APPENDIX B-14

LLDPE Liner Patch Replacement Log (CQC – 107)

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
Page: 1 of 24

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R1	AT	P-1/2/3	8/14/2008	4:56	P	2x2	5	M.R.	P	8/14/08
R2	AT	P-2/3/4	8/14/2008	4:47	P	2x2	5	M.R.	P	8/14/08
R3	DT-2	P-2/4 15'>BOS	8/14/2008	5:33	P	2x5	5	M.R.	P	8/14/08
R4	DT-1	P-1/3 200'BOS	8/14/2008	5:26	P	2x5	5	M.R.	P	8/14/08
R5	AT	P-3/5 TOP	8/14/2008	3:40	P	2x2	5	M.R.	P	8/14/08
R6	AT	P-3/4/5	8/14/2008	3:35	P	2x2	5	M.R.	P	8/14/08
R7	AT	P-4/5/6	8/14/2008	4:06	P	2x2	5	M.R.	P	8/14/08
R8	BO	P-4/6 340'>BOS	8/14/2008	6:46	P	2x2	5	M.R.	P	8/14/08
R9	BO	P-6/7 115'>BOS	8/14/2008	6:30	P	2x2	5	M.R.	P	8/14/08
R10	BO	P-6/7 50'>BOS	8/14/2008	6:17	P	2x2	5	M.R.	P	8/14/08
R11	BO	P-6/7 40'>BOS	8/14/2008	6:15	P	2x2	5	M.R.	P	8/14/08
R12	AT	P-6/78	8/14/2008	6:07	P	2x2	5	M.R.	P	8/14/08
R13	AT	P-7/8/9	8/14/2008	6:10	P	2x2	5	M.R.	P	8/14/08
R14	BO	P-6/8 242'>BOS	8/14/2008	6:08	BT	4x4	5	M.R.	P	8/14/08
R15	BT	P-6/8 220'>BOS 5' into P-6	8/14/2008	5:55	P	2x5	5	M.R.	P	8/14/08
R16	DT-3	P-4/6 165'>BOS	8/14/2008	6:02	P	2x2	5	M.R.	P	8/14/08
R17	BO	P-6/8 195'>bos	8/14/2008	4:43	P	2x3	5	M.R.	P	8/14/08
R18	BO	P-6/8 145'>BOS	8/14/2008	4:37	P	2x3	5	M.R.	P	8/14/08
R19	BOS	P-6/8 120'>BOS	8/14/2008	4:32	P	2x2	5	M.R.	P	8/14/08
R20	AT	P-8/10 Top	8/14/2008	4:18	P	2x2	5	M.R.	P	8/14/08
R21	AT	P-8/9/10	8/14/2008	4:24	P	2x2	5	M.R.	P	8/14/08
R22	AT	P-9/10/11	8/14/2008	4:27	P	2x2	5	M.R.	P	8/14/08
R23	DT-4	P-8/9 140'>BOS	8/15/2008	7:45	P	2x5	5	M.R.	P	8/14/08
R24	BO	P-9/11/ 290'>BOS	8/15/2008	8:15	P	2x2	5	M.R.	P	8/14/08
R25	AT	P-11/12/13	8/14/2008	6:57	P	2x2	5	M.R.	P	8/14/08
R26	AT	P-12/13/14	8/14/2008	7:04	P	2x2	5	M.R.	P	8/15/08
R27	DT-6	P-13/14/14 80'>BOS	8/15/2008	10:30	P	2x5	5	M.R.	P	8/15/08
R28	DT-5	P-11/13 200'>BOS	8/15/2008	10:38	P	2x5	5	M.R.	P	8/15/08
R29	BT	P-11 140'>top middle of panel	8/15/2008	12:00	BT	3x6	5	M.R.	P	8/15/08
R30	AT	P-13/14/15	8/15/2008	11:10	P	2x2	5	M.R.	P	8/15/08
R31	AT	P-14/15/17	8/15/2008	11:06	P	2x2	5	M.R.	P	8/15/08
R32	AT	P-14/17/19	8/15/2008	11:00	P	2x4	5	M.R.	P	8/15/08
R33	BO	P-14/19/ 45'>BOS	8/15/2008	10:57	P	2x2	5	M.R.	P	8/15/08
R34	DT-7	P-17/19 100'>BOS	8/15/2008	10:41	P	2x5	5	M.R.	P	8/15/08
R35	AT	P-14/19/20	8/15/2008	7:54	P	2x6	5	M.R.	P	8/15/08
R36	BO	P-14/20 60'>BOS	8/15/2008	8:10	P	2x2	5	M.R.	P	8/15/08
R37	AT	P-14/20/21	8/15/2008	8:25	P	2x3	5	M.R.	P	8/15/08
R38	BO	P-14/21 28'>BOS	8/15/2008	8:32	P	2x2	5	M.R.	P	8/15/08
R39	AT	P-17/18/19	8/15/2008	8:13	P	2x2	5	M.R.	P	8/15/08
R40	AT	P-16/17/18	8/15/2008	8:18	P	2x2	5	M.R.	P	8/15/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R41	BO	P-16/18 75'>BOS	8/15/2008	8:45	P	2x2	5	M.R.	P	8/15/08
R42	BO	P-16/22 295'>BOS	8/15/2008	8:53	P	2x2	5	M.R.	P	8/15/08
R43	BT	P-19 125'>Top middle of panel	8/15/2008	11:50	P	5x5	5	M.R.	P	8/15/08
R44	BO	P-16/17 250'>BOS	8/15/2008	9:00	P	2x3	5	M.R.	P	8/15/08
R45	AT	P-22/23/24	8/15/2008	9:15	P	2x2	5	M.R.	P	8/15/08
R46	AT	P-23/24/25	8/15/2008	9:18	P	2x5	5	M.R.	P	8/15/08
R47	BO	P-23/25 10'>BOS	8/15/2008	9:25	P	2x5	5	M.R.	P	8/15/08
R48	BO	P-16/17 165'>BOS	8/15/2008	10:16	P	2x2	5	M.R.	P	8/15/08
R49	DT--8	P-16/17 160'>BOS	8/15/2008	10:13	P	2x5	5	M.R.	P	8/15/08
R50	DT-9	P-16/22 140'>BOS	8/15/2008	10:00	P	2x5	5	M.R.	P	8/15/08
R51	DT-10	P-22/24 49'>BOS	8/15/2008	9:54	P	2x5	5	M.R.	P	8/15/08
R52	DT-11	P-24/25 150'>BOS	8/15/2008	9:46	P	2x5	5	M.R.	P	8/15/08
R53	BO	P-16/17 100'>BOS	8/15/2008	11:12	P	2x2	5	M.R.	P	8/15/08
R54	AT	P-15/16/17	8/15/2008	11:17	P	2x3	5	M.R.	P	8/15/08
R55	AT	P-11/13 Top	8/15/2008	10:55	P	2x2	5	M.R.	P	8/15/08
R56	BT	P-26/28 60'>Top	8/19/2008	8:45	P	3x6	5	H.V.	P	8/20/08
R57	AT	P-26/27/28	8/19/2008	8:50	P	2x2	5	H.V.	P	8/20/08
R58	AT	P-27/28/29	8/19/2008	8:25	P	2x2	5	H.V.	P	8/20/08
R59	BT	P-27 35'> Top of panel	8/19/2008	8:10	P	3x6	5	H.V.	P	8/20/08
R60	BO	P-26/27 50'>BOS	8/19/2008	8:22	P	2x2	5	H.V.	P	8/20/08
R61	BT	P-27/29 160'>BOS	8/19/2008	1:25	P	4x10	5	H.V.	P	8/20/08
R62	AT	P-29/30/31	8/19/2008	9:40	P	2x2	5	H.V.	P	8/20/08
R63	AT	P-30/31/32	8/19/2008	9:30	P	2x2	5	H.V.	P	8/20/08
R64	BT	P-38/39 15'>tie in	8/19/2008	12:10	P	4x4	5	H.V.	P	8/20/08
R65	BO	P-39/40 185'>BOS	8/19/2008	12:59	P	2x2	5	H.V.	P	8/20/08
R66	AT	P-37/38/39	8/19/2008	10:10	P	2x2	5	H.V.	P	8/20/08
R67	AT	P-36/37/38	8/19/2008	10:05	P	2x3	5	H.V.	P	8/20/08
R68	BT	P-36/37 10'>BOS	8/19/2008	10:50	P	5x5	5	H.V.	P	8/20/08
R69	AT	P-40/41/42	8/19/2008	11:30	P	2x2	5	H.V.	P	8/20/08
R70	AT	P-41/42/43	8/19/2008	11:25	P	2x2	5	H.V.	P	8/20/08
R71	AT	P-45/46/56	8/20/2008	4:10	P	2x2	5	H.V.	P	8/20/08
R72	AT	P-46/47/55/56	8/20/2008	4:20	P	2x4	5	H.V.	P	8/20/08
R73	AT	P-47/48/54/55	8/20/2008	4:30	P	2x3	5	H.V.	P	8/20/08
R74	AT	P-48/49/53/54	8/20/2008	4:32	P	2x2	5	H.V.	P	8/20/08
R75	AT	P-43/50/53	8/20/2008	4:34	P	2x2	5	H.V.	P	8/20/08
R76	AT	P-50/52/53	8/20/2008	4:38	P	2x2	5	H.V.	P	8/20/08
R77	AT	P-50/51/52	8/20/2008	4:52	P	2x2	5	H.V.	P	8/20/08
R78	AT	P-55/56/57	8/20/2008	5:10	P	2x3	5	H.V.	P	8/20/08
R79	DT-12	P-26/28 150'>BOS	8/19/2008	8:36	P	2x5	5	H.V.	P	8/20/08
R80	DT-13	P-29/31 175'>BOS	8/19/2008	8:59	P	2x5	5	H.V.	P	8/20/08

Defect Code:

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EE - Earthwork Equipment Damage
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WR - Wrinkle
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Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R81	DT-14	P-32/33 100'>BOS	8/19/2008	9:10	P	2x5	5	H.V.	P	8/20/08
R82	DT-15	P-34/35 95'>BOS	8/19/2008	9:20	P	2x5	5	H.V.	P	8/20/08
R83	DT-16	P-36/38 15'>BOS	8/19/2008	9:59	P	2x5	5	H.V.	P	8/20/08
R84	DT17	P-39/40 85'>BOS	8/19/2008	11:10	P	2x5	5	H.V.	P	8/20/08
R85	DT18	P-42/43 60'>BOS	8/19/2008	11:45	P	2x5	5	H.V.	P	8/20/08
R86	DT-19	P-45/46 48'>BOS	8/19/2008	11:59	P	2x5	5	H.V.	P	8/20/08
R87	DT-20	P-49/50 15'>BOS	8/19/2008	5:30	P	2x5	5	H.V.	P	8/20/08
R88	DT21	P-55/56 65'>BOS	8/20/2008	5:06	P	2x5	5	H.V.	P	8/20/08
R89	BT	P-47/48 25'>BOS	8/20/2008	4:59	BT	4x4	5	H.V.	P	8/20/08
R90	AT	P-28/29/75/77	8/20/2008	1:15	P	2x4	5	H.V.	P	8/20/08
R91	AT	P-29/31/74/75	8/20/2008	1:25	P	2x5	5	H.V.	P	8/20/08
R92	AT	P-321/32/74	8/20/2008	1:30	P	2x2	5	H.V.	P	8/20/08
R93	AT	P-32/72/74	8/20/2008	1:35	P	2x2	5	H.V.	P	8/20/08
R94	AT	P-32/33/72	8/20/2008	1:40	P	2x2	5	H.V.	P	8/20/08
R95	AT	P-33/71/72	8/20/2008	1:45	P	2x2	5	H.V.	P	8/20/08
R96	AT	P-33/34/71	8/20/2008	1:50	P	2x2	5	H.V.	P	8/20/08
R97	AT	P-34/70/71	8/20/2008	1:55	P	2x2	5	H.V.	P	8/20/08
R98	AT	P-34/35/70	8/20/2008	2:05	P	2x2	5	H.V.	P	8/20/08
R99	AT	P-35/68/70	8/20/2008	2:10	P	2x2	5	H.V.	P	8/20/08
R100	AT	P-35/36/68	8/20/2008	2:18	P	2x6	5	H.V.	P	8/20/08
R101	AT	P-36/66/68	8/20/2008	2:30	P	2x2	5	H.V.	P	8/20/08
R102	AT	P-36/37/66	8/20/2008	2:35	P	2x2	5	H.V.	P	8/20/08
R103	AT	P-37/39/65/66	8/20/2008	2:43	P	2x5	5	H.V.	P	8/20/08
R104	AT	P-63/65/39	8/20/2008	3:05	P	2x2	5	H.V.	P	8/20/08
R105	AT	P-63/64/65	8/20/2008	2:58	P	2x2	5	H.V.	P	8/20/08
R106	AT	P-64/65/66	8/20/2008	2:46	P	2x2	5	H.V.	P	8/20/08
R107	AT	P-39/40/63	8/20/2008	3:08	P	2x2	5	H.V.	P	8/20/08
R108	AT	P-62/63/40	8/20/2008	3:15	P	2x2	5	H.V.	P	8/20/08
R109	AT	P-40/41/62	8/20/2008	3:19	P	2x2	5	H.V.	P	8/20/08
R110	AT	P-60/62/41	8/20/2008	2:22	P	2x2	5	H.V.	P	8/20/08
R111	AT	P-41/43/60	8/20/2008	3:26	P	2x2	5	H.V.	P	8/20/08
R112	AT	P-43/59/60	8/20/2008	3:30	P	2x2	5	H.V.	P	8/20/08
R113	AT	P-43/44/59	8/20/2008	3:50	P	2x5	5	H.V.	P	8/20/08
R114	AT	P-44/58/59	8/20/2008	3:55	P	2x2	5	H.V.	P	8/20/08
R115	AT	P-44/45/58	8/20/2008	3:59	P	2x2	5	H.V.	P	8/20/08
R116	AT	P-45/56/58	8/20/2008	4:05	P	2x2	5	H.V.	P	8/20/08
R117	AT	P-56/57/58	8/20/2008	5:15	P	2x2	5	H.V.	P	8/20/08
R118	AT	P-59/60 105'>BOS	8/20/2008	5:45	BT	5x5	5	H.V.	P	8/20/08
R119	AT	P-60/61/62	8/20/2008	6:00	P	2x2	5	H.V.	P	8/20/08
R120	AT	P-61/62/63	8/20/2008	5:55	P	2x2	5	H.V.	P	8/20/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
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Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R121	AT	P-64/66/67	8/20/2008	6:14	P	2x2	5	H.V.	P	8/20/08
R122	AT	P-66/67/68	8/20/2008	6:22	P	2x2	5	H.V.	P	8/20/08
R123	BO	P-68/69/ 130'>BOS	8/20/2008	6:31	P	2x2	5	H.V.	P	8/20/08
R124	AT	P-71/72/73	8/20/2008	6:45	P	2x2	5	H.V.	P	8/20/08
R125	AT	P-72/73/74	8/20/2008	6:55	P	2x2	5	H.V.	P	8/20/08
R126	AT	P-74/76 110'>BOS	8/21/2008	10:20	P	4x4	5	H.V.	P	8/20/08
R127	AT	P-74/75/76	8/21/2008	9:45	P	2x3	5	H.V.	P	8/20/08
R128	AT	P-75/76/77	8/21/2008	9:50	P	2x2	5	H.V.	P	8/20/08
R129	AT	P-69/70/71	8/20/2008	2:26	P	2x2	5	H.V.	P	8/20/08
R130	AT	P-68/69/70	8/20/2008	2:22	P	2x2	5	H.V.	P	8/20/08
R131	DT-22	P-59/60 90'>BOS	8/20/2008	6:05	P	2x5	5	H.V.	P	8/20/08
R132	DT-23	P-63/64140'>BOS	8/21/2008	8:10	P	2x5	5	H.V.	P	8/20/08
R133	DT-24	P-67/68 50'>BOS	8/21/2008	9:23	P	2x5	5	H.V.	P	8/20/08
R134	DT-25	P-69/71 150'>BOS	8/21/2008	9:15	P	2x5	5	H.V.	P	8/20/08
R135	DT-26	P-73/74 152'>BOS	8/21/2008	9:40	P	2x5	5	H.V.	P	8/20/08
R136	DT-27	P-76/77 100'>BOS	8/21/2008	10:10	P	2x5	5	H.V.	P	8/20/08
R137	DT-28	P-77/78 150'>BOS	8/23/2008	8:50	P	2x5	5	H.V.	P	8/23/08
R138	BT	P-78 15'>Top middle of panel	8/23/2008	8:10	P	4x4	5	H.V.	P	8/23/08
R139	AT	P-78/79/80	8/23/2008	8:20	P	2x2	5	H.V.	P	8/23/08
R140	AT	P-79/80/81	8/23/2008	8:15	P	2x2	5	H.V.	P	8/23/08
R141	DT-29	P-79/81/ 75'>BOS	8/23/2008	8:58	P	2x5	5	H.V.	P	8/23/08
R142	DT-30	P-81/83 250'>BOS	8/23/2008	9:05	P	2x5	5	H.V.	P	8/23/08
R143	DT-31	P-83/84 50'>BOS	8/23/2008	9:12	P	2x5	5	H.V.	P	8/23/08
R144	BT	P-87/88 10'>BOS	8/23/2008	9:55	P	4x4	5	H.V.	P	8/23/08
R145	AT	P-84/87/87	8/23/2008	9:35	P	2x3	5	H.V.	P	8/23/08
R146	AT	P-83/84/85	8/23/2008	9:55	P	2x2	5	H.V.	P	8/23/08
R147	AT	P-84/85/89	8/23/2008	9:59	P	2x2	5	H.V.	P	8/23/08
R148	MD	P-84/85 5'>into P85	8/23/2008	10:09	P	2x2	5	H.V.	P	8/23/08
R149	AT	P-85/87/89	8/23/2008	10:30	P	2x2	5	H.V.	P	8/23/08
R150	AT	P-86/87/89	8/23/2008	10:22	P	2x2	5	H.V.	P	8/23/08
R151	AT	P-85/86/89	8/23/2008	10:38	P	2x3	5	H.V.	P	8/23/08
R152	AT	P-81/82/85	8/23/2008	12:02	P	2x2	5	H.V.	P	8/23/08
R153	AT	P-80/81/85	8/23/2008	11:59	P	2x2	5	H.V.	P	8/23/08
R154	AT	P-86/90/91	8/23/2008	10:54	P	2x2	5	H.V.	P	8/25/08
R155	AT	P-90/91/92	8/23/2008	10:49	P	2x2	5	H.V.	P	8/25/08
R156	DT-32	P-86/90 85'>BOS	8/23/2008	11:45	P	2x5	5	H.V.	P	8/25/08
R157	BT	P-90/92 100'>BOS	8/23/2008	12:10	P	3x8	5	H.V.	P	8/25/08
R158	AT	P-92/93/94	8/23/2008	3:59	P	2x2	5	H.V.	P	8/25/08
R159	AT	P-93/94/95	8/23/2008	3:55	P	2x2	5	H.V.	P	8/25/08
R160	AT	P-97/98/99	8/23/2008	3:45	P	2x2	5	H.V.	P	8/25/08

