woodward-Clyde (dated 24 April) to our proposed test protocol dated 8 April. It seems that everyone has a little different perspective on how to approach this issue and we are happy to assist in the coordination of this task. We appreciate everyone's input and have incorporated those concerns into this revision of the procedure.

SAMPLE COLLECTION

GSE will provide qualified personnel (hereafter: GSE Inspector) to observe the areas marked as questionable and to then progress into the currently acceptable regions. As the Inspector walks toward the unaffected areas, a spot will be chosen which is likely to be in satisfactory condition. A one square foot sample will be taken at that spot and the underlying composite material, if present, observed. If there is evidence of any damage under the liner, another sample will be taken five feet away (in the direction opposite the damage). This will continue until a sample that is visually acceptable is obtained. That sample will then be numbered (#1-GSE, for example), the manufacturing machine direction marked, and its location marked on a site drawing. In addition, an adjacent one square foot sample will be taken and numbered (#1-NYCDEP) for archive purposes.

The next sample will be taken approximately 50 feet away, around the perimeter of the (visually established) unacceptable area. Again, a visual judgment will be made and another set of samples cut and labeled (#2-GSE and #2-NYCDEP). In this fashion, a series of samples (#4 - ??) will be cut for physical property testing. Please see the attached sketch for a visual explanation of this procedure.

FIELD TESTING

1" x 6" strip specimens will be prepared and tensile tested. Each sample will have two of these specimens cut in the machine direction and two cut in the cross direction. These four specimens will be tested on the field tensiometer for tensile yield strength and break strength. This is

achieved by activating the "Hold" or "Peak" function on the tensiometer and observing the readout throughout the entire test. The test results will be averaged and compared to the project requirements (120 lb for yield and 225 lb for break).

Averaging of test results is appropriate and typical in the geosynthetics industry since variability in the material, in particular the textured liner, is normal. As such, a single value lower than the requirement is quite possible; however, that would not indicate the sample is unacceptable for serving as a containment barrier. Further, the original project specifications do not restrict averaging of test values. Therefore, GSE believes that averaging of test data (both field and laboratory) is appropriate and acceptable for this procedure.

If the sample does fail, it shall be rejected and retested (five feet out from the failed sample). When a passing sample is identified, it will be forwarded to GSE's Laboratory for conformation testing.

LABORATORY TESTING

The following table summarizes what tests will be performed in the GSE Lab, the minimum allowable values and the testing particulars.

Property	Method	Smooth	Textured	Test(s) Per Sample
Thickness (mil)	ASTM D 1693	60±10%	60±10%	5
Tensile Properties	ASTM D 638			
Yield Stress (lb/in)		130	130	1 MD and 1 CD
Yield Strain (%)	1.5" Gauge Length	13	13	1 MD and 1 CD
Break Stress (lb/in)		243	75	1 MD and 1 CD
Break Strain (%)	2.0" Gauge Length	500	150	1 MD and 1 CD
Tear (lb)	ASTM D 1004	40	45	1 MD and 1 CD
Puncture (lb)	FTMS 101, Meth. 2065	60	60	1
Dimensional Stability (% change)	ASTM D 1204	±3	±3	1 MD and 1 CD
Specific Gravity (g/cc)	ASTM D 792/D 1505	0.93		
Oxidative Induction Time, OIT (minutes)	ASTM D 3895, 200°C, 1 atmosphere	100	100	1
Notched Constant Tensile Load stress crack, NCTL (hours)	ASTM D 5397, single point	200	N/A	1 CD

If a sample does not meet any one of the above requirements, another set of samples (one for testing and one for archiving) will be obtained from the field (labeled #1A-GSE and #1A-NYCDEP) at the appropriate location and tested for all parameters listed above. If that sample fails, the routine will be repeated (samples labeled #1B, #1C and so on) until satisfactory material is reached.

In order to better guarantee the long term performance of the material, GSE will perform OIT and NCTL testing. The OIT test provides an indication of the resistance of the material to degradation due to oxidation. Since the material has been subjected to oxidative degradation (fire is an oxidation reaction), GSE will perform such testing. The NCTL test is to be performed in lieu of the environmental stress crack (ASTM D 1693) test that is mentioned in the project specifications. NCTL testing is a more advanced and rigorous test than ASTM D 1693 for determining a geomembrane's resistance to stress cracking. Also, it is a much shorter test -- 200 hours versus 2000 hours.

The following paragraphs explain why various tests that are in the project specifications do not appear in the table above. GSE respects the suggestion that all job-specified properties are to be included in this procedure, however, some of those tests are not appropriate for HDPE geomembranes. They were tested on the material prior to deployment to meet contractual requirements. However, we are now in a position where judicious reasoning and explanations will be to everyone's advantage. Please be aware that GSE's number one priority is to insure long-term environmental containment. The repair efforts at Pelham bay are no different in this regard.