Defect Code:
BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip
P- Patch
B-Extrudate Bead
GB-Grind & Bead
BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
Page: 5 of 24

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R161	AT	P-98/99/100	8/23/2008	3:38	P	2x2	5	H.V.	P	8/25/08
R162	BT	P-102/103 30'>BOS	8/23/2008	3:20	BT	3x5	5	H.V.	P	8/25/08
R163	AT	P-102/103/104	8/23/2008	2:35	P	2x2	5	H.V.	P	8/25/08
R164	AT	P-103/104/105	8/23/2008	2:20	P	2x2	5	H.V.	P	8/25/08
R165	AT	P-94/95/96	8/23/2008	12:45	P	2x2	5	H.V.	P	8/25/08
R166	AT	P-95/96/97	8/23/2008	12:50	P	2x2	5	H.V.	P	8/25/08
R167	AT	P-99/100/101	8/23/2008	1:08	P	2x2	5	H.V.	P	8/25/08
R168	AT	P-100/101/102	8/23/2008	1:15	P	2x2	5	H.V.	P	8/25/08
R169	AT	P-102/104/ 115'>BOS	8/23/2008	2:10	BT	3x4	5	H.V.	P	8/25/08
R170	AT	P-104/105/106	8/23/2008	1:25	P	2x2	5	H.V.	P	8/25/08
R171	AT	P-105/106/107	8/23/2008	1:30	P	2x2	5	H.V.	P	8/25/08
R172	DT-33	P-92/94/150'>BOS	8/23/2008	4:14	P	2x5	5	H.V.	P	8/25/08
R173	DT-34	P-94/95 100'>BOS	8/23/2008	4:20	P	2x5	5	H.V.	P	8/25/08
R174	DT-35	P-94/97 75'>BOS	8/23/2008	4:25	P	2x5	5	H.V.	P	8/25/08
R175	DT-36	P-97/99 175'>BOS	8/23/2008	4:30	P	2x5	5	H.V.	P	8/25/08
R176	DT-37	P-99/100 110'>BOS	8/23/2008	4:40	P	2x5	5	H.V.	P	8/25/08
R177	DT-38	P-100102 100'>BOS	8/23/2008	4:50	P	2x5	5	H.V.	P	8/25/08
R178	DT-39	P-102/104 160'>BOS	8/23/2008	4:55	P	2x5	5	H.V.	P	8/25/08
R179	DT-40	P-104/105 100'>BOS	8/23/2008	5:05	P	2x5	5	H.V.	P	8/25/08
R180	DT-41	P-105/107 95'>BOS	8/23/2008	5:10	P	2x5	5	H.V.	P	8/25/08
R181	DT-42	P-107/108 148'>BOS	8/23/2008	5:15	P	2x5	5	H.V.	P	8/25/08
R182	BO	P-107/108 210'>BOS	8/23/2008	2:15	P	2x2	5	H.V.	P	8/25/08
R183	gas bubble	P-17 100'>Top	9/4/2008	9:00	P	2x2	5	H.V.	P	9/4/08
R184	AT	P-108/110/111	9/4/2008	11:15	P	2x2	5	H.V.	P	9/4/08
R185	AT	P-110/111/112	9/4/2008	11:20	P	2x2	5	H.V.	P	9/4/08
R186	DT-43	P-110/112 100'>BOS	9/4/2008	12:50	P	2x5	5	H.V.	P	9/4/08
R187	DT-44	P-112/114 135'>BOS	9/4/2008	12:59	P	2x5	5	H.V.	P	9/4/08
R188	DT-45	P-114/115 154'>BOS	9/4/2008	1:05	P	2x5	5	H.V.	P	9/4/08
R189	AT	P-108/109/110	9/4/2008	11:35	P	2x2	5	H.V.	P	9/4/08
R190	AT	P-109/110/112	9/4/2008	11:28	P	2x2	5	H.V.	P	9/4/08
R191	AT	P-112/113/114	9/4/2008	12:45	P	2x5	5	H.V.	P	9/4/08
R192	MD	P-114/113 5'>into P114	9/4/2008	12:30	P	2x2	5	H.V.	P	9/4/08
R193	AT	P-113/114/115	9/4/2008	12:35	P	2x2	5	H.V.	P	9/4/08
R194	BT	P-115/116 200'>BOS	9/4/2008	1:30	BT	3x4	5	H.V.	P	9/4/08
R195	DT-46	P-115/116 175'>BOS	9/4/2008	1:10	P	2x5	5	H.V.	P	9/4/08
R196	AT	P-116/117/118	9/4/2008	1:38	P	2x2	5	H.V.	P	9/4/08
R197	AT	P-117/118/119	9/4/2008	1:42	P	2x2	5	H.V.	P	9/4/08
R198	DT-47	P-116/117/ 15'>BOS	9/4/2008	1:35	P	2x5	5	H.V.	P	9/4/08
R199	DT-48	P-118/119 160'>BOS	9/4/2008	1:50	P	2x5	5	H.V.	P	9/4/08
R200	DT-49	P-119/120 145'>BOS	9/4/2008	1:56	P	2x5	5	H.V.	P	9/4/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 6 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R201	GAS	P-92/93 94'>BOS	9/30/2008	4:45	P	2x2	1	C.F.	P	9/30/08
R202	GAS	P-86/90 132'>BOS	9/30/2008	4:50	P	2x2	1	C.F.	P	9/30/08
R203	BT	P-120/121 12'>BOS	10/3/2008	10:20	BT	3x3	1	C.F.	P	10/4/08
R204	BO	P-120/121 45'>BOS	10/3/2008	10:30	P	2x2	1	C.F.	P	10/4/08
R205	AT	P-123/124/125	10/3/2008	10:33	P	2x2	1	C.F.	P	10/4/08
R206	AT	P-124/125/126	10/3/2008	10:35	P	2x2	1	C.F.	P	10/4/08
R207	AT	P-121/122/123	10/3/2008	10:45	P	2x2	1	C.F.	P	10/4/08
R208	AT	P-122/123/124	10/3/2008	10:48	P	2x2	1	C.F.	P	10/4/08
R209	BO	P-120/121/ 305'>BOS	10/3/2008	1:15	P	2x2	1	C.F.	P	10/4/08
R210	DT-50	P-121/122 105'>BOS	10/3/2008	9:50	P	2x5	1	C.F.	P	10/4/08
R211	AT	P-120/121 tie in	10/3/2008	1:06	P	2x2	5	M.M.	P	10/4/08
R212	BT	P-121/122 tie in	10/3/2008	11:40	BT	5x14	5	M.M.	P	10/4/08
R213	DT-51	P-124/126 60'>BOS	10/4/2008	9:45	P	2x5	1	C.F.	P	10/4/08
R214	DT-53	P-126/128 10'>BOS	10/4/2008	9:40	P	2x5	1	C.F.	P	10/4/08
R215	AT	P-126/127/128	10/3/2008	10:52	P	2x2	1	C.F.	P	10/4/08
R216	AT	P-127/128/129	10/3/2008	10:55	P	2x2	1	C.F.	P	10/4/08
R217	DT-54	P-129/131 15'>BOS	10/4/2008	9:35	P	2x5	1	C.F.	P	10/4/08
R218	AT	P-129/130/131	10/3/2008	10:58	P	2x2	1	C.F.	P	10/4/08
R219	AT	P-130/131/132	10/3/2008	11:00	P	2x2	1	C.F.	P	10/4/08
R220	DT-55	P-133/134 24'>BOS	10/4/2008	3:50	P	2x5	1	C.F.	P	10/4/08
R221	AT	P-134/135/139	10/4/2008	2:15	P	2x2	1	C.F.	P	10/4/08
R222	BT	P-138/139 12'>BOS	10/4/2008	2:23	BT	3x3	1	C.F.	P	10/4/08
R223	AT	P-134/137/138/139	10/4/2008	2:03	P	2x5	1	C.F.	P	10/4/08
R224	AT	P-136/137/138	10/4/2008	2:30	P	2x2	1	C.F.	P	10/4/08
R225	DT-56	P-136/138 10'>BOS	10/4/2008	4:00	P	2x5	1	C.F.	P	10/4/08
R226	AT	P-136/140/141	10/3/2008	2:33	P	2x2	1	C.F.	P	10/4/08
R227	BO	P-136/140 30'>BOS	10/3/2008	2:36	P	2x2	1	C.F.	P	10/4/08
R228	AT	P-140/141/142	10/3/2008	2:40	P	2x2	1	C.F.	P	10/4/08
R229	DT-57	P-140/142 10'>BOS	10/3/2008	4:05	P	2x2	1	C.F.	P	10/4/08
R230	AT	P-133/134/137	10/3/2008	2:00	P	2x2	1	C.F.	P	10/4/08
R231	AT	P-133/136/137	10/3/2008	1:56	P	2x2	1	C.F.	P	10/4/08
R232	AT	P-132/133/136	10/3/2008	1:53	P	2x2	1	C.F.	P	10/4/08
R233	AT	P-132/136 27'>BOS	10/3/2008	1:48	P	2x2	1	C.F.	P	10/4/08
R234	AT	P-130/132/136/141	10/3/2008	1:45	P	2x2	1	C.F.	P	10/4/08
R235	AT	P-129/130/141	10/3/2008	1:30	P	2x2	1	C.F.	P	10/4/08
R236	BT	P-127/129 50'>bos	10/3/2008	11:50	BT	3x4	1	C.F.	P	10/4/08
R237	BO	P-126/127 85'>bos	10/3/2008	10:40	P	2x2	1	C.F.	P	10/4/08
R238	AT	P-129/141/142/143	10/3/2008	12:10	P	2x14	1	C.F.	P	10/4/08
R239	AT	P-142/143/145	10/3/2008	1:00	P	2x2	1	C.F.	P	10/4/08
R240	DT-52	P-142/145 10'>bos	10/3/2008	10:45	P	2x5	1	C.F.	P	10/4/08

P-92/93

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint

SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip
P- Patch
B-Extrudate Bead
GB-Grind & Bead
BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R241	AT	P-127/129/143	10/3/2008	10:05	P	2x5	1	C.F.	P	10/4/08
R242	AT	P-127/143/145	10/3/2008	1:10	P	2x5	1	C.F.	P	10/4/08
R243	AT	P-126/127/145	10/3/2008	1:13	P	2x5	1	C.F.	P	10/4/08
R244	AT	P-126/145/147	10/3/2008	1:15	P	2x5	1	C.F.	P	10/4/08
R245	AT	P-125/126/146/147	10/3/2008	1:17	P	2x5	1	C.F.	P	10/4/08
R246	AT	P-146/147/148	10/3/2008	1:22	P	2x5	1	C.F.	P	10/4/08
R247	AT	P-150/151/152	10/4/2008	7:42	P	2x5	1	C.F.	P	10/4/08
R248	AT	P-151/152/153	10/4/2008	8:15	P	2x5	1	C.F.	P	10/4/08
R249	DT-61	P-151/153 10'>BOS	10/4/2008	8:25	P	2x5	1	C.F.	P	10/4/08
R250	DT-60	P-150/151 100'>BOS	10/4/2008	8:35	P	2x5	1	C.F.	P	10/4/08
R251	AT	P-149/150/151	10/3/2008	3:06	P	2x5	1	C.F.	P	10/4/08
R252	AT	P-148/149/150	10/3/2008	3:05	P	2x5	1	C.F.	P	10/4/08
R253	DT-59	P-148/149 15'>BOS	10/4/2008	8:50	P	2x5	1	C.F.	P	10/4/08
R254	DT-58	P-144/147 15'>BOS	10/5/2008	4:10	P	2x5	1	C.F.	P	10/4/08
R255	AT	P-144/145/147	10/5/2008	2:54	P	2x5	1	C.F.	P	10/4/08
R256	AT	P-142/144/145	10/5/2008	2:55	P	2x5	1	C.F.	P	10/4/08
R257	BT	P-149/151 50'>BOS	10/5/2008	3:30	P	2x5	1	C.F.	P	10/4/08
R258	AT	P-123/125/146/148	10/6/2008	9:02	P	2x5	5	M.M	P	10/6/08
R259	AT	P-123/148/168	10/6/2008	9:10	P	2x5	5	M.M	P	10/6/08
R260	AT	P-148/168/150	10/6/2008	9:12	P	2x5	5	M.M	P	10/6/08
R261	AT	P-150/168/169	10/6/2008	9:15	P	2x5	5	M.M	P	10/6/08
R262	AT	P-150/152/169/170	10/6/2008	9:20	P	2x5	5	M.M	P	10/6/08
R263	DT-68	P-169/170 33'>BOS	10/6/2008	9:26	P	2x5	5	M.M	P	10/6/08
R264	AT	P-152/153/170/171	10/6/2008	9:31	P	2x5	5	M.M	P	10/6/08
R265	AT	P-171/172/174	10/6/2008	9:36	P	2x5	5	M.M	P	10/6/08
R266	AT	P-153/171/174	10/6/2008	9:42	P	2x5	5	M.M	P	10/6/08
R267	AT	P-153/155/172/174	10/6/2008	9:44	P	2x5	5	M.M	P	10/6/08
R268	AT	P-156/157/172/173	10/6/2008	9:47	P	2x5	5	M.M	P	10/6/08
R269	AT	P-155/156/157	10/6/2008	9:50	P	2x5	5	M.M	P	10/6/08
R270	AT	P-156/157/158/173/175	10/6/2008	9:51	P	2x5	5	M.M	P	10/6/08
R271	AT	P-158/160/175/176	10/6/2008	10:08	P	2x5	5	M.M	P	10/6/08
R272	AT	P-160/161/176/177	10/6/2008	10:13	P	2x5	5	M.M	P	10/6/08
R273	AT	P-161/163/177/179	10/6/2008	10:26	P	2x5	5	M.M	P	10/6/08
R274	AT	P-163/164/179/180	10/6/2008	10:30	P	2x5	5	M.M	P	10/6/08
R275	AT	P-164/166/180/181	10/6/2008	10:34	P	2x5	5	M.M	P	10/6/08
R276	DT-67	P-177/179 10'>BOS	10/6/2008	10:38	P	2x5	5	M.M	P	10/6/08
R277	AT	P-177/178/179	10/6/2008	10:40	P	2x5	5	M.M	P	10/6/08
R278	AT	P-176/177/178	10/6/2008	10:44	P	2x5	5	M.M	P	10/6/08
R279	DT-62	P-155/156 20'>BOS	10/6/2008	10:03	P	2x5	5	M.M	P	10/6/08
R280	MD	P-151/1524'>into P152	10/6/2008	10:05	P	2x5	5	M.M	P	10/6/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
Page: 8 of 24