Please be advised that modulus of elasticity (MOE) is no longer performed routinely by GSE's (formally Gundle) Manufacturing Quality Assurance Laboratory to approve material for shipment. There is a great amount of uncertainty regarding the appropriateness of this test. MOE is determined from tensile testing. According to ASTM D 638 (Standard Test Method for Tensile Properties of Plastics), MOE is defined as "the ratio of stress (nominal) to corresponding strain below the proportional limit of a material. It is expressed in force per unit area, usually pounds-force per square inch (megapascals) (Also known as *elastic modulus* or *Young's modulus*). This definition is followed by, "since the existence of a true proportional limit in plastics is debatable, the propriety of applying the term "modulus of elasticity" to describe the stiffness or rigidity of a plastic has been seriously questioned." The final statement is, "such a constant is useful if its arbitrary nature and dependence on time, temperature, and other factors are realized."

It is therefore evident that there is a great amount of uncertainty in MOE testing and interpretation. Further, MOE is misunderstood by some specification writers who do not realize that a high modulus generally means a membrane is stiffer than membrane with a lower MOE. The elastic modulus is therefore not a useful design parameter for geomembrane applications.

The uncertainty regarding MOE testing has been resolved with NSF International by omitting it from their required material properties for HDPE sheet. Due to the factors mentioned above, GSE does not propose to include MOE testing in this test procedure.

In a similar fashion, soil burial testing is not included in this test program. The test was originally developed for geomembranes that contain cellulose scrim as a reinforcement component; cellulose is subject to microbiological attack. It was also found that various chemical plasticizers and fillers such as those found in PVC geomembranes are also susceptible to microbiological attack. All currently produced polyethylene geomembranes are unsupported (i.e. do not contain scrim) and are unplasticized and unfilled. Therefore, the soil burial test does not affect the material, if performed properly. As a result of this, NSF no longer requires soil burial testing for HDPE geomembranes. Because of the aforementioned issues, and the fact that the test takes more than 30 days, GSE does not intend on including soil burial in this test procedure.

✓ The next test that appears in the project specifications and not this test procedure is melt index. Often, melt flow is a required specification for lining products. However, this is not an appropriate specification. A material's melt flow characteristics have always been a concern to plastics manufacturers since there are so many specific types of resins available. This is the case in all plastic products from surgical tubing to plastic bottles. Geosynthetics is the only plastics industry GSE is aware of that sees melt flow in material specifications. It seems that it was developed as a marketing tool for the various manufacturers and is now so common, it is considered "normal". However, we must realize that the performance properties of a plastic material is not impacted in any way by the resin's melt flow properties. In light of this, it is GSE's opinion that melt index testing will not provide any technically useful information in the Pelham Bay issue.

✓ Low temperature brittleness is also being excluded from this test procedure. It is GSE's opinion that the test will not provide any useful data. We do not believe this to be a property affected by the damage incurred at Pelham Bay that will not be evidenced in the tests that will be performed. If a serious question arises, GSE is open to performing a limited amount of such testing to illustrate this point.

Carbon black content is excluded from the list of tested properties since it cannot be altered without the material being completely combusted. Since the carbon particles are on the order of five microns in diameter, there is no way to adversely affect the carbon content without severe damage to the product.

REPAIR BOUNDARY PLACEMENT

Once testing has been completed, the repair boundary will be marked and cut. Marking will involve using a suitable marking device to draw lines between (passing) sample locations. Before placement of new material, the authorized GSE Inspector will observe all underlying material at the cut interfaces to check for damage between the 50-foot spaced samples. If the Inspector finds any questionable area, he has the authority to remark the boundary. Throughout this work, the GSE Inspector will be encouraged to photograph any and all areas being inspected for historical recordkeeping purposes.

In addition to the GSE Inspector, Brecco or NYCDEF is welcome to have a representative present to observe the boundaries and document whatever information may be needed.

If anyone has any comments, questions or anything to add on this procedure, please call or fax so we may discuss. GSE is committed to working with you on this issue and will do everything we can to facilitate a high-quality repair job.