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R281	BT	P-153/155 90'>BOS	10/6/2008	11:15	P	4x4	1	C.F.	P	10/6/08
R282	AT	P-153/154/155	10/6/2008	11:07	P	2x2	1	C.F.	P	10/6/08
R283	AT	P-154/155/156	10/6/2008	11:05	P	2x2	1	C.F.	P	10/6/08
R284	AT	P-158/159/160	10/6/2008	10:45	P	2x2	1	C.F.	P	10/6/08
R285	AT	P-159/160/161	10/6/2008	10:43	P	2x2	1	C.F.	P	10/6/08
R286	DT-63	P-158/160 80'>BOS	10/6/2008	10:53	P	2x5	1	C.F.	P	10/6/08
R287	DT-64	P-160/161 18'>BOS	10/6/2008	10:18	P	2x5	5	M.M	P	10/6/08
R288	DT-65	P-163/164 100'>BOS	10/6/2008	10:20	P	2x5	1	C.F.	P	10/6/08
R289	AT	P-161/162163	10/6/2008	10:33	P	2x2	1	C.F.	P	10/6/08
R290	AT	P-162/163/164	10/6/2008	10:35	P	2x2	1	C.F.	P	10/6/08
R291	BT	P-164/165/166	10/6/2008	10:10	P	4x8	1	C.F.	P	10/6/08
R292	AT	P-165/166/167	10/6/2008	9:30	P	2x2	1	C.F.	P	10/6/08
R293	DT-66	P-165/167 50'>BOS	10/6/2008	9:20	P	2x5	1	C.F.	P	10/6/08
R294	DT-69	P-183/185 105'>BOS	10/9/2008	8:04	P	2x5	5	M.M.	P	10/9/08
R295	DT--70	P-186/188 140'>BOS	10/9/2008	8:20	P	2x5	5	M.M.	P	10/9/08
R296	DT-71	190/191 26'>BOS	10/9/2008	9:05	P	2x5	5	M.M.	P	10/9/08
R297	DT-72	P-191/192 10'>BOS	10/9/2008	9:44	P	2x5	5	M.M.	P	10/9/08
R298	DT-73	P-192/194 150'>BOS	10/9/2008	11:06	P	2x5	5	M.M.	P	10/9/08
R299	DT-74	P-187/189 38'>BOS	10/9/2008	11:33	P	2x5	5	M.M.	P	10/9/08
R300	DT-75	P-195197 232'>BOS	10/9/2008	11:00	P	2x5	5	M.M.	P	10/9/08
R301	DT-76	P-198/199 200'>BOS	10/9/2008	10:55	P	2x5	5	M.M.	P	10/9/08
R302	DT-77	P-200/202 150'>BOS	10/9/2008	10:45	P	2x5	5	M.M.	P	10/9/08
R303	DT-78	P-203/204 10'>BOS	10/9/2008	10:39	P	2x5	5	M.M.	P	10/9/08
R304	DT-79	P-206/207 52'>BOS	10/9/2008	10:04	P	2x5	5	M.M.	P	10/9/08
R305	BT	P-205/206 15'>BOS	10/9/2008	10:20	BT	3x3	5	M.M.	P	10/9/08
R306	AT	P-204/205/206	10/9/2008	10:27	P	2x2	5	M.M.	P	10/9/08
R307	AT	P-203/204/205	10/9/2008	10:43	P	2x2	5	M.M.	P	10/9/08
R308	AT	P-201/202/203	10/9/2008	10:46	P	2x2	5	M.M.	P	10/9/08
R309	AT	P-200/201/202	10/9/2008	10:50	P	2x2	5	M.M.	P	10/9/08
R310	AT	P-187/188/189	10/9/2008	11:30	P	2x2	5	M.M.	P	10/9/08
R311	AT	P-186/187/188	10/9/2008	11:28	P	2x2	5	M.M.	P	10/9/08
R312	BO	P-184/186 25'>BOS	10/9/2008	8:40	P	2x2	5	M.M.	P	10/9/08
R313	AT	P-184/185/186	10/9/2008	8:14	P	2x2	5	M.M.	P	10/9/08
R314	AT	P-183/184/185	10/9/2008	8:10	P	2x2	5	M.M.	P	10/9/08
R315	AT	P-167/182/183	10/9/2008	7:41	P	2x2	5	M.M.	P	10/9/08
R316	AT	P-166/167/181/182	10/9/2008	7:38	P	2x2	5	M.M.	P	10/9/08
R317	AT	P-181/182/50'>BOS	10/9/2008	7:55	P	3x4	5	M.M.	P	10/9/08
R318	AT	P-188/189/190	10/9/2008	8:36	P	2x3	5	M.M.	P	10/9/08
R319	AT	P-189/190/191	10/9/2008	8:35	P	2x2	5	M.M.	P	10/9/08
R320	BO	P-189/191 50'>BOS	10/9/2008	8:26	P	2x3	5	M.M.	P	10/9/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R321	AT	P-191/192/193	10/9/2008	9:34	P	2x2	5	MM	P	10/9/08
R322	BT	P-192/193 5'into P-192	10/9/2008	9:30	BT	3x7	5	MM	P	10/9/08
R323	AT	P-192/193/194	10/9/2008	9:09	P	2x2	5	MM	P	10/9/08
R324	BO	P-193/194 98'>BOS	10/9/2008	8:49	P	2x4	5	MM	P	10/9/08
R325	AT	P-194/195/196	10/9/2008	9:00	P	2x2	5	MM	P	10/9/08
R326	AT	P-195/196/197	10/9/2008	8:57	P	2x2	5	MM	P	10/9/08
R327	MD	P-187/188 50'into P-188 mid of pan	10/9/2008	11:10	P	2x2	5	MM	P	10/9/08
R328	MD	P-187/183 35'into188mid of pan	10/9/2008	11:13	P	2x2	5	MM	P	10/9/08
R329	MD	P-187/188 15'into P-188 mid of pan	10/9/2008	11:16	P	2x2	5	MM	P	10/9/08
R330	MD	P-187/188 5'into P-88	10/9/2008	11:21	P	2x2	5	MM	P	10/9/08
R331	gas bubble	P-18250'>top middle of panel	10/10/2008	8:00	P	2x2	5	MM	P	10/10/08
R332	AT	P-209/211/204/205	10/10/2008	8:10	P	2x2	5	MM	P	10/16/08
R333	AT	P-209/210/211	10/10/2008	9:33	P	2x2	5	MM	P	10/16/08
R334	DT-80	P-209/210 15'>BOS	10/10/2008	2:30	P	2x5	5	MM	P	10/16/08
R335	AT	P-210/211/212	10/10/2008	9:36	P	2x2	5	MM	P	10/16/08
R336	AT	P-211/253/255	10/10/2008	8:13	P	2x2	5	MM	P	10/16/08
R337	AT	P-211/212/253	10/10/2008	8:15	P	2x2	5	MM	P	10/16/08
R338	AT	P-212/213/251/253	10/10/2008	8:17	P	2x5	5	MM	P	10/16/08
R339	AT	P-251/252/253	10/10/2008	8:56	P	2x2	5	MM	P	10/16/08
R340	AT	P-250/251/252	10/10/2008	9:01	P	2x2	5	MM	P	10/16/08
R341	DT-81	P-252/253 15'>BOS	10/10/2008	2:50	P	2x5	5	MM	P	10/16/08
R342	AT	P-213/214/250/251	10/10/2008	9:03	P	2x2	5	MM	P	10/16/08
R343	AT	P-214/215/249/250	10/10/2008	9:10	P	2x2	5	MM	P	10/16/08
R344	AT	P-215/217/247/249	10/16/2008	9:25	P	2x5	5	MM	P	10/16/08
R345	DT-81	P-212/213 55'>BOS	10/16/2008	2:25	P	2x5	5	MM	P	10/16/08
R346	AT	P-214/215/216	10/16/2008	2:17	P	2x2	5	MM	P	10/16/08
R347	AT	P-215/216/217	10/16/2008	2:15	P	2x2	5	MM	P	10/16/08
R348	DT-82	P-215/217 10'>BOS	10/16/2008	2:43	P	2x2	5	MM	P	10/16/08
R349	AT	P-217/218/247	10/16/2008	9:40	P	2x2	5	MM	P	10/16/08
R350	AT	P-246/247/218	10/16/2008	9:43	P	2x5	5	MM	P	10/16/08
R351	AT	P-218/219/246	10/16/2008	9:47	P	2x2	5	MM	P	10/16/08
R352	BT	P-218/219 15'>BOS	10/16/2008	10:03	P	3x5	5	MM	P	10/16/08
R353	AT	P-219/245/246	10/16/2008	9:49	P	2x2	5	MM	P	10/16/08
R354	AT	P-219/220/245	10/16/2008	9:50	P	2x2	5	MM	P	10/16/08
R355	AT	P-220/244/245	10/16/2008	9:53	P	2x2	5	MM	P	10/16/08
R356	DT-83	P-219/220 55'>BOS	10/16/2008	2:26	P	2x5	5	MM	P	10/16/08
R357	AT	P-220/221/244	10/16/2008	9:58	P	2x2	5	MM	P	10/16/08
R358	AT	P-221/238/244	10/16/2008	10:00	P	2x2	5	MM	P	10/16/08
R359	AT	P-221/223/238	10/16/2008	10:16	P	2x2	5	MM	P	10/16/08
R360	AT	P-223/230/231/238	10/16/2008	10:44	P	2x10	5	MM	P	10/16/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 10 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R361	AT	P-223/230/229	10/6/2008	1:38	P	2x2	5	MM	P	10/16/08
R362	AT	P-223/224/229	10/6/2008	1:33	P	2x2	5	MM	P	10/16/08
R363	DT-85	P-224/229 7'>BOS	10/6/2008	1:45	P	2x5	5	MM	P	10/16/08
R364	AT	P-222/223/224/225	10/6/2008	1:50	P	2x2	5	MM	P	10/16/08
R365	DT-84	P-221/223/222	10/6/2008	2:21	P	2x7	5	MM	P	10/16/08
R366	AT	P-222/225/226	10/6/2008	1:51	P	2x2	5	MM	P	10/16/08
R367	AT	P-222/226/227	10/6/2008	1:58	P	2x2	5	MM	P	10/16/08
R368	AT	P-222/227/228	10/6/2008	1:54	P	2x2	5	MM	P	10/16/08
R369	AT	P-231/233/238	10/6/2008	11:40	P	2x2	5	MM	P	10/16/08
R370	AT	P-231/232/233	10/6/2008	11:45	P	2x2	5	MM	P	10/16/08
R371	AT	P-232/233/234	10/6/2008	11:47	P	2x2	5	MM	P	10/16/08
R372	AT	P-232/234/235/236/232	10/6/2008	11:51	P	3x3	5	MM	P	10/16/08
R373	DT-86	P-231/232 15'>BOS	10/6/2008	11:56	P	2x5	5	MM	P	10/16/08
R374	AT	P-233/234/235	10/9/2008	11:35	P	2x2	5	MM	P	10/16/08
R375	DT-87	P-238/240 10'>BOS	10/9/2008	11:00	P	2x5	5	MM	P	10/16/08
R376	AT	P-238/240/241/242	10/9/2008	11:18	P	3x3	5	MM	P	10/16/08
R377	AT	P-239/240/241	10/9/2008	11:13	P	2x2	5	MM	P	10/16/08
R378	AT	P-238/239/240	10/9/2008	10:35	P	2x2	5	MM	P	10/16/08
R379	AT	P-238/239/243	10/9/2008	10:53	P	2x2	5	MM	P	10/16/08
R380	AT	P-238/243/244	10/9/2008	10:20	P	2x2	5	MM	P	10/16/08
R381	DT-88	P-244/245 45'>BOS	10/9/2008	2:32	P	2x5	5	MM	P	10/16/08
R382	AT	P-246/247/248	10/9/2008	10:04	P	2x2	5	MM	P	10/16/08
R383	AT	P-247/248/249	10/9/2008	10:02	P	2x2	5	MM	P	10/16/08
R384	DT-89	P-246/247 20'>BOS	10/9/2008	2:38	P	2x5	5	MM	P	10/16/08
R385	DT-90	P-249/250 66'>BOS	10/9/2008	2:45	P	2x5	5	MM	P	10/16/08
R386	AT	P-253/254/255	10/9/2008	9:15	P	3x3	5	MM	P	10/16/08
R387	BT	P-232 middle of panel	10/9/2008	1:20	P	3x4	5	MM	P	10/16/08
R388	DT-92	P320/321 50'>BOS-	11/10/2008	10:50	P	2x5	1	CF	P	11/11/08
R389	DT-93	P-319/320 75'>BOS	11/10/2008	10:40	P	2x5	1	CF	P	11/11/08
R390	DT-94	318/319 100'>BOS	11/10/2008	10:30	P	2x5	1	CF	P	11/11/08
R391	DT-95	P-317/318 125'>BOS	11/10/2008	10:20	P	2x5	1	CF	P	11/11/08
R392	DT96	P-316/317 150'>BOS	11/10/2008	10:15	P	2x5	1	CF	P	11/11/08
R393	BT	P-316/317 168'>BOS	11/10/2008	9:45	BT	2x6	1	CF	P	11/11/08
R394	BT	P-316/317 193'>BOS	11/10/2008	10:00	BT	2x7	1	CF	P	11/11/08
R395	DT-97	P-307/316 175'>BOS	11/10/2008	10:10	P	2x5	1	CF	P	11/11/08
R396	AT	P-306/307/308	11/10/2008	11:05	P	2x2	1	CF	P	11/11/08
R397	DT-98	P-307/308 30'>BOS	11/10/2008	11:50	P	2x5	1	CF	P	11/11/08
R398	AT	P-307/308/309	11/10/2008	11:55	P	2x2	1	CF	P	11/11/08
R399	AT	P-306/308/309	11/10/2008	11:58	P	2x2	1	CF	P	11/11/08
R400	AT	P-306/309/311	11/10/2008	12:00	P	2x3	1	CF	P	11/11/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 11 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R401	DT-99	P-307/309 50'>BOS	11/10/2008	1:22	P	2x5	1	CF	P	11/11/08
R402	DT-100	309/311 70'>BOS	11/10/2008	1:26	P	2x5	1	CF	P	11/11/08
R403	BT	307/309 142'>BOS	11/10/2008	2:20	BT	4x6	1	CF	P	11/11/08
R404	AT	P-309/310/311	11/10/2008	2:28	P	2x2	1	CF	P	11/11/08
R405	AT	P-310/311/312	11/10/2008	2:30	P	2x2	1	CF	P	11/11/08
R406	DT-101	P-311/312 25'>BOS	11/10/2008	2:33	P	2x5	1	CF	P	11/11/08
R407	AT	P-304/311/312	11/10/2008	1:30	P	2x3	1	CF	P	11/11/08
R408	DT-102	P-304/312 80'>BOS	11/10/2008	3:22	P	2x5	1	CF	P	11/11/08
R409	AT	P-304/312/313/314	11/10/2008	3:30	P	2x4	1	CF	P	11/11/08
R410	AT	P-310/312/313	11/10/2008	3:33	P	2x2	1	CF	P	11/11/08
R411	BT	P-310/313 72'>BOS	11/10/2008	4:00	BT	3x3	1	CF	P	11/11/08
R412	BT	P-310/10'>tranch middle of the P	11/10/2008	4:30	BT	4x4	1	CF	P	11/11/08
R413	DT-103	P-313/314 72'>BOS	11/10/2008	4:00	P	2x5	1	CF	P	11/11/08
R414	AT	P-304/314/315	11/10/2008	5:22	P	2x3	1	CF	P	11/11/08
R415	AT	P-304/306/311	11/10/2008	1:13	P	2x2	1	CF	P	11/11/08
R416	AT	P-303/304/306	11/10/2008	1:12	P	2x2	1	CF	P	11/11/08
R417	AT	P-302/303/304	11/10/2008	2:38	P	2x2	1	CF	P	11/11/08
R418	DT-104	P-302/304 15'>BOS	11/10/2008	2:40	P	2x5	1	CF	P	11/11/08
R419	AT	P-301/302/303	11/10/2008	2:43	P	2x2	1	CF	P	11/11/08
R420	AT	P-300/301/302	11/10/2008	3:00	P	2x2	1	CF	P	11/11/08
R421	AT	P-298/300/301	11/10/2008	2:58	P	2x2	1	CF	P	11/11/08
R422	DT-107	P-296/298 50'>BOS	11/10/2008	2:53	P	2x2	1	CF	P	11/11/08
R423	AT	P-296/297/298	11/10/2008	11:40	P	2x2	1	CF	P	11/11/08
R424	DT-106	P-298/301 50'>BOS	11/10/2008	2:48	P	2x5	1	CF	P	11/11/08
R425	AT	P-298/299/301	11/10/2008	9:53	P	2x2	1	CF	P	11/11/08
R426	DT-105	P-301/303 85'>BOS	11/10/2008	1:15	P	2x5	1	CF	P	11/11/08
R427	AT	P-303/305/306	11/10/2008	11:08	P	2x2	1	CF	P	11/11/08
R428	AT	P-278/260/306	11/10/2008	1:11	P	2x2	1	CF	P	11/11/08
R429	AT	P-260/305/306	11/11/2008	11:35	P	2x2	1	CF	P	11/11/08
R430	AT	P-260/261/259/305	11/10/2008	1:16	P	2x5	5	MM	P	11/11/08
R431	AT	P-259/260/261	11/10/2008	1:20	P	2x2	5	MM	P	11/11/08
R432	AT	P-260/261/279	11/10/2008	1:05	P	2x2	5	MM	P	11/11/08
R433	AT	P-260/278/279	11/10/2008	1:08	P	2x2	5	MM	P	11/11/08
R434	AT	P-258/259/305	11/10/2008	11:20	P	2x4	1	CF	P	11/11/08
R435	AT	P-258/301/303/305	11/10/2008	11:25	P	2x4	1	CF	P	11/11/08
R436	AT	P-258/256/301	11/10/2008	11:28	P	2x2	1	CF	P	11/11/08
R437	MD	P-256/301 10'>BOS	11/10/2008	11:40	P	2x3	1	CF	P	11/11/08
R438	AT	P-256/263/299/301	11/10/2008	1:11	P	2x3	1	CF	P	11/11/08
R439	AT	P-263/264/299	11/10/2008	9:50	P	2x2	5	MM	P	11/11/08