Regards,



Matthew W. Adams
Technical Service

CC: R. Zunker



GSE Lining Technology, Inc.
19005 Omdale Road
Houston, Texas 77073-3500
(800) 435-2908 / (713) 443-8864

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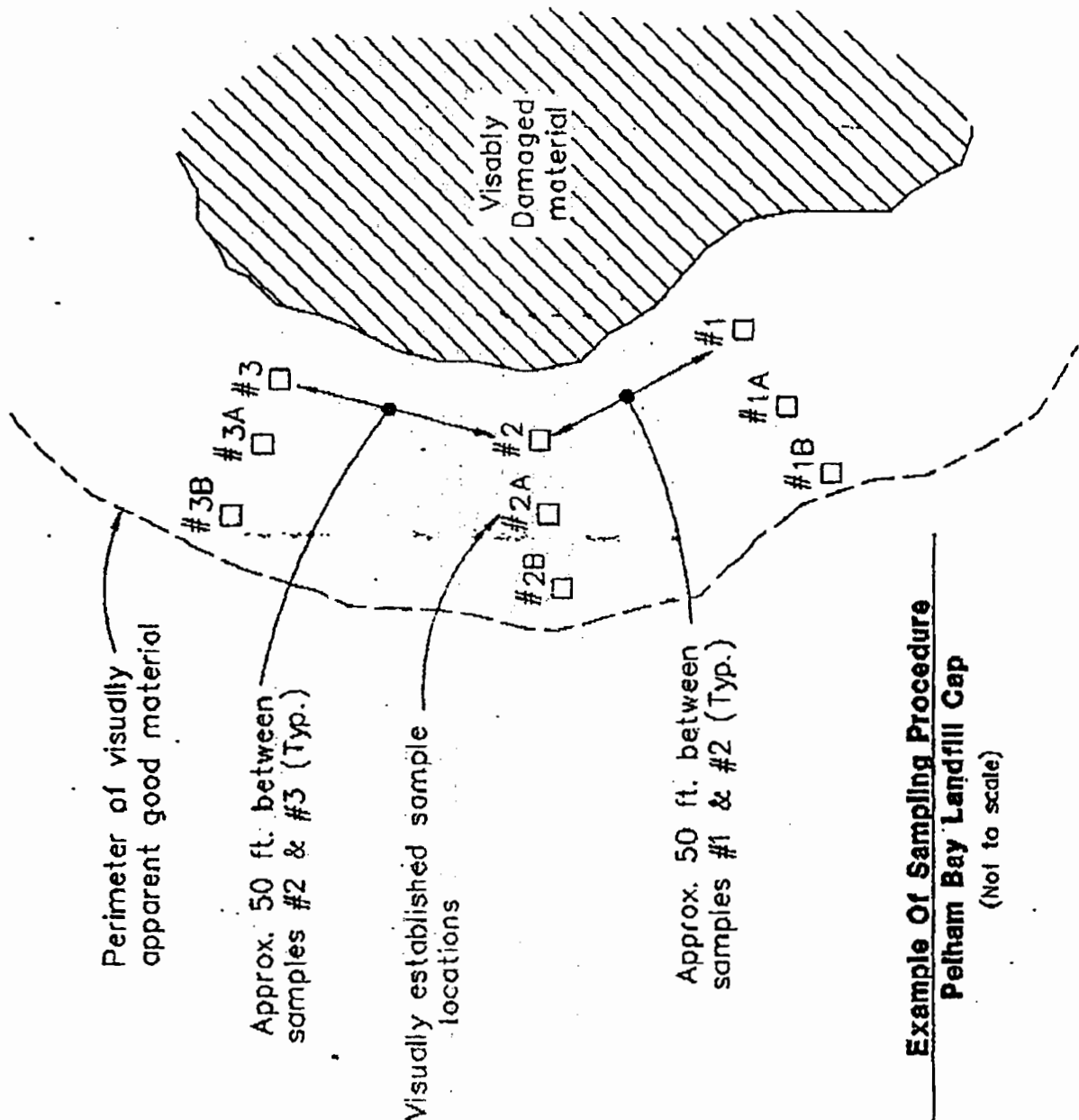
MATT006

DRAWN Don

DATE 04/08/96

REVISION 0

DWG. NO.



BRECO MECHANICAL GROUP, INC.
201 SAW MILL RIVER ROAD
YONKERS, NEW YORK 10701

TEL (914) 963-3600 * FAX (914) 963-3989

May 23, 1996

Mr. Roy Durig, P.E.
Chief - Landfill Remediation
New York City Department of
Environmental Protection
96-05 Horace Harding Expressway
5th Floor - Lefrak Plaza
Corona, New York 11368

Re: Pelham Bay Landfill Closure
Contract No. 876-HP
Letter No. 76

Dear Mr. Durig,

Attached please find GSE's letter dated 5/22/96 detailing their schedule for liner repair. This schedule is weather dependent. Also attached are the test results for the samples taken to delineate the extent of damage.

Very Truly Yours,
BRECO MECHANICAL GROUP, INC.



Mark SanAngelo
Project Manager

Enc.

cc: P. Zoltanesky Jr.
P. Smith/J. Jarahari

A. Ciancia
S. Mokbel

MS/jc
Durig.523



GSE Lining Technology, Inc.

May 22, 1996

19103 Gundie Road
Houston, Texas 77073
800-435-2008
713-443-8564
Fax: 713-475-4010

Breco Mechanical Group, Inc.
201 Saw Mill River Road
Yonkers, New York 10701

Attn: Mark SanAngelo.

Re: Pelham Bay Landfill
GSE Project No. XA4790
Schedule of Work

Dear Mark,

GSE Lining Technology, Inc. provides the following schedule for the above referenced project.

Schedule:

1. Laboratory Testing of Samples - two weeks - complete May 22, 1996
2. Liner disposal - two dumpsters per day - complete May 24, 1996
3. Liner deployment / replacement - one acre per day - complete June 21, 1996
4. As-built drawing - upon completion of project

I have included a copy of the test results with this letter.

Sincerely,

Ronald Zunker, Jr.
Project Manager
Installation Services

enclosure

GSE Lining Technology, Inc.

Pellham Bay Landfill
GSE MR No. 1413-01
GSE Job No. XA4790

Report Date: 5/21/90

Sample #	Pass/Fail	Date (S) Smooth/ (T) Textured	Tensile Strength @ Yield			Tensile Elongation @ Yield			Tensile Strength @ Break			Tensile Elongation @ Break			Tear Resistance		
			ASTM D 638, Type IV, 2 in			ASTM D 638, Type IV, 2 in			ASTM D 1004			ASTM D 1004			ASTM D 1004		
			Smooth Spec = 130 ppl Textured Spec = 130 ppl MD	CD	[ppl]	Smooth Spec = 13 % Textured Spec = 13 % MD	CD	[%]	Smooth Spec = 243 ppl Textured Spec = 243 ppl MD	CD	[ppl]	Smooth Spec = 500 % Textured Spec = 150 % MD	CD	[%]	Smooth Spec = 40 lb Textured Spec = 40 lb MD	CD	[lb]
1	Pass	5/8/96 S	143	165	165	19	19	19	256	295	295	729	809	809	54	54	52
2	Pass	5/8/96 S	168	166	166	18	15	15	305	287	287	777	793	793			
3	Pass	5/8/96 S	153	148	148	20	16	16	277	255	255	794	793	793	49	49	54
4	Pass	5/8/96 S	171	164	164	17	16	16	291	280	280	743	769	769			
5	Pass	5/8/96 S	146	160	160	18	17	17	249	303	303	704	853	853			
6	Pass	5/8/96 S	168	166	166	21	18	18	258	262	262	675	759	759	52	52	61
7	Pass	5/8/96 S	163	160	160	19	17	17	264	244	244	685	720	720	49	49	55
8	Pass	5/8/96 S	162	161	161	21	16	16	314	309	309	806	853	853			
9	Pass	5/8/96 S	153	148	148	18	16	16	317	287	287	835	816	816			
10	Pass	5/8/96 T	155	169	169	20	16	16	275	300	300	772	830	830			
11	Pass	5/8/96 S	151	151	151	18	17	17	311	284	284	837	828	828			
12	Pass	5/8/96 S	157	168	168	18	18	18	298	298	298	791	817	817			
13	Pass	5/8/96 S	169	162	162	20	16	16	289	264	264	756	760	760			
14	Pass	5/8/96 S	166	166	166	18	18	18	298	254	254	764	709	709			
15	Pass	5/8/96 S	162	163	163	19	15	15	294	270	270	782	792	792	52	52	58
16	Pass	5/8/96 S	154	176	176	18	18	18	270	302	302	738	804	804			
17	Pass	5/8/96 S	160	171	171	20	16	16	315	282	282	887	812	812			
18	Pass	5/8/96 S	155	171	171	17	18	18	285	314	314	798	863	863			
19	Pass	5/8/96 S	158	178	178	18	17	17	303	324	324	827	897	897	52	52	56

Report By:
Melody Adams
Checked: [blank]

GSE Lining Technology, Inc.