R440	AT	P-264/297/298/299	11/10/2008	9:58	P	2x6	5	MM	P	11/11/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R441	AT	P-264/267/297	11/10/2008	10:05	P	3x3	5	MM	P	10/16/08
R442	AT	P-264/265/267	11/10/2008	10:08	P	2x2	5	MM	P	10/16/08
R443	AT	P-263/264/265	11/10/2008	10:12	P	2x5	5	MM	P	10/16/08
R444	AT	P-267/268/295/296/297	11/10/2008	11:36	P	2x6	5	MM	P	10/16/08
R445	AT	P-268/271/295	11/10/2008	11:47	P	2x2	5	MM	P	10/16/08
R446	AT	P-271/293/294/295	11/10/2008	11:10	P	2x4	5	MM	P	10/16/08
R447	AT	P-268/269/271	11/10/2008	11:54	P	2x2	5	MM	P	10/16/08
R448	AT	P-267/268/269	11/10/2008	11:50	P	2x2	5	MM	P	10/16/08
R449	AT	P-294/295/296	11/10/2008	1:01	P	2x2	5	MM	P	10/16/08
R450	AT	P-292/293/294	11/10/2008	12:38	P	2x2	5	MM	P	10/16/08
R451	AT	P-271/292/293	11/10/2008	1:00	P	2x2	5	MM	P	10/16/08
R452	AT	P-271/272/292	11/10/2008	1:03	P	2x2	5	MM	P	10/16/08
R453	DT-108	P-292/294 50'>BOS	11/10/2008	7:00	P	2x5	5	MM	P	10/16/08
R454	AT	P-272/274/291/292	11/10/2008	1:21	P	2x3	5	MM	P	10/16/08
R455	AT	P-272/273/274	11/10/2008	1:26	P	2x2	5	MM	P	10/16/08
R456	AT	P-271/272/273	11/10/2008	1:24	P	2x2	5	MM	P	10/16/08
R457	AT	P-274/275/291	11/10/2008	1:31	P	2x3	5	MM	P	10/16/08
R458	AT	P-275/276/291	11/10/2008	2:07	P	2x2	5	MM	P	10/16/08
R459	BT	P-292/294 tranch	11/10/2008	3:24	BT	6x7	5	MM	P	10/16/08
R460	BO	P-274/275 35'>BOS	11/10/2008	2:04	P	2x2	5	MM	P	10/16/08
R461	DT-109	P-273/274 25'>BOS	11/10/2008	1:38	P	2x5	5	MM	P	10/16/08
R462	BT	P-273/274 50'>BOS	11/10/2008	2:00	BT	4x4	5	MM	P	10/16/08
R463	AT	P-270/271/273	11/10/2008	1:46	BTNP	4x4	5	MM	P	10/16/08
R464	AT	P-270/271/269	11/10/2008	2:25	P	2x2	5	MM	P	10/16/08
R465	AT	P-266/267/269	11/10/2008	2:36	P	2x2	5	MM	P	10/16/08
R466	AT	P-265/266/267	11/10/2008	2:40	P	2x2	5	MM	P	10/16/08
R467	BT	P-265/266 15'>BOS	11/10/2008	2:43	BT	2x2	5	MM	P	10/16/08
R468	3BT'S	P-265 48'>tranch middle of panel	11/10/2008	3:11	3BT'S	6x7	5	MM	P	11/11/08
R469	2BT'S	P-262 46'>tranch middle of panel	11/10/2008	3:25	2BT'S	4x4	5	MM	P	11/11/08
R470	3BT'S	P-262 tranch middle of panel	11/10/2008	4:00	3BT'S	4x6	5	MM	P	11/11/08
R471	MD	P-256 tiein in the tranch	11/10/2008	4:05	P	3x3	5	MM	P	11/11/08
R472	DT-110	P-267/269 30'>BOS	11/10/2008	5:10	P	2x5	5	MM	P	11/11/08
R473	DT-112	P-256/26230'>BOS	11/10/2008	5:16	P	2x5	5	MM	P	11/11/08
R474	AT	P-262/263/265	11/10/2008	11:20	P	2x2	5	MM	P	11/11/08
R475	AT	P-256/262/263	11/10/2008	10:35	P	2x2	5	MM	P	11/11/08
R476	3BT'S	P-262/263 5'>into P-263	11/10/2008	11:05	3BT'S	3x7	5	MM	P	11/11/08
R477	AT	P-256/257/258	11/10/2008	10:25	P	2x3	5	MM	P	11/11/08
R478	AT	P-257/258/259	11/10/2008	10:32	P	2x2	5	MM	P	11/11/08
R479	DT-113	P-257/259 25'>BOS	11/11/2008	9:11	P	2x5	5	MM	P	11/11/08
R480	DT-111	P-263/265 25'>BOS	11/11/2008	9:05	P	2x5	5	MM	P	11/11/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 13 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R481	DT-114	P-259/261 50'>BOS	11/11/2008	11:34	P	2x5	5	MM	P	11/11/08
R482	AT	P-261/279/280/288	11/8/2008	12:53	P	2x3	5	MM	P	11/11/08
R483	AT	P-278/279/280	11/8/2008	1:00	P	2x3	5	MM	P	11/11/08
R484	AT	P-278/280/281	11/8/2008	12:47	P	2x2	5	MM	P	11/11/08
R485	AT	P-280/281/282	11/8/2008	12:45	P	2x2	5	MM	P	11/11/08
R486	DT-118	P-281/282 25'>BOS	11/11/2008	11:28	P	2x5	5	MM	P	11/11/08
R487	2BT'S	P-281/282 45'>BOS	11/11/2008	12:05	2BT'S	4x4	5	MM	P	11/11/08
R488	AT	P-261/282/283	11/8/2008	11:56	P	4x4	5	MM	P	11/11/08
R489	AT	P-261/283/284	11/8/2008	11:45	P	2x2	5	MM	P	11/11/08
R490	DT-115	P-261/284 25'>BOS	11/11/2008	9:52	P	2x5	5	MM	P	11/11/08
R491	AT	P-261/284/285	11/8/2008	11:40	P	2x2	5	MM	P	11/11/08
R492	AT	P-283/284/285	11/8/2008	11:43	P	2x2	5	MM	P	11/11/08
R493	DT-117	P-282/283 75'>BOS	11/11/2008	11:45	P	2x5	5	MM	P	11/11/08
R494	AT	P-261/286/287	11/8/2008	1:31	P	2x2	5	MM	P	11/11/08
R495	DT-116	P-286/287 25'>BOS	11/11/2008	9:26	P	2x5	5	MM	P	11/11/08
R496	AT	P-286/287/288	11/8/2008	1:40	P	2x2	5	MM	P	11/11/08
R497	AT	P-287/288/261	11/8/2008	1:35	P	3x3	5	MM	P	11/11/08
R498	AT	P-288/289/290	11/8/2008	1:46	P	2x2	5	MM	P	11/11/08
R499	AT	P-261/289/290	11/8/2008	1:48	P	2x2	5	MM	P	11/11/08
R500	BT	P-281/282 179'>BOS 5'>into P282	11/8/2008	2:15	BT	3x3	5	MM	P	11/11/08
R501	BT	P-281/282 179'>BOS 6'>into P281	11/8/2008	2:45	BT	3x3	5	MM	P	11/11/08
R502	AT	P-277/278/281	11/8/2008	2:50	P	2x2	5	MM	P	11/11/08
R503	AT	P-1/277/278	11/8/2008	2:55	P	2x2	5	MM	P	11/11/08
R504	DT-119	P-277/281 25'>BOS	11/8/2008	9:43	P	2x5	5	MM	P	11/11/08
R505	AT	P-1/277 tiein	11/8/2008	1:20	P	3x3	5	MM	P	11/11/08
R506	DT-20	P-1/278 135'>BOS	11/11/2008	11:40	P	2x5	5	MM	P	11/11/08
R507	AT	P-256/257 tiein	11/10/2008	11:30	P	2x2	5	MM	P	11/11/08
R508	BT	P-322/323 358'>BOS	11/20/2008	11:57	BT	2x7	1	CF	P	11/20/08
R509	BT	P-322/323 378'>BOS	11/20/2008	12:10	BT	2x6	1	CF	P	11/20/08
R510	DT-121	P-321/322 25'>BOS	11/20/2008	9:55	P	2x5	5	MM	P	11/20/08
R511	DT-122	P-322/323 50'>BOS	11/20/2008	9:48	P	2x5	5	MM	P	11/20/08
R512	DT-123	P-323/324 85'>BOS	11/20/2008	9:40	P	2x5	5	MM	P	11/20/08
R513	DT-124	P-324/325 115'>BOS	11/20/2008	10:03	P	2x5	5	MM	P	11/20/08
R514	DT-125	P-325/326 150'>BOS	11/20/2008	9:31	P	2x5	5	MM	P	11/20/08
R515	BT'S 2	P-324/325 177'>BOS	11/20/2008	9:15	2BT'S	5x7	5	MM	P	11/20/08
R516	DT-126	P-326/327 190'>BOS	11/20/2008	9:22	P	2x5	5	MM	P	11/20/08
R517	DT-127	P-327/328 240'>BOS	11/20/2008	11:38	P	2x5	1	CF	P	11/20/08
R518	DT-128	P-328/329 300'>BOS	11/20/2008	11:30	P	2x5	1	CF	P	11/20/08
R519	DT-129	P-329/330 350'>BOS	11/20/2008	11:18	P	2x5	1	CF	P	11/20/08
R520	AT	P-330/331/332	11/20/2008	9:37	P	2x2	1	CF	P	11/20/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 14 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R521	BT	P-381/345 trench	11/20/2008	9:00	P	4x4	1	CF	P	11/20/08
R522	AT	P-33/332/333	11/20/2008	9:40	P	2x2	1	CF	P	11/20/08
R523	DT-131	P-332/333 15'>BOS	11/20/2008	10:11	P	2x5	1	CF	P	11/20/08
R524	AT	P-332/333/334	11/20/2008	9:47	P	2x2	1	CF	P	11/20/08
R525	AT	P-330/333/334	11/20/2008	9:45	P	2x2	1	CF	P	11/20/08
R526	DT-130	P-330/334 15'>BOS	11/20/2008	10:00	P	2x5	1	CF	P	11/20/08
R527	AT	P-330/334/335/336	11/20/2008	10:04	P	2x4	1	CF	P	11/20/08
R528	AT	P-332/334/335	11/20/2008	10:06	P	2x2	1	CF	P	11/20/08
R529	2BT'S	P-331/332 355>BOS	11/20/2008	11:07	P	5x5	1	CF	P	11/20/08
R530	AT	P-330/326/337	11/20/2008	11:22	P	2x2	1	CF	P	11/20/08
R531	AT	P-330/337/339/340	11/20/2008	1:00	P	2x4	5	MM	P	11/20/08
R532	AT	P-336/337/339	11/20/2008	12:00	P	2x2	5	MM	P	11/20/08
R533	AT	P-336/338/339	11/20/2008	12:05	P	2x2	5	MM	P	11/20/08
R534	AT	P-335/336/338	11/20/2008	12:00	P	2x2	5	MM	P	11/20/08
R535	2BT'S	P-338/339 170'>BOS	11/20/2008	8:45	P	4x4	5	MM	P	11/20/08
R536	AT	P-330/340/341	11/20/2008	10:10	P	2x2	5	MM	P	11/20/08
R537	AT	P-330/341/343/344	11/20/2008	10:28	P	2x7	5	MM	P	11/20/08
R538	AT	P-341/342/343	11/20/2008	10:43	P	2x2	5	MM	P	11/20/08
R539	AT	P-340/341/342	11/20/2008	10:50	P	2x2	5	MM	P	11/20/08
R540	AT	P-339/340/342	11/20/2008	10:53	P	2x2	5	MM	P	11/20/08
R541	DT-138	P-339/340 15'>BOS	11/20/2008	11:00	P	2x5	5	MM	P	11/20/08
R542	DT-132	P-343/344 255'>BOS	11/20/2008	10:30	P	2x5	5	MM	P	11/20/08
R543	DT-137	P-335/338 100'>BOS	11/20/2008	11:07	P	2x5	5	MM	P	11/20/08
R544	DT136	P-332/355 60'>BOS	11/20/2008	11:15	P	2x5	5	MM	P	11/20/08
R545	DT135	P-331/332 135'>BOS	11/20/2008	11:25	P	2x2	5	MM	P	11/20/08
R546	AT	P-331/345/346	11/20/2008	11:36	P	2x3	5	MM	P	11/20/08
R547	AT	P-345/346/347	11/20/2008	11:40	P	2x2	5	MM	P	11/20/08
R548	AT	P-346/347/348	11/20/2008	11:37	P	2x2	5	MM	P	11/20/08
R549	DT-133	P-345/347 25'>BOS	11/20/2008	11:47	P	2x5	5	MM	P	11/20/08
R550	DT-134	P-345/331 70'>BOS	11/20/2008	11:57	P	2x5	5	MM	P	11/20/08
R551	BT	P-322 trench	11/20/2008	4:20	P	4x4	1	CF	P	11/20/08
R552	EE	P345/331 187'>BOS	12/22/2008	8:12	P	3X3	10	JV	P	12/22/08
R553	EE	P-331 MOP	12/22/2008	8:18	P	3X3	10	JV	P	12/22/08
R554	EE	P-325 MOP	12/22/2008	8:32	P	3X3	10	JV	P	12/22/08
R555	EE	P-316 MOP	12/22/2008	8:49	P	3X3	10	JV	P	12/22/08
R556	EE	P-309 MOP	12/22/2008	8:55	P	3X3	10	JV	P	12/22/08
R557	EE	P-256 MOP	12/22/2008	9:12	P	3X3	10	JV	P	12/22/08
R558	EE	P-256-262, 109'>EOS	12/22/2008	9:16	P	3X3	10	JV	P	12/22/08
R559	EE	P-292 MOP	12/22/2008	9:24	P	3X3	10	JV	P	12/22/08
R560	EE	P-256 MOP	12/22/2008	9:39	P	3X3	10	JV	P	12/22/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 15 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R561	EE	P-263 MOP	12/22/2009	9:57	P	3X3	X10	JV	P	12/22/08
R562	EE	P-296 MOP	12/22/2008	10:15	P	3X3	X10	JV	P	12/22/08
R563	EE	North Slope	1/13/2009	4:00	P	2X2	X10	JV	P	1/13/09
R564	EE	South Slope	1/14/2009	11:01	P	2X2	X10	JV	P	1/15/09
R565	EE	South Slope	1/14/2009	11:10	P	2X5	X11	DR	P	1/15/09
R566	EE	South Slope	1/14/2009	11:40	P	2X5	X11	DR	P	1/15/09
R567	EE	South Slope	1/14/2009	1:50	P	2X4	X10	JV	P	1/15/09
R568	EE	South Slope	1/14/2009	2:15	P	2X2	X10	JV	P	1/15/09
R569	EE	South Slope	1/15/2009	10:20	P	2X2	X11	DR	P	1/15/09
R570	EE	South Slope	1/15/2009	10:15	P	2X2	X10	JV	P	1/15/09
R571	EE	South Slope	1/15/2009	2:00	P	2X4	X10	JV	P	1/15/09
R572	EE	South Slope	1/15/2009	2:10	P	2X2	X10	JV	P	1/15/09
R573	EE	South Slope	1/15/2009	3:01	P	2X2	X10	JV	P	1/15/09
R574	EE	South Slope	1/15/2009	2:31	P	2X2	X11	DR	P	1/15/09
R575	EE	East Slope	1/15/2009	3:20	P	2X2	X10	JV	P	1/15/09
R576	EE	East Slope	1/15/2009	3:24	P	2X2	X10	JV	P	1/15/09
R577	EE	East Slope	1/15/2009	3:30	P	2X2	X10	JV	P	1/15/09
R578	DT-147	P-371/373 51'> BOS	2/1/2009	3:27	P	2X5	X8	FL	P	2/2/09
R579	AT	P-373/375	1/31/2009	3:07	P	3X3	X8	FL	P	2/2/09
R580	AT	P-371/373	1/31/2009	3:11	P	3X3	X8	FL	P	2/2/09
R581	WS	P-371/TI	1/31/2009	3:25	P	2X2	X8	FL	P	2/2/09
R582	AT	P-370/371/TI	1/31/2009	3:48	P	3X3	X8	FL	P	2/2/09
R583	AT	P-369/370/TI	1/31/2009	3:13	P	3X3	X8	FL	P	2/2/09
R584	WS	P-369/TI	1/31/2009	4:20	P	2X2	X8	FL	P	2/2/09
R585	WS	P-369/TI	1/31/2009	4:30	P	3X3	X8	FL	P	2/2/09
R586	BO	P-369/367 16'> BOS	1/31/2009	2:52	P	2X2	X8	FL	P	2/2/09
R587	AT	P-367/368/369	1/31/2009	2:44	P	2X2	X8	FL	P	2/2/09
R588	Pipe	P-367	2/1/2009	8:00	BT	4X4	X9	JV	P	2/2/09
R589	AT	P-366/367/368	1/31/2009	2:47	P	2X2	X8	FL	P	2/2/09
R590	AT	P-366/367/TI	1/31/2009	4:50	P	2X2	X8	FL	P	2/2/09
R591	AT	P-364/365	1/31/2009	4:50	P	3X3	X9	JV	P	2/2/09
R592	AT	P-363/364/TI	1/31/2009	4:36	P	2X2	X9	JV	P	2/2/09
R593	DT	P-363/364 15'> BOS	1/31/2009	5:10	P	2X5	X9	JV	P	2/2/09
R594	WS	P-363/TI	1/31/2009	4:27	P	2X2	X9	JV	P	2/2/09
R595	AT	P-368/363	1/31/2009	4:20	P	2X2	X9	JV	P	2/2/09
R596	AT	P-360/361/TI	1/31/2009	4:03	P	3X4	X9	JV	P	2/2/09
R597	WS	P-360/TI	1/31/2009	3:50	P	2X2	X9	JV	P	2/2/09
R598	AT	P-359/360/TI	1/31/2009	3:45	P	2X2	X9	JV	P	2/2/09
R599	AT	P-358/359/TI	1/31/2009	2:27	P	2X2	X9	JV	P	2/2/09
R600	AT	P-359/360/361	1/31/2009	3:00	P	2X2	X9	JV	P	2/2/09

Defect Code:

BO - Burn Out
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FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R601	AT	P-360/361/362	1/31/2009	3:08	P	2X2	X9	JV	P	2/2/09
R602	DT-144	P-361/362 26'> BOS	1/31/2009	3:29	P	2X5	X9	JV	P	2/2/09
R603	BO	P-356/358 87'> BOS	1/31/2009	2:38	P	2X2	X9	JV	P	2/2/09
R604	BO	P-355/356 109'> BOS	1/31/2009	2:45	P	2X2	X9	JV	P	2/2/09
R605	BO	P-355/354 57'> BOS	1/31/2009	2:42	P	2X2	X9	JV	P	2/2/09
R606	BO	P-355/354 52'> BOS	1/31/2009	2:48	P	2X2	X9	JV	P	2/2/09
R607	DT-141	P-352/354 38'> BOS	1/31/2009	3:12	P	2X5	X9	JV	P	2/2/09
R608	BO	P-351/352 121'> BOS	1/31/2009	9:22	P	2X3	X9	JV	P	2/2/09
R609	BO	P-350/351 116'> BOS	1/31/2009	9:15	P	2X2	X9	JV	P	2/2/09
R610	BO	P-350/351 167'> BOS	1/31/2009	9:25	P	2X2	X9	JV	P	2/2/09
R611	DT-139	P-349/350 106'> BOS	1/31/2009	2:35	P	2X5	X9	JV	P	2/2/09
R612	AT	P-352/353/354	1/31/2009	1:37	P	2X2	X9	JV	P	2/2/09
R613	BO	P-352/353 55'> BOS	1/31/2009	1:35	P	2X2	X9	JV	P	2/1/09
R614	BO	P-352/353 42'> BOS	1/31/2009	1:33	P	2X2	X9	JV	P	2/1/09
R615	DT & AT	P-353/354/355	1/31/2009	1:55	P	3X8	X9	JV	P	2/1/09
R616	BO	P-355/356 32'> BOS	1/31/2009	2:07	P	2X2	X9	JV	P	2/1/09
R617	BO	P-355/356 22'> BOS	1/31/2009	2:02	P	2X2	X9	JV	P	2/1/09
R618	AT	P-355/356/TI	1/31/2009	1:27	P	2X2	X9	JV	P	2/1/09
R619	AT	P-353/355/TI	1/31/2009	1:14	P	2X2	X9	JV	P	2/1/09
R620	EE	P-352/353 into TI	1/31/2009	1:01	P	2X3	X9	JV	P	2/1/09
R621	AT	P-352/351/TI	1/31/2009	11:54	P	2X9	X9	JV	P	2/1/09
R622	BO	P-352/351 13'> BOS	1/31/2009	11:56	P	2X2	X9	JV	P	2/1/09
R623	BO	P-352/351 21'> BOS	1/31/2009	12:00	P	2X4	X9	JV	P	2/1/09
R624	DT-140	P-351/352 40'> BOS	1/31/2009	2:32	P	2X5	X9	JV	P	2/1/09
R625	AT	P-350/351/TI	1/31/2009	11:39	P	2X2	X9	JV	P	2/1/09
R626	AT	P-349/350/TI	1/31/2009	11:35	P	2X4	X9	JV	P	2/1/09
R627	Short Panel	P-349/TI	1/31/2009	11:20	P	10X8	X9	JV	P	2/1/09
R628	WS	P-349/TI 73'> BOS	1/31/2009	11:00	P	2X4	X9	JV	P	2/1/09
R629	WS	P-349/TI 91'> BOS	1/31/2009	9:45	P	2X2	X9	JV	P	2/1/09
R630	WS	P-349/TI 182'> BOS	1/31/2009	8:52	P	2X3	X9	JV	P	2/1/09
R631	EE	P-349/TI 202'> BOS	1/31/2009	8:45	P	2X2	X9	JV	P	2/1/09
R632	WS	P-349/TI 251'> BOS	1/31/2009	8:30	P	2X2	X9	JV	P	2/1/09
R633	WS	P-349/TI	2/1/2009	10:54	P	2X2	X9	JV	P	2/1/09
R634	AT	P-349/350/TI	2/1/2009	10:40	P	2X3	X9	JV	P	2/1/09
R635	BO	P-349/350 27'> EOS	1/31/2009	8:25	P	2X2	X9	JV	P	2/1/09
R636	Pipe	P-350 15'> EOS	2/1/2009	8:00	P	4X4	X9	JV	P	2/1/09
R637	AT	P-350/351/TI	2/1/2009	10:30	P	2X2	X9	JV	P	2/1/09
R638	WR	P-352/TI	2/1/2009	10:09	P	2X15	X9	JV	P	2/2/09
R639	BO	P-351/352 182'> BOS	1/31/2009	9:20	P	2X2	X9	JV	P	2/2/09
R640	DT-142	P-355/356 24'> EOS	1/31/2009	5:16	P	2X5	X9	JV	P	2/2/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R641	AT	P-355/356/357	2/1/2009	8:45	P	2X4	X9	JV	P	2/2/09
R642	MD	P-357	2/1/2009	8:38	P	2X2	X9	JV	P	2/2/09
R643	MD	P-357	2/1/2009	8:41	P	2X2	X9	JV	P	2/2/09
R644	AT	P-356/357/358	2/1/2009	8:35	P	2X2	X9	JV	P	2/2/09
R645	DT-143	P-358/359 57'> EOS	1/31/2009	5:26	P	3X6	X9	JV	P	2/2/09
R646	DT-146	P-362	2/1/2009	12:36	BT	5X7	X9	JV	P	2/2/09
R647	DT	P-366/368 57'> EOS	2/1/2009	12:39	P	2X5	X9	JV	P	2/2/09
R648	AT	P-370/371/372	1/31/2009	2:35	P	2X2	X9	JV	P	2/2/09
R649	AT	P-371/372/373	1/31/2009	2:28	P	2X2	X9	JV	P	2/2/09
R650	AT	P-372/373/374	1/31/2009	2:20	P	2X2	X9	JV	P	2/2/09
R651	BO	P-373/374 11'> BOS	1/31/2009	2:15	P	2X2	X9	JV	P	2/2/09
R652	AT	P-373/374/375	1/31/2009	2:10	P	2X4	X9	JV	P	2/2/09
R653	AT	P-374/375/TI	2/1/2009	9:02	P	2X3	X8	FL	P	2/2/09
R654	MD	P-374/TI 4'> R653	2/1/2009	9:20	P	2X7	X8	FL	P	2/2/09
R655	MD	P-374/372/TI	2/1/2009	9:40	P	2X5	X8	FL	P	2/2/09
R656	SI	P-372 2'> R655	2/1/2009	9:58	P	2X2	X8	FL	P	2/2/09
R657	BT	P-372/TI	2/1/2009	10:00	BT	3X8	X8	FL	P	2/2/09
R658	MD	TI 4'> R655	2/1/2009	9:44	P	2X2	X8	FL	P	2/2/09
R659	MD	P-372/TI	2/1/2009	10:30	P	2X8	X8	FL	P	2/2/09
R660	AT	P-372/370/TI	2/1/2009	10:40	P	2X3	X8	FL	P	2/2/09
R661	MD	P-372 1'> EOS	2/1/2009	10:45	P	2X2	X8	FL	P	2/2/09
R662	MD	P-369/TI	2/1/2009	10:50	P	2X8	X8	FL	P	2/2/09
R663	AT	P-370/369 7'> EOS	2/1/2009	1:10	P	2X5	X8	FL	P	2/2/09
R664	MD	P-369 4' into P-369 12'> TI	2/1/2009	1:15	P	2X2	X8	FL	P	2/2/09
R665	MD	P-369 17'>R664 EOS	2/2/2009	7:58	P	2X2	X9	JV	P	2/2/09
R666	MD	P-368 4'> R667 EOS	2/1/2009	1:29	P	2X6	X8	FL	P	2/2/09
R667	WR	P-368/TI 1'> EOS	2/1/2009	1:36	P	2X2	X8	FL	P	2/2/09
R668	MD	TI 3'> R667 EOS	2/1/2009	1:42	P	2X2	X8	FL	P	2/2/09
R669	MD	P-365/T-1 6' into P-365 EOS	2/1/2009	1:50	P	2X6	X8	FL	P	2/2/09
R670	MD	P-364/TI 6' into P-364 EOS	2/1/2009	2:00	P	2X8	X8	FL	P	2/2/09
R671	MD	P-362/T-1 6' into TI	2/1/2009	12:57	P	2X7	X8	FL	P	2/2/09
R672	MD	P-359/TI 6' into TI	2/1/2009	12:06	P	2X8	X9	JV	P	2/2/09
R673	AT	P-358/357 7'> EOS	2/1/2009	8:53	P	2X2	X9	JV	P	2/2/09
R674	AT	P-357/355 6'> EOS	2/1/2009	8:47	P	2X4	X9	JV	P	2/2/09
R675	MD	TI 7'> R674 1' into TI	2/1/2009	9:15	P	2X3	X9	JV	P	2/2/09
R676	MD	TI 4' into TI 7'> R675	2/1/2009	9:20	P	2X2	X9	JV	P	2/2/09
R677	MD	TI Seam Bead	2/1/2009	9:32	GB	7'>	X9	JV	P	2/2/09
R678	MD	P-362 93' Middle of Panel	2/2/2009	8:40	P	2x2	X9	JV	P	2/2/09
R679	MD	P-365 93' 5' into Middle of Panel	2/2/2009	8:21	P	2X2	X9	JV	P	2/2/09
R680	MD	TI Middle of Panel 2'> P-375 Seam	2/2/2009	8:09	P	2X2	X9	JV	P	2/2/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
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Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R681	AT	P-376/377/TI	2/2/2009	9:10	P	2X2	X9	JV	P	2/2/09
R682	BO	P-377/376 8'> BOS	2/4/2009	2:22	P	2X2	X8	DR	P	2/5/09
R683	BO	P-376/377 17'> BOS	2/4/2009	2:28	P	2X2	X8	DR	P	2/5/09
R684	BO	P-376/377 37'> BOS	2/4/2009	2:37	P	2X5	X8	DR	P	2/5/09
R685	BO	P-376/377 45'> BOS	2/4/2009	2:42	P	2X2	X8	DR	P	2/5/09
R686	DT-149	P-376/377 61'> BOS	2/4/2009	2:46	P	2X5	X8	DR	P	2/5/09
R687	Pipe	P-348/376 28'> BOS	2/4/2009	4:02	BT	5X8	X8	DR	P	2/5/09
R688	DT-148	P-348/376 45'> BOS	2/4/2009	3:02	P	2X5	X8	DR	P	2/5/09
R689	AT	P-348/378	2/14/2009	3:00	P	2X2	X8	DR	P	2/15/09
R690	AT	P-377/378/TI	2/14/2009	3:04	P	2X2	X8	DR	P	2/15/09
R691	DT-150	P-377/378 34'> BOS	2/4/2009	4:14	P	2X5	X8	DR	P	2/15/09
R692	WS	P-378/TI	2/14/2009	3:22	P	2X2	X8	DR	P	2/15/09
R693	AT	P-378/379/TI	2/14/2009	3:25	P	2X2	X8	DR	P	2/15/09
R694	AT	P-379/380/TI	2/14/2009	3:28	P	2X2	X8	DR	P	2/15/09
R695	WS	P-380/TI	2/14/2009	3:31	P	2X2	X8	DR	P	2/15/09
R696	DT-152	P-379/380 54'> BOS	2/4/2009	4:34	P	2X5	X8	DR	P	2/5/09
R697	DT-151	P-378/379 47'> BOS	2/4/2009	4:27	P	2X5	X8	DR	P	2/5/09
R698	AT	P-347/348/376	2/4/2009	4:40	P	2X2	X8	DR	P	2/5/09
R699	BO	P-376/378 183'> BOS	2/4/2009	4:03	P	2X2	X8	DR	P	2/5/09
R700	BO	P-376/347 57'> BOS	2/4/2009	4:06	P	2X2	X8	DR	P	2/5/09
R701	BO	P-376/377 286'> BOS	2/4/2009	5:32	P	2X2	X8	DR	P	2/5/09
R702	BO	P-347/376 165'> BOS	2/4/2009	5:47	P	2X4	X8	DR	P	2/5/09
R703	BO	P-376/377 331'> BOS	2/4/2009	5:45	P	2X2	X8	DR	P	2/5/09
R704	BO	P-376/377 421'> BOS	2/4/2009	5:49	P	2X2	X8	DR	P	2/5/09
R705	BO	P-347/376 112'> EOS	2/4/2009	5:53	P	2X2	X8	DR	P	2/5/09
R706	BO	P-376/377 480'> BOS	2/4/2009	5:51	P	2X2	X8	DR	P	2/5/09
R707	BO	P-376/377 510'> BOS	2/5/2009	8:12	P	2X2	X9	JV	P	2/5/09
R708	Short Panel	P-376/347	2/5/2009	8:49	P	8X10	X9	JV	P	2/5/09
R709	MD	P-376	2/5/2009	8:15	P	2X2	X9	JV	P	2/5/09
R710	MD	P-376	2/5/2009	8:10	P	2X2	X9	JV	P	2/5/09
R711	MD	P-376	2/5/2009	8:20	P	2X2	X9	JV	P	2/5/09
R712	BO	P-377/378 132'> EOS	2/5/2009	8:25	P	2X2	X9	JV	P	2/5/09
R713	BO	P-374/380 132'> EOS	2/4/2009	6:06	P	2X2	X8	DR	P	2/5/09
R714	Pipe	P-378/379 185'> BOS	2/4/2009	5:20	BT	3X8	X8	DR	P	2/5/09
R715	MD	P-412/TI	2/13/2009	9:16	P	6X8	X9	JV	P	2/14/09
R716	AT	P-412/413/TI	2/13/2009	4:48	P	2X4	X9	JV	P	2/14/09
R717	AT	P-412/413	2/13/2009	8:50	P	2X2	X9	JV	P	2/14/09
R718	MD	P-413/TI	2/13/2009	5:22	P	6X8	X9	JV	P	2/14/09
R719	BO	P-413/409 13'> BOS	2/13/2009	5:36	P	2X2	X9	JV	P	2/14/09
R720	MD	P-413/TI	2/13/2009	5:30	P	5X6	X9	JV	P	2/14/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 19 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R721	AT	P-413/409/TI	2/13/2009	5:35	P	2X2	X9	JV	P	2/14/09
R722	WS	P-409/TI	2/13/2009	9:15	P	2X2	X8	DR	P	2/14/09
R723	WS	P-409/TI	2/13/2009	9:22	P	2X2	X8	DR	P	2/14/09
R724	MD	P-409/TI	2/13/2009	9:32	P	2X2	X8	DR	P	2/14/09
R725	BO	P-409/408 14'> BOS	2/13/2009	10:50	P	2X4	X8	DR	P	2/14/09
R726	AT	P-408/409/TI	2/13/2009	10:53	P	2X2	X8	DR	P	2/14/09
R727	AT	P-406/408/TI	2/13/2009	10:57	P	2X2	X8	DR	P	2/14/09
R728	AT	P-405/406/TI	2/13/2009	11:09	P	4X4	X8	DR	P	2/14/09
R729	AT	P-403/405/TI	2/13/2009	11:15	P	2X2	X8	DR	P	2/14/09
R730	AT	P-401/403/TI	2/13/2009	2:07	P	2X3	X8	DR	P	2/14/09
R731	AT	P-400/401/TI	2/13/2009	2:01	P	2X3	X8	DR	P	2/14/09
R732	EE	P-400	2/13/2009	2:12	P	2X5	X8	DR	P	2/14/09
R733	AT	P-398/400/TI	2/13/2009	1:25	P	2X3	X8	DR	P	2/14/09
R734	DT	P-398/400 27'> BOS	2/14/2009	4:08	P	2X5	X8	DR	P	2/14/09
R735	WS	P-398/400 51'> EOS	2/14/2009	2:20	P	2X2	X8	DR	P	2/14/09
R736	WS	P-398/400 43'> EOS	2/14/2009	2:24	P	2X2	X8	DR	P	2/14/09
R737	BO	P-398/400 27'> EOS	2/14/2009	2:34	P	3X5	X8	DR	P	2/14/09
R738	AT	P-398/399/400	2/13/2009	2:41	P	2X2	X8	DR	P	2/14/09
R739	AT	P-399/400/401	2/13/2009	2:42	P	2X5	X8	DR	P	2/14/09
R740	DT-158	P-401/403 114'> BOS	2/14/2009	8:21	P	2X5	X9	JV	P	2/14/09
R741	BO	P-403/405 89'> BOS	2/14/2009	11:18	P	2X2	X9	JV	P	2/14/09
R742	EE	P-405	2/14/2009	11:22	P	2X2	X8	DR	P	2/14/09
R743	BO	P-401/403 159'> BOS	2/14/2009	7:55	P	2X2	X9	JV	P	2/14/09
R744	BO	P-401/403 166'> BOS	2/14/2009	7:53	P	2X5	X9	JV	P	2/14/09
R745	BO	P-401/399 31'> BOS	2/14/2009	8:12	P	2X4	X9	JV	P	2/14/09
R746	Pipe	P-409/411 77'> BOS	2/14/2009	8:36	P	5X5	X9	JV	P	2/14/09
R747	DT	P-410/254 29'> EOS	2/14/2009	4:06	P	2X5	X9	JV	P	2/14/09
R748	DT-154	P-412/411 86'> BOS	2/14/2009	3:56	P	2X5	X9	JV	P	2/14/09
R749	BO	P-408/411 52'> EOS	2/14/2009	9:25	P	2X2	X9	JV	P	2/14/09
R750	DT-155	P-409/411 16'> EOS	2/14/2009	3:43	P	2X5	X9	JV	P	2/14/09
R751	AT	P-409/410/411	2/14/2009	9:50	P	2X2	X9	JV	P	2/14/09
R752	AT	P-410/411/414	2/14/2009	9:45	P	2X2	X9	JV	P	2/14/09
R753	AT	P-411/412/414	2/14/2009	9:41	P	2X4	X9	JV	P	2/14/09
R754	BO	P-417/254 54'> EOS	2/14/2009	9:54	P	2X4	X9	JV	P	2/14/09
R755	WS	P-412/254 8'> EOS	2/14/2009	9:58	P	2X2	X9	JV	P	2/14/09
R756	WS	P-412/414 10'> EOS	2/14/2009	10:03	P	2X2	X9	JV	P	2/14/09
R757	Pipe	P-414	2/14/2009	10:49	P	6X5	X9	JV	P	2/14/09
R758	WS	P-410/414 7'> EOS	2/14/2009	10:36	P	2X2	X9	JV	P	2/14/09
R759	WS	P-409/410 10'> EOS	2/14/2009	10:53	P	2X2	X9	JV	P	2/14/09
R760	WS	P-407/409 10'> EOS	2/14/2009	10:58	P	2X2	X9	JV	P	2/14/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R761	WS	P-406/407 10'> EOS	2/14/2009	11:02	P	2X2	X9	JV	P	2/14/09
R762	WS	P-404/406 10'> EOS	2/13/2009	1:08	P	2X2	X9	JV	P	2/14/09
R763	WS	P-402/404 19'> EOS	2/13/2009	1:02	P	2X3	X9	JV	P	2/14/09
R764	DT-156	P-406/407 18'> BOS	2/13/2009	3:32	P	2X5	X9	JV	P	2/14/09
R765	AT	P-406/407/408	2/13/2009	11:08	P	2X2	X9	JV	P	2/14/09
R766	MD	P-408	2/13/2009	11:14	P	2X2	X9	JV	P	2/14/09
R767	AT	P-407/408/409	2/13/2009	11:10	P	2X2	X9	JV	P	2/14/09
R768	BO	P-406/408 27'> EOS	2/13/2009	11:21	P	2X2	X9	JV	P	2/14/09
R769	BO	P-405/408 45'> EOS	2/13/2009	11:35	P	2X5	X9	JV	P	2/14/09
R770	AT	P-404/405/406	2/13/2009	11:40	P	2X2	X9	JV	P	2/14/09
R771	WS	P-404/405 3'> EOS	2/13/2009	11:50	P	2X3	X9	JV	P	2/14/09
R772	MD	P-405/408 45'> EOS	2/13/2009	11:53	P	2X2	X9	JV	P	2/14/09
R773	DT-157	P-403/405 21'> EOS	2/13/2009	3:20	P	2X5	X9	JV	P	2/14/09
R774	BO	P-401/403 45'> EOS	2/13/2009	12:30	P	2X5	X9	JV	P	2/14/09
R775	AT	P-403/404/405	2/13/2009	12:03	P	2X6	X9	JV	P	2/14/09
R776	BO	P-403/404 7'> BOS	2/13/2009	12:05	P	2X2	X9	JV	P	2/14/09
R777	AT	P-402/403/404	2/13/2009	12:15	P	2X4	X9	JV	P	2/14/09
R778	AT	P-401/402/403	2/13/2009	12:22	P	2X2	X9	JV	P	2/14/09
R779	WS	P-401/402 10'> EOS	2/13/2009	1:24	P	2X2	X9	JV	P	2/14/09
R780	WS	P-401/399 11'> EOS	2/13/2009	1:30	P	2X2	X9	JV	P	2/14/09
R781	WS	P-399/398 12'> EOS	2/13/2009	1:36	P	2X2	X9	JV	P	2/14/09
R782	EE	P-399	2/13/2009	5:30	P	4X4	X9	JV	P	2/14/09
R783	WS	P-397/398	2/13/2009	1:30	P	2X2	X8	DR	P	2/14/09
R784	WS	P-397	2/13/2009	1:35	P	2X2	X8	DR	P	2/14/09
R785	MD	P-397	2/13/2009	1:51	P	2X2	X8	DR	P	2/14/09
R786	MD	P-397	2/13/2009	1:54	P	2X2	X8	DR	P	2/14/09
R787	AT	P-397/398/396	2/14/2009	8:55	P	2X2	X8	DR	P	2/14/09
R788	AT	P-397/395/396	2/14/2009	8:15	P	2X2	X8	DR	P	2/15/09
R789	MD	TI	2/13/2009	1:44	P	2X2	X8	DR	P	2/15/09
R790	WS	P-397/395	2/14/2009	8:44	P	2X2	X8	DR	P	2/15/09
R791	MD	TI	2/14/2009	8:35	P	2X2	X8	DR	P	2/15/09
R792	WS	P-395/393	2/14/2009	8:24	P	2X2	X8	DR	P	2/15/09
R793	WS	P-393/396	2/14/2009	8:09	P	2X2	X8	DR	P	2/15/09
R794	WS	P-392	2/14/2009	8:04	P	2X2	X8	DR	P	2/15/09
R795	Pipe	P-392/391	2/14/2009	10:34	BT	8X6	X8	DR	P	2/15/09
R796	AT	P-392/393/391	2/14/2009	10:19	P	2X5	X8	DR	P	2/15/09
R797	BO	P-391/393 15'> BOS	2/14/2009	10:10	P	2X2	X8	DR	P	2/15/09
R798	BO	P-391/393 71'> BOS	2/14/2009	9:29	P	2X2	X8	DR	P	2/15/09
R799	AT	P-391/388/389	2/14/2009	9:44	P	2X3	X8	DR	P	2/15/09
R800	BO	P-388/391	2/14/2009	9:39	P	2X3	X8	DR	P	2/15/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R801	BO	P-388/391 28'> BOS	2/14/2009	9:34	P	2X2	X8	DR	P	2/15/09
R802	Pipe	P-393/395	2/14/2009	4:55	BT	4X6	X8	DR	P	2/15/09
R803	Pipe	P-395/396 49'> EOS	2/14/2009	4:09	BT	4X6	X8	DR	P	2/15/09
R804	DT-163	P-395/396 20'> EOS	2/14/2009	8:33	P	2X5	X9	JV	P	2/15/09
R805	BO	P-391/388 17'> EOS	2/14/2009	1:26	P	2X3	XP	JV	P	2/15/09
R806	AT	P-388/387/391	2/14/2009	1:20	P	2X2	X9	JV	P	2/15/09
R807	BO	P-393/395	2/13/2009	4:30	P	2X2	X8	DR	P	2/15/09
R808	AT	P-393/395/394	2/13/2009	4:28	P	2X3	X8	DR	P	2/15/09
R809	AT	P-394/395/396	2/13/2009	4:15	P	2X3	X8	DR	P	2/15/09
R810	BO	P-396/398 222'> BOS	2/13/2009	8:39	P	2X2	X9	JV	P	2/15/09
R811	BO	P-391/393	2/14/2009	8:52	P	2X2	X9	JV	P	2/15/09
R812	BO	P-394/396 102'> EOS	2/14/2009	8:46	P	2X5	X9	JV	P	2/15/09
R813	BO	P-393/391 286'> BOS	2/14/2009	9:00	P	2X2	X9	JV	P	2/15/09
R814	BO	P-391/393 294'> BOS	2/14/2009	9:05	P	2X2	X9	JV	P	2/15/09
R815	DT-164	P-393/394 81'> BOS	2/14/2009	8:58	P	2X5	X9	JV	P	2/15/09
R816	BO	P-396/398 281'> BOS	2/13/2009	3:03	P	2X2	X9	JV	P	2/15/09
R817	MD	P-398	2/13/2009	2:57	P	2X2	X9	JV	P	2/15/09
R818	MD	P-398	2/13/2009	2:55	P	2X2	X9	JV	P	2/15/09
R819	MD	P-398	2/13/2009	2:53	P	2X2	X9	JV	P	2/15/09
R820	MD	P-398	2/13/2009	2:50	P	2X2	X9	JV	P	2/15/09
R821	MD	P-398	2/13/2009	2:48	P	2X2	X9	JV	P	2/15/09
R822	MD	P-398	2/13/2009	1:55	P	2X2	X9	JV	P	2/15/09
R823	MD	P-398	2/13/2009	1:47	P	2X2	X9	JV	P	2/15/09
R824	Pipe	P-396/398 7'> EOS	2/13/2009	2:45	BT	4X6	X9	JV	P	2/15/09
R825	WS	P-396/394 6'> EOS	2/14/2009	9:13	P	2X2	X9	JV	P	2/15/09
R826	BO	P-396/394 11'> EOS	2/14/2009	9:24	P	2X2	X9	JV	P	2/15/09
R827	WS	P-398/399 14'> EOS	2/14/2009	9:30	P	2X2	X9	JV	P	2/15/09
R828	DT-165	P-391/393 14'> EOS	2/14/2009	9:44	P	2X6	X9	JV	P	2/15/09
R829	BO	P-391/393 333'> BOS	2/14/2009	9:10	P	2X2	X9	JV	P	2/15/09
R830	CR	P-391	2/14/2009	9:08	GB	2X2	X9	JV	P	2/15/09
R831	WS	P-387/391 15'> EOS	2/14/2009	9:47	P	2X2	X9	JV	P	2/15/09
R832	BO	P-387/391	2/14/2009	9:50	P	2X2	X9	JV	P	2/15/09
R833	WS	P-387/386 15'> EOS	2/14/2009	9:55	P	2X2	X9	JV	P	2/15/09
R834	WS	P-386/385 15'> EOS	2/14/2009	10:03	P	2X2	X9	JV	P	2/15/09
R835	WS	P-385/384 15'> EOS	2/14/2009	10:29	P	2X2	X9	JV	P	2/15/09
P-836	DD	P-384	2/14/2009	10:40	P	4X4	X9	JV	P	2/15/09
R837	WS	P-384/383 14'> EOS	2/14/2009	10:46	P	2X2	X9	JV	P	2/15/09
R838	WS	P-383/382	2/14/2009	10:56	P	2X2	X9	JV	P	2/15/09
R839	WS	P-382/381 16'> EOS	2/14/2009	11:18	P	2X2	X9	JV	P	2/15/09
R840	WS	P-381/380 16'> EOS	2/14/2009	11:25	P	2X2	X9	JV	P	2/15/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752 Material: LLDPE
Project Name: North Wake
Project Start Date: 8/14/2008 Thickness: 40 mil
Project Location: Raleigh NC
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Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R841	BO	P-383/382	2/14/2009	11:10	P	2X5	X9	JV	P	2/15/19
R842	BO	P-383/382 70'> EOS	2/14/2009	11:36	P	2X2	X9	JV	P	2/15/09
R843	BO	P-384/383 400'> EOS	2/14/2009	11:40	P	2X2	X9	JV	P	2/15/09
R844	BO	P-385/384 86'> EOS	2/14/2009	11:50	P	2X7	X9	JV	P	2/15/09
R845	DT-167	P-385/384 96'> EOS	2/14/2009	1:00	P	2X5	X9	JV	P	2/15/09
R846	BO	P-385/386 388'> EOS	2/14/2009	10:10	P	2X2	X9	JV	P	2/15/09
R847	BO	P-385/386 396'> EOS	2/14/2009	10:18	P	2X4	X9	JV	P	2/15/09
R848	DT-166	P-387/386 75'> BOS	2/14/2009	1:09	P	2X2	X9	JV	P	2/15/09
R849	BO	P-387/386 19'> BOS	2/14/2009	11:12	P	2X2	X9	JV	P	2/15/09
R850	AT	P-387/386/388	2/14/2009	1:17	P	2X2	X9	JV	P	2/15/09
R851	BO	P-386/385	2/14/2009	1:30	P	2X2	X9	JV	P	2/15/09
R852	BO	P-380/381 342'> BOS	2/14/2009	1:50	P	2X2	X9	JV	P	2/15/09
R853	Pipe	P-381	2/14/2009	2:45	BT	4X4	X9	JV	P	2/15/09
R854	Pipe	P-381/382 293'> BOS	2/14/2009	1:55	BT	5X5	X9	JV	P	2/15/09
R855	BO	P-382/383 287'> BOS	2/14/2009	1:43	P	2X2	X9	JV	P	2/15/09
R856	BO	P-383/384 257'> BOS	2/14/2009	1:40	P	2X2	X9	JV	P	2/15/09
R857	BO	P-385/386 180'> BOS	2/14/2009	3:20	P	2X2	X9	JV	P	2/15/09
R858	BO	P-385/386 163'> BOS	2/14/2009	3:25	P	2X2	X9	JV	P	2/15/09
R859	DT-170	P-380/381 210'> BOS	2/14/2009	3:06	P	2X5	X9	JV	P	2/15/09
R860	DT-169	P-381/382 205'> BOS	2/14/2009	3:12	P	2X5	X9	JV	P	2/15/09
R861	DT-168	P-383/384 110'> BOS	2/14/2009	3:31	P	2X5	X9	JV	P	2/15/09
R862	BO	P-384/385 104'> BOS	2/14/2009	1:12	P	2X2	X8	DR	P	2/15/09
R863	BO	P-385/386	2/14/2009	1:06	P	2X3	X8	DR	P	2/15/09
R864	AT	P-389/390/386	2/14/2009	10:53	P	2X2	X8	DR	P	2/15/09
R865	DT-161	P-398/396 70'> BOS	2/14/2009	9:14	P	2X5	X8	DR	P	2/15/09
R866	DT-162	P-386/385 12'> EOS	2/14/2009	12:59	P	2X5	X8	DR	P	2/15/09
R867	AT	P-386/385	2/14/2009	12:57	P	2X2	X8	DR	P	2/15/09
R868	BO	P-385/384	2/14/2009	1:16	P	2X2	X8	DR	P	2/15/09
R869	EE	P-384	2/14/2009	1:20	P	2X5	X8	DR	P	2/15/09
R870	AT	P-385/384	2/14/2009	1:43	P	2X2	X8	DR	P	2/15/09
R871	AT	P-383/384	2/14/2009	1:46	P	2X2	X8	DR	P	2/15/09
R872	AT	P-383/382	2/14/2009	1:50	P	2X2	X8	DR	P	2/15/09
R873	AT	P-382/381	2/14/2009	1:58	P	2X2	X8	DR	P	2/15/09
R874	BO	P-382/381 17'> BOS	2/14/2009	2:55	P	2X2	X8	DR	P	2/15/09
R875	EE	P-381	2/14/2009	4:05	P	2X3	X9	JV	P	2/15/09
R876	BO	P-381/380 31'> BOS	2/14/2009	4:00	P	2X2	X9	JV	P	2/15/09
R877	BO	P-381/380 53'> BOS	2/14/2009	3:43	P	2X2	X9	JV	P	2/15/09
R878	AT	P-380/381	2/14/2009	3:38	P	2X3	X8	DR	P	2/15/09
R879	BO	P-380/379 7'> BOS	2/14/2009	4:03	P	2X2	X8	DR	P	2/15/09
R880	SI	P-379	2/14/2009	3:10	P	2X2	X8	DR	P	2/15/09