Report Date: 5/21/96

Pelham Bay Landfill
GSE MR No. 1413-01
GSE Job No. XA4790

Sample #	Pass/Fail	Date	(Smooth/ Textured)	Tensile Strength @ Yield			Tensile Elongation @ Yield			Tensile Strength @ Break			Tensile Elongation @ Break			Tear Resistance		
				ASTM D 638, Type IV, 2 lpm			ASTM D 638, Type IV, 2 lpm			ASTM D 1004			ASTM D 1004			ASTM D 1004		
				Smooth Spec = 130 ppl Textured Spec = 130 ppl	MD	CD	1.3" gage length Smooth Spec = 13 % Textured Spec = 13 %	MD	CD	Smooth Spec = 243 ppl Textured Spec = 243 ppl	MD	CD	2.0" gage length Smooth Spec = 500 % Textured Spec = 150 %	MD	CD	Smooth Spec = 40 lb Textured Spec = 40 lb	MD	CD
Sample #	Pass/Fail	Received		[ppf]	[ppf]	[ppf]	[%]	[%]	[%]	[ppf]	[ppf]	[ppf]	[%]	[%]	[%]	[lb.]	[lb.]	[lb.]
20	Pass	5/8/96	S	152	157		19	16		276	293		768	857				
21	Pass	5/8/96	S	149	178		20	17		278	288		809	794				
22	Pass	5/8/96	S	158	176		17	17		304	337		821	903				
23	Pass	5/8/96	S	175	169		19	17		312	289		767	809		53	56	
24	Pass	5/8/96	S	155	168		17	17		255	320		689	856				
25	Pass	5/8/96	S	156	158		20	16		275	284		728	804				
26	Pass	5/8/96	S	155	165		20	17		285	342		766	914		53	58	
27	Pass	5/8/96	S	169	178		17	17		255	296		744	818				
28	Pass	5/8/96	S	163	177		17	17		253	268		705	760				
29	Pass	5/8/96	S	195	172		15	16		293	313		753	824				
30	Pass	5/8/96	S	178	155		16	17		290	292		794	798		53	53	
31	Pass	5/8/96	S	181	161		17	17		267	271		746	765				
32	Pass	5/8/96	S	180	167		14	16		281	310		768	805				
33	Pass	5/8/96	T	180	182		16	17		193	209		541	604		49	50	
34	Pass	5/8/96	T	178	182		17	16		155	154		416	461		55	52	
35	Pass	5/8/96	T	168	172		16	16		180	181		504	519				
36	Pass	5/8/96	T	166	172		17	17		185	177		516	511		52	47	
37	Pass	5/8/96	T	164	164		16	16		120	112		393	318				
38	Pass	5/8/96	T	182	175		16	17		182	207		489	553				

Report By:
Melody Adams
Nathan Ivy

GSE Lining Technology, Inc.

Pellham Bay Landfill

GSE MR No. 1413-01

GSE Job No. XA4790

Report Date: 5/21/96

Sample #	Pass/Fail	Date	(Smooth/Textured)	Tensile Strength @ Yield		Tensile Elongation @ Yield		Tensile Strength @ Break		Tensile Elongation @ Break		Tear Resistance	
				MD	CD	1.3" gage length	ASTM D 638, Type IV, 2 ipm	MD	CD	2.0" gage length	ASTM D 1004	Smooth Spec = 40 lb.	Textured Spec = 40 lb.
				ppsi	ppsi	[%]		ppsi	ppsi	[%]		MD	CD
39	Pass	5/8/96	T	160	164	17	17	102	157	416	501	55	51
40	Pass	5/8/96	T	170	179	17	16	194	113	576	440		
41	Pass	5/8/96	T	174	178	16	15	132	142	220	449		
42	Pass	5/8/96	T	164	175	17	16	202	128	560	418		
43	Pass	5/8/96	T	172	165	17	16	193	124	564	529		
44	Pass	5/8/96	T	169	179	17	14	164	178	475	544		
45	Pass	5/8/96	T	171	175	17	16	175	130	483	269	54	49
46	Pass	5/8/96	T	173	170	18	16	166	171	516	480		
47	Pass	5/8/96	S	191	161	15	16	296	282	779	786		
48	Pass	5/8/96	S	155	161	16	15	240	265	703	790		
49	Pass	5/8/96	S	170	185	16	14	280	292	734	770	54	52
50	Pass	5/8/96	S	175	187	16	14	290	303	765	810		
51	Pass	5/8/96	S	167	173	16	14	285	289	774	803		
52	Pass	5/8/96	S	173	168	17	15	272	277	730	798		
53	Pass	5/8/96	S	156	160	17	17	242	257	705	761		