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 23 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R881	SI	P-378	2/14/2009	3:15	P	2X2	X8	DR	P	2/15/09
R882	SI	P-380	2/14/2009	3:20	P	2X2	X8	DR	P	2/15/09
R883	EE	P-396	2/19/2009	9:25	P	6X10	X9	GY	P	2/19/09
R884	EE	P-386	2/19/2009	9:30	P	2X2	X9	GY	P	2/19/09
R885	EE	P-385	2/19/2009	9:40	P	2X2	X9	GY	P	2/19/09
R886	EE	P-383	2/19/2009	9:51	P	2X2	X9	GY	P	2/19/09
R887	MD	P-415	2/20/2009	11:48	P	2X2	X9	AL	P	2/21/09
R888	AT	P-375/415/TI	2/20/2009	11:20	P	2X2	X9	AL	P	2/21/09
R889	AT	P-415/416/TI	2/20/2009	10:49	P	2X2	X9	AL	P	2/21/09
R890	AT	P-416/417/TI	2/20/2009	10:39	P	2X2	X9	AL	P	2/21/09
R891	WS	P-417/TI	2/20/2009	10:32	P	2X2	X9	AL	P	2/21/09
R892	AT	P-417/421/TI	2/20/2009	10:25	P	2X2	X9	AL	P	2/21/09
R893	EE	P-421/TI	2/20/2009	12:30	P	2X2	X9	AL	P	2/21/09
R894	WS	P-421/TI	2/20/2009	12:09	P	2X2	X9	AL	P	2/21/09
R895	AT	P-417/421/TI	2/20/2009	12:29	P	2X2	X9	AL	P	2/21/09
R896	DT	P-416/417 63'> EOS	2/20/2009	12:45	P	2X5	X9	AL	P	2/21/09
R897	AT	P-417/420/TI	2/20/2009	2:36	P	2X6	X9	AL	P	2/21/09
R898	AT	P-419/420/TI	2/20/2009	2:48	P	2X2	X9	AL	P	2/21/09
R899	AT	P-418/419/TI	2/20/2009	2:58	P	2X2	X9	AL	P	2/21/09
R900	DT	P-418/419/TI 10'> BOS	2/20/2009	3:01	P	2X5	X9	AL	P	2/21/09
R901	AT	P-418/376/TI	2/20/2009	3:10	P	2X3	X9	AL	P	2/21/09
R902	BO	P-418/376 8'> EOS	2/20/2009	3:20	P	2X2	X9	AL	P	2/21/09
R903	WS	P-418/376/TI	2/20/2009	3:30	P	2X5	X9	AL	P	2/21/09
R904	AT	P-418/419/TI	2/20/2009	4:51	P	2X3	X9	AL	P	2/21/09
R905	AT	P-419/420/417/TI	2/20/2009	4:39	P	2X5	X9	AL	P	2/21/09
R906	AT	P-416/417/TI	2/20/2009	4:23	P	2X2	X9	AL	P	2/21/09
R907	EE	TI	2/20/2009	4:20	P	2X7	X9	AL	P	2/21/09
R908	AT	P-415/416/TI	2/20/2009	3:25	P	2X8	X8	CM	P	2/21/09
R909	WS	P-415/TI	2/20/2009	3:00	P	2X2	X8	CM	P	2/21/09
R910	EE	P-415/TI	2/20/2009	5:00	P	2X10	X8	CM	P	2/21/09
R911	AT	P-415/375/TI	2/20/2009	5:07	P	2X2	X8	CM	P	2/21/09
R912	DT	P-415/375 27'> BOS	2/20/2009	5:15	P	2X5	X8	CM	P	2/21/09
R913	BO	P-415/416 61'> BOS	2/20/2009	5:18	P	2X4	X8	CM	P	2/21/09
R914	EE	P-412	2/20/2009	10:55	P	4X4	X8	CM	P	2/21/09
R915	DD	P-376	2/20/2009	4:02	P	2X2	X8	CM	P	2/21/09
R916	DD	P-376	2/20/2009	4:15	P	2X2	X8	CM	P	2/21/09
R917	DD	P-367	2/20/2009	4:21	P	2X2	X8	CM	P	2/21/09
R918	EE	P-348	2/20/2009	4:30	P	2X2	X8	CM	P	2/21/09
R919	Pipe	East Slope	2/20/2009	11:09	BT	10X10	X8	CM	P	2/21/09
R920	EE	East Slope	2/20/2009	10:00	P	2X2	X8	CM	P	2/21/09