Report By:
Melody Adams
Nathan Ivy

Sample #	Pass/Fail	Date Received	(Smooth/Textured)	FTMS 101A Method 2063 Resistance [lb.]	Smooth Spec = 60 lb. Textured Spec = 60 lb.	Dimensional Stability ASTM D 1204 1 hr. @ 100 degC Spec = +/- 3%	Specific Gravity ASTM D 752/D 1505 Spec = >0.93	OIT ASTM D 3895 1 atm @ 280 degC GSE Spec = 100 min	Low Temp. Brittleness ASTM D 746 Spec = -40°F	Average Thickness ASTM D 1593 Spec = 60 +/-10%
						MD [% change]	TD [% change]	[minutes]	[°]	[mil]
1	Pass	5/8/96	S	92		-0.17	-0.15	150	<-40	59
2	Pass	5/8/96	S							62
3	Pass	5/8/96	S	92		0.1	0.08	150	<-40	58
4	Pass	5/8/96	S							61
5	Pass	5/8/96	S							59
6	Pass	5/8/96	S	104		0.19	0.25	150	<-40	61
7	Pass	5/8/96	S	102		-0.07	-0.15	150	<-40	61
8	Pass	5/8/96	S							60
9	Pass	5/8/96	S							60
10	Pass	5/8/96	T							60
11	Pass	5/8/96	S							59
12	Pass	5/8/96	S							59
13	Pass	5/8/96	S							61
14	Pass	5/8/96	S							62
15	Pass	5/8/96	S	101		-0.08	0.07	150	<-40	60
16	Pass	5/8/96	S							62
17	Pass	5/8/96	S							60
18	Pass	5/8/96	S							61
19	Pass	5/8/96	S	89		-0.15	-0.37	150	<-40	61

GSE Lining Technology, Inc.

Pelham Bay Landfill
GSE MR No. 1413-01
GSE Job No. XA4790

Report Date: 5/21/96

Sample #	Pass/Fail	Date (Smooth/Textured)	Puncture FTM15101/Method 2063 Smooth Spec = 60 lb. Textured Spec = 60 lb.	Dimensional Stability ASTM D 1204 1 hr. @ 100 degC Spec = +/- .3%	Specific Gravity ASTM D 792/D 1505 Spec = >0.93	OOT ASTM D 3895 1 atm @ 200 degC GSE Spec = 100 min.	Low Temp. Brittleness ASTM D 746 Spec = -10°F	Average Thickness ASTM D 1593 Spec = 60 +/- 10%
			Resilience [lb.]	MD [% change]	TD [% change]	[minutes]	°F	[mil]
20	Pass	5/8/96 S						60
21	Pass	5/8/96 S						60
22	Pass	5/8/96 S						61
23	Pass	5/8/96 S	97	-0.23	-0.1	150	<40	62
24	Pass	5/8/96 S						60
25	Pass	5/8/96 S						60
26	Pass	5/8/96 S	106	0.17	-0.35	150	<40	62
27	Pass	5/8/96 S						62
28	Pass	5/8/96 S						60
29	Pass	5/8/96 S						63
30	Pass	5/8/96 S	102	0.42	0.12	126	<40	61
31	Pass	5/8/96 S						61
32	Pass	5/8/96 S						62
33	Pass	5/8/96 T	111	0.25	0.02	112	<40	63
34	Pass	5/8/96 T	101	0.12	0.1	103		63
35	Pass	5/8/96 T						62
36	Pass	5/8/96 T	96	0.12	0.05	174	<40	61
37	Pass	5/8/96 T						64
38	Pass	5/8/96 T						65

Report By:
Melody Adams
Nathan Ivy

GSE Lining Technology, Inc.

Pelham Bay Landfill
GSE MR No. 1413-01
GSE Job No. XA4790

Report Date: 5/21/96

Sample #	Pass/Fail	Date (S)mo/d/Y	Puncture FTNS 101A Method 2065 Smooth Spec = 60 lb. Textured Spec = 60 lb. Resistance	Dimensional Stability ASTM D 1204 1 hr @ 100 degC Spec = +/- 3%		Specific Gravity ASTM D 792/D 1505 Spec = >0.93	.OIT ASTM D 3895 1 atm @ 200 degC GSE Spec = 100 min.	Low Temp. Brittleness ASTM D 746 Spec = -40°F	Average Thickness ASTM D 1593 Spec = 60 +/-10%	
				MD [% change]	TD [% change]					[minutes]
39	Pass	5/8/96	T	97	0.02	0.2	0.95	152	<40	63
40	Pass	5/8/96	T							62
41	Pass	5/8/96	T							61
42	Pass	5/8/96	T							63
43	Pass	5/8/96	T							64
44	Pass	5/8/96	T							62
45	Pass	5/8/96	T	101	-0.13	0.2	0.95	124	<40	63
46	Pass	5/8/96	T							63
47	Pass	5/8/96	S							59
48	Pass	5/8/96	S							56
49	Pass	5/8/96	S	95	-0.18	0.33	0.95	133	<40	66
50	Pass	5/8/96	S							60
51	Pass	5/8/96	S							58
52	Pass	5/8/96	S							60
53	Pass	5/8/96	S							60

Report By:
Melody Adams
Nathan Ivy

FAX TRANSMITTAL SHEET

FOR ANY QUESTIONS CALL ME AT 829 3255

THE FOLLOWING SHEET - (INCLUDING THIS FAX COVER SHEET)

ARE TO BE DELIVERED TO: Mark San Angelo

COMPANY: BeeCo.