Defect Code:

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FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

CQC Form 107
Patch Placement Log

Project No.: 6172-55752
Project Name: North Wake
Project Start Date: 8/14/2008
Project Location: Raleigh NC
Page: 24 of 24

Material: LLDPE
Thickness: 40 mil

Repair #	Defect Code	Defect Location	Repair Date	Repair Time	Repair Type	Approx Size	Machine ID	Repair Tech	Vacuum Test	
									P/F	Date
R921	AT	P-417/420/419	2/20/2009	4:46	P	2X5	X9	AL	P	2/21/09
R922	AT	P-392/390/489	2/14/2009	1:06	P	2X3	X8	DR	P	2/15/09
R923	AT	P-390/389/392>EOS	2/14/2009	1:21	P	2X3	X8	DR	P	2/15/09
R924	AT	P-390/386>EOS	2/14/2009	2:30	P	2X3	X8	DR	P	2/15/09
R925	AT	P-392/389/391	2/14/2009	2:39	P	2X3	X8	DR	P	2/15/09
R926	AT	P-388/389/386	2/14/2009	3:02	P	2X3	X8	DR	P	2/15/09
P927	AT	P-26/28/77/80	8/20/2008	1:10	P	2x4	5	H.V.	P	8/20/08

Defect Code:

BO - Burn Out
CR - Crease
DT - Destructive Test Number
EE - Earthwork Equipment Damage
FM – Fishmouth
FT – Pressure Test Cut
T – Joint
SI - Soil Surface Irregularity
DD - Deployment Damage
MD - Material Damage
WR - Wrinkle
WS - Welder restart
FD - Factory Defect
AT - Air Test

Repair Type: C-Cap Strip, P- Patch, B-Extrudate Bead, GB-Grind & Bead, BT-Boot

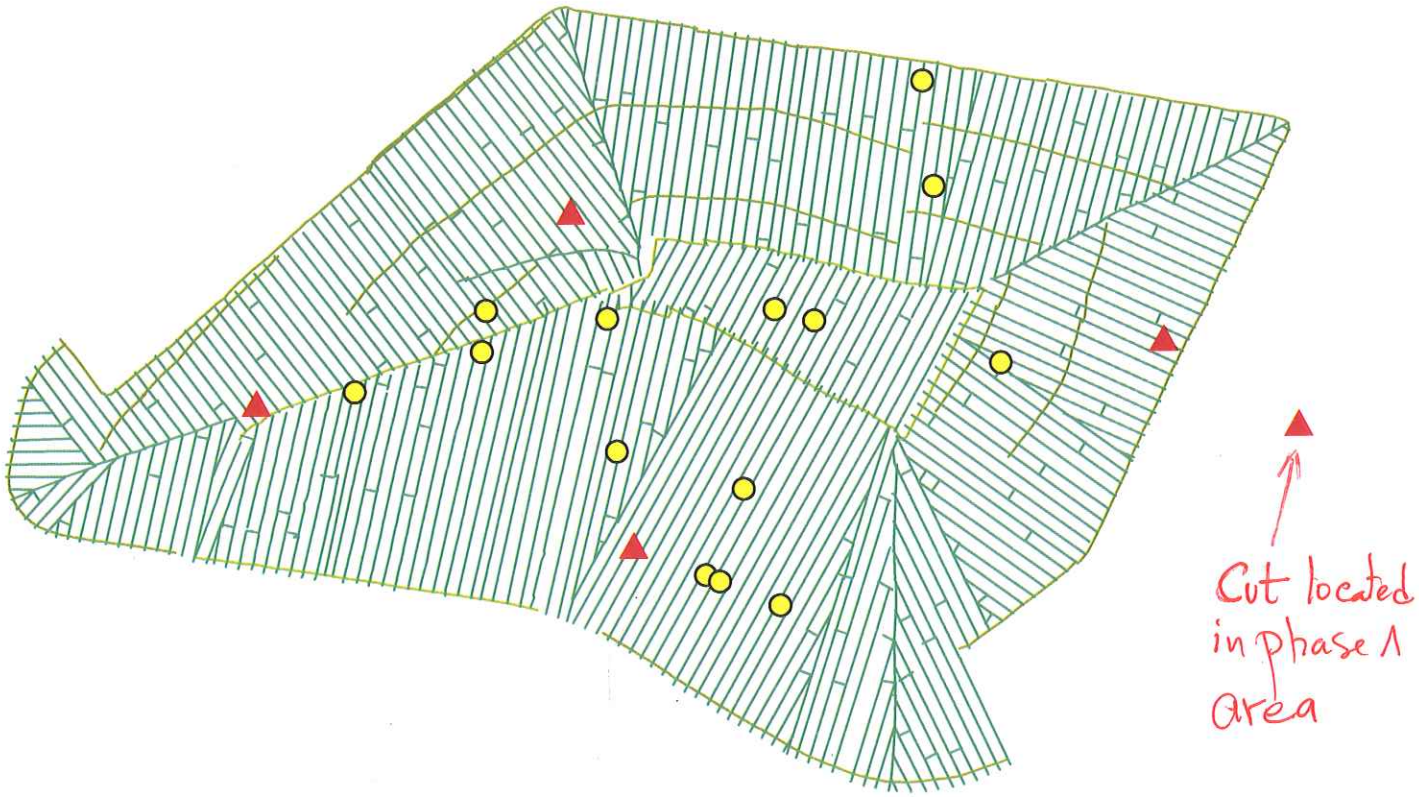
Test Result: P-Pass, F-Fail

Notations: BOS or 0-Beginning of Seam/ EOS-End of Seam/ --to an area/ >from an area/ NOAT-No AT

CDM

APPENDIX B-15

Supplemental LLDPE Liner Patch Replacement Survey



Legend

- ▲ Liner Damage Resulting from Installation of the Permanent Gas Line
- ● Cuts Performed to Release Gas Buildup Underneath the Liner

North Wake Landfill - Phase 2 Closure Project
Liner Patch Locations

CDM

APPENDIX C-1

Drainage Composite Manufacturer Qualifications and Experience

NORTH WAKE SUBTITLE D LANDFILL
PHASE 2 CLOSURE
WAKE COUNTY, NORTH CAROLINA

Submittal #3

Section 02274 – Composite Drainage Nets

- Proposed Seaming Method –Thermal Welding
- Material Data Sheet - TN 330-2-6
- Manufacturer's Certification Letter
- Manufacturer's QA/QC Manual
- Manufacturer's Installation Manual
- Manufacturer's Qualifications
- Material Samples - TN 330-2-6

PREPARED BY:
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152
June 3, 2008

HALLATON, INC.

1206 Sparks Road • Sparks, MD 21152
410 583 7700 • Fax: 410 583 7720

Geotextile Proposed Seaming Method

Field Seaming

Hallaton proposes using a dual track thermal fusion welder ("wedge welder") to seam the non woven Geotextile component of the Geocomposite. Fusion welding is a heat bonded weld fusing the two Geotextile panels together. It allows durability as well as a flat surface on the Geotextile. On side slopes, seams shall be oriented in the general direction of maximum slope, i.e., oriented down, not across the slope.

In areas where the geotextile does not allow room for a wedge welder to pass through a handheld hot air gun will be utilized to heat seam the Geotextile panels together.

Seam Overlap

Geotextile panels must have a finished minimum overlap of 4-6 inches for fusion welding.

Seaming Equipment and Accessories

Seaming will be performed using a Fusion Welder, 110 Volt (220 Volt).

-To avoid malfunctions with Fusion Welders used for seaming the Geomembrane, each crew will carry welders designated for the seaming of Geotextile only.

ENGINEERED SYNTHETIC PRODUCTS, INC.

405 Hood Road
Lilburn, GA 30047
Phone (770)564-1857

DRAINAGE PRODUCT DESCRIPTION SHEET
North Wake Landfill, Raleigh, NC
TRANSNET 330-2-6

Transnet 330-2-6 is a superior quality drainage media made by extruding two sets of HDPE strands together to form a diamond shaped net. The net is then heat laminated to a 6 ounce non-woven fabric. This three dimensional structure provides excellent planar liquid flow. The Transnet 330-2-6 conforms to the physical property values listed below:

NET PROPERTY	TEST METHOD	UNITS	MINIMUM AVERAGE ROLL VALUE
Melt Flow Index	ASTM D-1238	g/10 min.	1.0 max..
Thickness	ASTM D-5199	mils	300
Density of Polymer	ASTM D-1505	g/cm^2	0.94
Carbon Black	ASTM D-4218	%	2 - 3
Transmissivity (comp.)	ASTM D-4716	m^2/sec	8.6×10^{-4} *
Tensile Strength	ASTM D-5035	lbs/in.	37
Ply Adhesion	GRI GC7	lbs/in.	0.5

*Transmissivity of the geocomposite measured using water at 20 Degrees C with a gradient of 0.25, under a confining pressure of 1,000 psf, between soil and membrane after a 100 hour seating time. Values may vary based on dimension of the transmissivity specimen and specific laboratory.

STYLE GE-160

GE-160 is a superior quality, nonwoven geotextile produced by needlepunching together 100% polypropylene staple fibers in a random network to form a high strength dimensionally stable fabric. The polypropylene fibers are specially formulated to resist ultraviolet light deterioration, and are inert to commonly encountered soil chemicals. The fabric will not mildew, is non-biodegradable, and is resistant to damage from insects and rodents. Polypropylene is stable within a ph range of 2 to 13. GE-160 conforms to the physical property values below:

FABRIC PROPERTY	TEST METHOD	UNITS	MINIMUM AVERAGE ROLL VALUE
Weight	ASTM D-5261	oz.	6
Grab Tensile	ASTM D-4632	lbs	157
Grab Elongation	ASTM D-4632	%	50
Puncture	ASTM D-4833	Lbs.	56
Permittivity	ASTM D-4491	sec^{-1}	0.5
AOS	ASTM D-4751	US Sieve	70

Engineered Synthetic Products, Inc.
212 North Way
Birmingham, AL 35242
(205)981-1900; FAX (205)981-1901
email: g_kscott@bellsouth.net

Wednesday, May 28, 2008

Mr. Kennedy Garber
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152

Re: North Wake Landfill, Raleigh, NC
Geocomposite Certification Letter

Dear Mr. Garber;

We certify that the Skaps Industries, Inc. Transnet 330-2-6 drainage composite to be supplied to the above project will meet the requirements as stated in Sections 02274 and Addendum 1 of the North Wake Landfill project specifications. Actual certifications and roll specific test results for the geotextile, geonet and geocomposite will be provided upon shipment of the materials.

Sincerely,

Greg Scott

Greg Scott
Engineered Synthetic Products, Inc.

SKAPS INDUSTRIES, INC.

HISTORY

SKAPS Industries began producing geonets and geocomposites in February 1997 in Commerce, Georgia. Geonet thicknesses range from 160 mils to 330 mils. Geocomposites are laminated either single or double sided.

SKAPS Industries operates two state-of-the-art Geonet Extrusion Lines. This ensures that our customers who have special project-specific requirements are serviced without interfering with standard daily production.

The quality control testing laboratory is equipped with the most up-to-date equipment and operates six days per week. SKAPS maintains a strict QA/QC program designed around GRI and ASTM procedures and standards.

SKAPS Industries is committed to manufacturing the highest quality drainage nets and geocomposites as well as exceptional service before and after the sale.

SKAPS INDUSTRIES, INC.
Engineered Synthetic Products, Inc.

GEONET / GEOCOMPOSITE TESTING PROCEDURES

QC Sampling Schedule

All tests are performed every 35,000 square feet of production except for compressibility and melt index, which are tested once per shift (approximately every 250,000 square feet of production). Transmissivity is done on a requested basis.

Weight / Area (ASTM D 5261)

The width is determined by measuring the sample in three places--once across each cut end and once across the center. The three measurements are then averaged and reported in inches. The length is also determined by measuring three places--along both edges and along the center. These values are averaged and reported in inches. Samples are then taken and weighed to the nearest .001 lb/sf. The weight is divided by the average width to obtain a weight per length value. The weight/length number is divided by the average width value to obtain weight per area. The value is reported in lbs/sf.

Thickness (ASTM D 5199)

Five specimens are cut from across the width of the lab sample. A thickness gauge with a ¾ inch presser foot is used to measure the thickness of each specimen. The values are recorded and reported as an average in inches.

Tensile Strength (ASTM D 5035)

Five specimens are cut from across the width of the lab sample. They are then placed in the jaws of the Instron Machine and a load is applied at a constant strain of 12 in/min until yield. The results of the tensile test are then averaged and recorded.

% Carbon Black (ASTM D 4218)

The carbon black test determines the percent by weight of the product that is carbon black. The percent of carbon black is the ratio of the residue weight after pyrolysis in a muffle furnace compared to the weight of input specimen. Two grams of the net are cut and placed in aluminum dishes. The samples are then placed in a muffle furnace for ten minutes at 600 degrees centigrade. The samples are removed and allowed to cool. The carbon black percentage is calculated and recorded.

Ply Adhesion (ASTM F 904)

Five specimens are cut from across the entire width of the composite sample, each measuring one inch wide by ten inches long. The strain rate for the test is 10 in/min. The fabric is clamped in one jaw of the Instron machine while the net is clamped in the other. The fabric is pulled away from the net to test the adhesion of the fabric to the net.

Transmissivity (ASTM D 4716)

The transmissivity test for the composite is identical to the test for the geonet.

Melt Index (ASTM D 1238)

The melt index determines the rate of the extrusion of the molten resin through a die of specified length and diameter at a temperature of 190 degrees centigrade under a load of 2.16 kg and is measured in g/10min. A sample of approximately 2.5 grams of geonet is then put through the melt plastometer to verify flow rates.

Density of Polymer (ASTM D 1505)

Taking samples from the melt index test, small strands are cut and measured in a density column. A mixture of distilled water and isopropyl alcohol is used as the suspension fluid.

Transmissivity (ASTM D 4716)

The transmissivity test measures the inplane flow of water across the net sample. In the standard test, the sample is placed between two steel plates with the water temperature at 20 degrees centigrade. Different gradients and loads are applied to the sample. The values are then calculated and converted to gallons per min/ft, or meters^2/sec. Transmissivity is not a standard manufacturing quality control test but rather a design indicator and is tested on a per project request basis.

TRANSNET

DRAINAGE NET

GEOCOMPOSITE

HANDLING AND INSTALLATION MANUAL

10/2003

SKAPS INDUSTRIES, INC.

Engineered Synthetic Products, Inc.
Phone (770) 564-1857
Fax (770) 564-1818

Introduction

Geocomposites provide a solution to various drainage problems. As with any synthetic product, the quality assurance and quality control does not stop once the product is shipped from the factory. Whether the product has been specified for vertical wall hydrostatic relief or horizontal flow zones for landfill cells/closure and roadways, care in handling and installation is critical to the future functioning of the product.