DEPARTMENT: _____

FAX NUMBER: _____

COMMENTS: #17 is my only question. Also
attached is the sample ~~etc~~ we would like
to test

FROM: Alam Gordon

PELHAM BAY LANDFILL
GSE PROJECT NO. XA4790
TEST SAMPLES

NUMBER	DAMAGE
1	BURN
2	BURN
3	BURN
4	BURN
5	BURN
6	BURN
7	BURN
8	BURN
9	BURN
10	BURN
11	BURN
12	BURN
13	BURN
14	BURN
15	WIND
16	WIND
17	WIND
18	WIND
19	WIND
20	WIND
21	WIND
22	WIND
23	WIND
24	WIND
25	WIND
26	BURN
27	BURN
28	BURN
29	BURN
30	BURN
31	BURN
32	BURN
33	BURN
34	BURN
35	BURN
36	BURN
37	BURN
38	BURN
39	WIND
40	WIND
41	WIND
42	WIND
43	WIND
44	WIND
45	BURN
46	BURN
47	BURN
48	WIND
49	WIND
50	WIND
51	WIND
52	WIND
53	WIND

5 choices

3

30

34

39

49

Also Maybe #12

Walter G. Jordan
NYC DEP



GSE Lining Technology, Inc.

19103 Gundle Road
Houston, Texas 77073
800-435-2008
713-443-8564
Fax: 713-475-0010

May 9, 1996

Breco Mechanical Group, Inc.
201 Saw Mill River Road
Yonkers, New York 10701

Attn: Mark SanAngelo

Re: Pelham Bay Landfill
GSE Project No. XA4790
May 7, 1996 Meeting Minutes

Dear Mark,

Please find the following minutes from our meeting on May 7, 1996, at the above referenced project. I have summarized my understanding of the agreements that were made between GSE, Breco, Woodward-Clyde, and the NYCDEP.

Please distribute the minutes to the listed parties, have them sign, if they agree with the following statements, and return the signed copy to my attention. If a signed copy is not returned by Monday, May 13, 1996, GSE Lining will stop work and demobe the project until this matter is resolved.

If you have any questions, do not hesitate to contact me at 713-230-5823.

Sincerely,

Ronald Zunker, Jr.
Project Manager
Installation Services

enclosure

MEMORANDUM

TO: Meeting Attendees

FROM: Ron Zunker, Project Manager
GSE Lining Technology, Inc.

DATE: May 9, 1996

SUBJECT: Minutes of Meeting
Held May 7, 1996
Pelham Bay Landfill
Bronx, New York

The purpose of these minutes is to document pertinent discussions and agreements made at this meeting. Should anyone attending this meeting take exception to any portion of these minutes, they should notify Ron Zunker immediately upon receipt. If no exceptions are noted, please sign and return this page via fax to 713-230-2528.

<u>Name</u>	<u>Organization</u>	<u>Signature</u>
Mark SanAngelo	Breco Mechanical Group, Inc.	
Said Mokbel	Woodward-Clyde Consultants	
Warren Gordon	NYCDEP	
Bill Walling	GSE Lining Technology, Inc.	
Ron Zunker	GSE Lining Technology, Inc.	

It is GSE Lining Technology, Inc.'s understanding that the following points were agreed upon during the meeting held on May 7, 1996 at the Pelham Bay Landfill site.

1. GSE Lining Technology, Inc. will provide written certification that GSE visually surveyed the damage on the Pelham Bay Landfill, visually inspected the location of the test samples, will test the samples as specified in item #2 and will warranty the material and installation per the contract.
2. GSE Lining Technology, Inc. will test all samples (S3) for tensile (in the machine and cross direction) and thickness. Fifteen (15) samples will require additional testing. The additional tests are low temperature brittleness, OIT, tear, puncture, dimensional stability and specific gravity.
3. GSE Lining Technology, Inc. will choose ten of the fifteen samples to be tested according to item #2. Woodward-Clyde and NYCDEP will choose the remaining five samples. Testing will start immediately and be completed within three weeks.
4. GSE Lining Technology, Inc. will provide written test results to Breco.
5. GSE Lining Technology, Inc. will provide written certification for ESCR results, referenced by panel numbers.
6. GSE Lining Technology, Inc. will provide an As-built with location of test samples identified, once installation is completed.
7. Liner along the anchor trench will be visually inspected for any signs of stress. Liner quality will be verified by destructive sampling of the tie-in seam. *EMICROMETER.*
8. Breco will survey the location of the test samples. Breco will also survey the site in order to verify quantity of damaged material. Breco will pay for this survey.

James J. Ghera
NYC DEP

FIELD MEMO

TO: Warren Gordon, P.E.
Resident Engineer, Pelham Bay Landfill

FROM: Daniel Creighton
Geomembrane Supervisor

DATE: March 14, 1996

SUBJECT: Geomembrane Damage to the Top of Landfill

Due to the recent damage to the top of the landfill, much repair work and replacement of the geomembrane must be done. The following is a summary of the work which must be completed.

Replacement of missing panels:

Panels Totally Blown Away:

700, 701, 702, 703, 704, 705, 706, 731, 732, S-18, S19,
S-20, S-21, S-22, S-23, S-24, S-25, S-26, S-27, S-28, S-29, S-30,
S-31, S-32, S-33, S-56, S-57, S-58, S-59, S-60, S-61, S-62, S-63,
S-64, S-65, S-66, S-67, S-68, S-69, S-70, S-71, S-101, S-102, S-103,
S-104, S-105, S-106, S-107, S-108, S-109, S-110, S-111, S-117, S-118, S-119,
S-120, S-121, S-122, S-123, S-124, S-125, S-126, S-127, S-128, S-139, S-140,
S-141, S-142, S-143, S-144, S-145, S-146, S-147, S-148, S-149, S-150, S-195,
S-197, S-200 and S-203.

Total SF = 190,752

Panels Partially Blown Away:

Eastern Half of Panel S-112, Eastern Half of Panel S-113,
Eastern One Quarter of Panel S-114, Northern Half of Panel S-151,
Eastern Half of Panel S-198, Eastern Half of Panel S-202,
Eastern Half of Panel S-204, Eastern Three Quarters of Panel S-206,
Eastern Half of Panel S-208, Eastern Half of Panel S-209 and
Eastern Half of Panel S-210.

Total SF = 18,667

Sub-Total of Panels Blown Away = 209,419 SF

Replacement of panels damaged beyond repair:

Panels Totally Damaged:

699, 733, 734, 735, 736, 737, S-11, S-12, S-13, S-14, S-15,
S-16, S-17, S-34, S-35, S-55, S-80, S-84, S-85, S-95, S-96, S-97,
S-98, S-99, S-100, S-115, S-129, S-152, S-192.

Total SF = 72,975

(continued on next page)

Panels Partially Damaged:

Eastern portion of 692,	Eastern portion of 693,
Eastern portion of 694,	Eastern portion of 695,
Eastern portion of 696,	Eastern Half of Panel 776,
Eastern Half of Panel 777,	Eastern Half of Panel 778,
Eastern Half of Panel 779,	Eastern Half of Panel 204,
Western Half of Panel S-36,	Western Half of Panel S-37,
Western Half of Panel S-38,	Western Half of Panel S-78,
Western Half of Panel S-79,	Western Portion of Panel S-81,
Northwestern Three Quarters of Panel S-83,	
Western Half of Panel S-82,	Western Half of Panel S-86,
Western Half of Panel S-87,	Western Half of Panel S-88,
Western Half of Panel S-112,	Western Half of Panel S-113,
Western Three Quarters of Panel S-114,	
Southern Half of Panel S-151,	Eastern Half of Panel S-193,
Eastern Half of Panel S-194,	Eastern Half of Panel S-196,
Middle of Panel S-198,	Middle of Panel S-199,
Western Half of Panel S-202,	Middle of Panel S-204,
Middle of Panel S-206,	Middle of Panel S-208,
Middle of Panel S-209 and	Middle of Panel S-210.

Total SF = 51,442

Sub-Total of Panels Damaged Beyond Repair = 124,417 SF

Panels of questionable integrity to be checked:

S-36, S-37, S-38, S-39, S-40, S-41, S-42, S-43, S-44, S-45, S-46, S-47,
S-48, S-49, S-50, S-51, S-52, S-53, S-54, S-74, S-75, S-76, S-77, S-92,
S-93, S-93A, S-94, S-153, S-154, S-155, S-156, S-160, S-161, S-185, S-186, S-189,
S-190 and S-211.

Sub-Total of Panels of Questionable Integrity = 83,739 SF

Grand Total of Damaged and Questionable Panels = 417,575 SF

All other panels on top of landfill visually appear to be salvageable. However, tests along the borders of damaged and questionable panels must be tested frequently to insure the integrity of the material. Tests should include all appropriate methods as per the Contract Documents to insure that the material still meets the specifications listed on page 02778-5, Part 2, Section 2.2.A. In addition, geomembrane should be free of holes or blisters and be of the same quality as when delivered to site. BRECO should submit their expert's proposal to repair the top of the landfill in accordance with the Specifications and Contract Documents at their earliest convenience.

xc: Ramaglia/Durig
Ciancia (WCCI)
NYS DEC
Rant (BRECO)