TRANSNET is manufactured utilizing high quality HDPE resin and lamination of high strength to weight ratio nonwoven geotextiles. The lamination process is completed at the same location where the net is manufactured, minimizing additional handling and allowing for supply of custom lengths. TRANSNET can have one or both sides laminated in order to meet the design specification.

Manufacturing

TRANSNET is manufactured utilizing state-of-the-art counter rotating dies and the highest quality resin. TRANSNET is manufactured with the addition of carbon black to stabilize against degradation from UV exposure.

Packaging

Upon completion of the lamination process, the geocomposite will be wrapped in an opaque wrap to prevent exposure to UV and for protection from the weather, dust, etc. In the event only TRANSNET is required, shipping in a wrapper is not necessary.

Each roll will be stickered or tagged so that the following information is available at all times from the manufacturer:

- **Manufacturer's Name**
- **Product Identification**
- **Lot Number**
- **Roll Dimensions**

SKAPS INDUSTRIES, INC.
Engineered Synthetic Products, Inc.

Shipping and Storage

Geocomposite rolls will be shipped in original packaging. In the event the packaging is damaged during shipment, repairs should be made to ensure protection against UV and weather. Care should be used during the off loading to ensure that the machinery used does not penetrate packaging.

Storage of the rolls prior to installation should be in an area where they are not in standing water. For storage longer than 30 days, rolls should be elevated off the ground with tires, pallets or 2x4's to prevent water from saturating the bottom row. The stack should then be covered with a material that will give additional protection from the elements. Should the product be exposed to excessive dust, the product should be washed prior to installation.

Site Preparation

The design engineer will determine how and where the geocomposite is to be utilized. With any application, care should be used in placing net or composite so that it is not damaged by stones or other protrusions that may compromise the functionality of the product.

Installation

TRANSNET should be installed by hand. Once the roll is delivered to the installation location via rubber-tired loader or other appropriate machinery, the rolls should be inspected for any damage from shipping or handling. Once the rolls are positioned, they should be unrolled by hand. For slope applications, the rolls should be rolled from top to bottom and hand tightened to remove any wrinkles. The TRANSNET portion of adjacent rolls shall be overlapped two to four inches or according to the Engineer's recommendation. When placing TRANSNET end to end, overlap in shingle placement fashion a minimum of one foot. For end-to-end placement, the top layer of geotextile shall be peeled back and excess TRANSNET will be trimmed so that the top layer of geotextile covers the attachment of the two layers of geocomposite. The TRANSNET will be attached to adjacent rolls utilizing plastic wire ties. These ties will be placed at a maximum spacing of 5 feet along the sides of the rolls and a maximum of 2 feet for end to end attachment, or according to the Engineer's specification.

Metal ties or hog rings are not to be used.

Anchoring

For slope applications, TRANSNET should be placed in a trench so that pull out or slippage is prevented. The trench should be in accordance with the Design Engineer's requirements. Sand bags should be on hand at all times and placed on edges not seamed to prevent uplift from the wind. Welding of the TRANSNET to HDPE liner or any other geomembrane is not recommended.

SKAPS INDUSTRIES

INSTALLATION GUIDELINES

Nonwoven Geotextile, Nets and Composites

Heat Seaming

Nonwoven B Separate or Laminated

Nonwoven geotextiles can be joined together by using fusion seaming methods. The minimum overlap for this type of welding is four inches. Prior to fusion seaming the geotextile together, the installer must demonstrate to the Field Engineer the ability to perform this type of installation method. Areas burned through that are damaged by fusion welding shall be properly repaired. Care should be taken during installation to prevent damage to the geotextile. Torn or punctured material shall be patched with sufficient overlap to prevent separation.

Sewing Procedure

Nonwoven B Separate or Laminated

Fabric layers should be placed on the ground (preferably firm ground) so that the edges to be sewn are parallel and overlapping. The sewing operation typically requires three men--a machine operator and a man on each side of the machine. The lead man should hold the fabric edges evenly together and feed the fabric into the sewing machine head or folder. The man behind the machine should hold tension on the fabric so the machine operator has a taut and straight edge to sew across. If the machine misses a stictch or runs off the fabric, terminate the seam by cutting and tying the thread. Begin a new seam approximately one foot behind the broken seam.

Overlapping

Nonwoven-Separate or Laminated Separate

Roll goods form of geotextile should be overlapped a minimum of 12". Care should be taken that roll goods remain parallel to each other. Extreme care should be taken to assure that soil does not intrude into the composite structure thus clogging the drainage net.

SKAPS INDUSTRIES, INC.
Engineered Synthetic Products, Inc.

PROJECT LIST

1. Newport News Landfill
   Newport News, Virginia

Purpose:	Landfill Closure
Installation Date:	July 1997
Engineer:	In House
Installer:	Mid America Lining
Product:	Transnet 220-2-6
Quantity:	1,200,000 ft^2

2. Murray Ohio Disposal Site
   Lawrenceburg, Tennessee

Purpose:	Landfill
Installation Date:	June 1997
Engineer:	Geraghity & Miller Inc.
Installer:	Environmental Specialties, Inc.
Product:	Transnet 220-2-8
Quantity:	497,400 ft^2

3. City of Arlington
   Arlington, Texas

Purpose:	Landfill
Installation Date:	August 1997
Engineer:	HDR
Installer:	Falcon Environmental
Product:	Transnet 220
Quantity:	677,000 ft^2

4. Esopus Landfill
   Esopus, New York

Purpose:	Landfill Cap
Installation Date:	June 1997
Installer:	F. R. Liners
Product:	Transnet 220-1-4
Quantity:	1,250,000 ft^2

5. Centerville Landfill
   Centerville, Maryland

Purpose:	Landfill Cap
Installation Date:	July 1997
Engineer:	Stearns & Wheeler
Installer :	Mid America Lining, Inc.
Product:	Transnet 220-2-6
Quantity:	1,073,000 ft^2

6. City Management-Waters Site
Waters, Michigan

Purpose:	Landfill Cap
Installation Date:	August 1997
Engineer:	STS Consultants, Inc.
Product:	Transnet 220-2-10 qty: 96,000 ft^2
	Transnet 220-1-10 qty: 448,000 ft^2
	Transnet 220 qty: 17,000 ft^2

7. Cumberland Co. Landfill
Fayetteville, North Carolina

Purpose:	Landfill Cap
Installation Date:	August 1997
Engineer:	CMD
Installer:	G.I.T.
Product:	Transnet 220-2-6
Quantity:	1,134,000 ft^2

8. Robbins Air Force Base Landfill
Robbins Air Force Base, Georgia

Purpose:	Landfill Closure
Installation Date:	February 1998
Engineer:	U.S. Army Corps of Engineers
Installer:	Environmental Chemical Corporation
Product:	Transnet 220-1-10
	Transnet 250-2-7/4
Quantity:	4,200,000 ft^2

9. Ash Grove Cement Co.
Chanute, Kansas

Purpose:	Landfill Closure
Installation Date:	June 1998
Engineer:	Burns and MacDonald
Installer:	Geo-Synthetics, Inc.
Product:	Transnet 250-2-7
Quantity:	764,000 ft^2

10. Delaware County Landfill
Sandtown, Delaware

Purpose:	Landfill Closure
Installation Date:	June 1998
Engineer:	Camp Dresser McKee
Installer:	GeoPacific Linings, Inc.
Product:	Transnet 220-2-6/10
	Transnet 220-2-6
Quantity:	1,700,000 ft^2

11. City of Waco Landfill
Waco, Texas

Purpose:	Landfill Cell
Installation Date:	June 1999
Engineer:	The Wallace Group, Inc.
Installer:	Big D Lining Systems
Product:	Transnet 220-2-6
	Transnet 220-1-6
Quantity:	1,100,000 ft^2

12. Huron County Sanitary Landfill
Huron, Ohio

Purpose:	Landfill Closure
Installation Date:	October 1999
Engineer:	Malcolm Pirnie, Inc.
Installer:	Ground Safe, Inc.
Product:	Transnet 220-2-8
Quantity:	1,954,000 ft^2

13. Ridgeview Landfill
Whitclaw, WI

Purpose:	Landfill Closure
Installation Date:	June, 2003
Engineer:	
Installer:	
Product:	Transnet 220-2-6
Quantity:	1,078,000 ft^2

14. Peoples Landfill
Birch Run, MI

Purpose:	Landfill Closure
Installation Date:	October 2003
Engineer:	
Installer:	
Product:	Transnet 220-2-6
Quantity:	1,645,000 ft^2

Polyethylene Technical Publication #21

Fortiflex® HDPE Chemical Resistance Chart

Reagent	70º F (21º C)	140º F (60º C)
A		
Acetaldehyde	S	O
Acetic acid (1-10%)	S	S
Acetic acid (10-60%)	S	O
Acetic acid (80-100%)	S	O
Acetic anhydride	S	S
Acetone	S	S
Acids (aromatic)	S	S
Acrylic emulsions	S	S
Adipic acid	S	S
Aluminum chloride concentrated	S	S
Aluminum chloride dilute	S	S
Aluminum fluoride concentrated	S	S
Aluminum sulfate concentrated	S	S
Alums (all types) concentrated	S	S
Amino acetic acid	S	S
Ammonia (100% dry gas)	S	S
Ammonium acetate	S	S
Ammonium bromide	S	S
Ammonium carbonate	S	S
Ammonium chloride saturated	S	S
Ammonium fluoride (20%)	S	S
Ammonium hydroxide	S	S
Ammonium metaphosphate (sat.)	S	S
Ammonium nitrate saturated	S	S
Ammonium persulfate saturated	S	S
Ammonium phosphate	S	S
Ammonium sulfate saturated	S	S
Ammonium sulfide saturated	S	S
Ammonium thiocyanate saturated	S	S
Amyl acetate (100%)	O	U
Amyl alcohol (100%)	S	S
Amyl Chloride (100%)	O	U
Aniline (100%)	S	U
Anise seed oil	O	U
Antimony chloride	S	S
Aqua regia	O	U
Aromatic hydrocarbons	U	U
Arsenic	S	S
Aspirin	S	S
B		
Barium carbonate saturated	S	S
Barium carbonate saturated	S	S
Barium hydroxide	S	S
Barium sulfate saturated	S	S
Barium sulfite saturated	S	S
Beer	S	S
Benzaldehyde	S	O
Benzene	O	U
Benzene sulfonic acid	S	S
Benzoic acid crystals	S	S
Benzoic acid saturated	S	S
Bismuth carbonate saturated	S	S
Black liquor	S	S
Bleach lye (10%)	S	S
Borax cold saturated	S	S
Boric acid concentrated	S	S
Boric acid dilute	S	S
Brine	S	S
Bromic acid (10%)	S	S
Bromine liquid (100%)	O	U
Bromochloromethane	U	U
Butadiene	U	U
Butanediol (10%)	S	S
Butanediol (60%)	S	S
Butanediol (100%)	S	S
Butter	S	S
Butyl acetate (100%)	O	U
Butyl alcohol (100%)	S	S
Butylene glycol	S	S
Butyric acid (100%)	S	S
C		
Caffeine citrate saturated	S	S
Calcium bisulfide	S	S
Calcium bromide	S	S
Calcium carbonate saturated	S	S
Calcium Chlorate saturated	S	S
Calcium hydroxide	S	S
Calcium hypochlorite bleach solution	S	S
Calcium nitrate (50%)	S	S
Calcium sulfate	S	S
Camphor crystals	S	S
Camphor oil	U	U
Carbon dioxide (100% dry)	S	S
Carbon dioxide (100% wet)	S	S
Carbon dioxide cold saturated	S	S
Carbon disulphide	O	U
Carbon monoxide	S	S
Carbon tetrachloride	U	U
Carbonic acid	S	S
Carnauba wax	S	S
Carrot juice	S	S
Castor oil concentrated	S	S
Catsup	S	S
Caustic soda	S	O
Cedar leaf oil	U	U
Cedar wood oil	U	U
Chlorine liquid	O	U
Chlorobenzene	O	U
Chloroform	U	U
Chlorosulfonic acid (100%)	U	U
Chrome alum saturated	S	S
Chromic acid (10-20%)	S	O
Chromic acid (50%)	S	O
Cider	S	S
Cinnamon	S	S
Cinnamon oil	U	U
Citric acid saturated	S	S
Citronella oil	O	U
Cloves (ground)	S	S

Legend: S = Satisfactory O = Some attack U = Unsatisfactory

Reagent	70º F (21º C)	140º F (60º C)
Coconut oil alcohols	S	S
Cod liver oil	S	S
Coffee	S	S
Copper chloride saturated	S	S
Cooper cyanide saturated	S	S
Copper fluoride (2%)	S	S
Copper nitrate saturated	S	S
Copper sulfate dilute	S	S
Copper sulfate saturated	S	S
Corn oil	S	S
Cottonseed oil	S	S
Cranberry sauce	S	S
Cresols	S	O
Cuprous chloride saturated	S	S
Cuprous oxide	S	S
Cyclohexane	U	U
Cyclohexanone	U	U
D		
Decalin	S	S
Detergents (synthetic)	S	S
Developers (photogenic)	S	S
Dextrin saturated	S	S
Dextrose saturated	S	S
Dibutyl ether	O	U
Dichlorobenzene (ortho and para)	U	U
Diethylene glycol	S	S
Dioxane	S	S
Disodium phosphate	S	S
E		
Emulsions (photographic)	S	S
Ether	O	O
Ethyl acetate (100%)	O	O
Ethyl alcohol (35%)	S	S
Ethyl alcohol (100%)	S	S
Ethylbenzene	O	U
Ethylene glycol	S	S
F		
Ferric chloride saturated	S	S
Ferric nitrate saturated	S	S
Ferrous ammonium citrate	S	S
Ferrous chloride saturated	S	S
Ferrous sulfate	S	S
Fluoboric acid	S	S
Fluorine	S	U
Fluosilicic acid (32%)	S	S
Fluosilicic acid concentrated	S	S
Formaldehyde (10-30%)	S	S
Formaldehyde (30-40%)	S	O
Formic acid (20%)	S	S
Formic acid (50%)	S	S
Formic acid (100%)	S	S
Fructose saturated	S	S
Fuel oil	S	U
Furfural (100%)	O	U
Furfuryl alcohol	S	O
G		
Gallic acid saturated	S	S
Gasoline	S	U
Glucose	S	S
Glycerine	S	S
Glycol	S	S
Glycolic acid (30%)	S	S
Grape juice	S	S
Grapefruit juice	S	S

Reagent	70º F (21º C)	140º F (60º C)
H		
Heptane	O	U
Hexachlorobenzene	S	S
Hexane	U	U
Hydrobromic acid (50%)	S	S
Hydrochloric acid (10%)	S	S
Hydrochloric acid (30%)	S	S
Hydrochloric acid (35%)	S	S
Hydrocyanic acid	S	S
Hydrocyanic acid saturated	S	S
Hydrofluoric acid (40%)	S	S
Hydrofluoric acid (60%)	S	S
Hydrofluoric acid (75%)	S	S
Hydrogen (100%)	S	S
Hydrogen bromide (10%)	S	S
Hydrogen chloride dry gas	S	S
Hydrogen peroxide (30%)	S	O
Hydrogen sulfide	S	S
Hydroquinone	S	S
Hypochlorous acid concentrated	S	S
I		
Inks	S	S
Iodine crystals	O	O
Isobutyl alcohol	S	S
Isopropyl alcohol	S	S
Isopropyl ether	O	U
K		
Kerosene	O	O
L		
Lactic acid (10%)	S	S
Lactic acid (90%)	S	S
Lanolin	S	S
Lard	S	S
Lead acetate saturated	S	S
Lead nitrate	S	S
Lemon juice	S	S
Lemon oil	O	U
Lime juice	S	S
Linseed oil	S	S
M		
Magnesium carbonate saturated	S	S
Magnesium chloride saturated	S	S
Magnesium hydroxide saturated	S	S
Magnesium nitrate saturated	S	S
Magnesium sulfate saturated	S	S
Margarine	S	S
Mercuric chloride	S	S
Mercuric cyanide saturated	S	S
Mercurous nitrate saturated	S	S
Mercury	S	S
Methyl alcohol (100%)	S	S
Methyl ethyl ketone (100%)	U	U
Methylene chloride (100%)	U	U
Methylsulfuric acid	S	S
Milk	S	S
Mineral oils	S	U
Molasses	S	S
Mustard (prepared)	S	S
N		
Naphtha	O	U
Naphthalene	S	U
Natural gas (wet)	S	S
Nickel chloride saturated	S	S

Reagent	70º F (21º C)	140º F (60º C)
Nickel nitrate concentrated	S	S
Nickel sulfate	S	S
Nicotinic acid	S	S
Nitric acid (0-30%)	S	S
Nitric acid (30-50%)	S	O
Nitric acid (70%)	S	O
Nitric acid (95-98%)	U	U
Nitrobenzene (100%)	U	U
Nitroglycerine	O	U
O		
Octane	S	S
Oleum concentrated	U	U
Olive oil	S	S
Orange juice	S	S
Oxalic acid dilute	S	S
Oxalic acid saturated	S	S
Ozone	O	O
P		
Palm oil	S	S
Paraffin oil	S	O
Peanut butter	S	S
Pepper (fresh ground)	S	S
Peppermint oil	O	U
Perchloric acid (50%)	S	O
Perchloroethylene	U	U
Petroleum ether	U	U
Petroleum jelly	S	S
Phenol	S	S
Phosphoric acid (0-30%)	S	S
Phosphoric acid (30-90%)	S	S
Phosphoric acid (over 90%)	S	S
Photographic solutions	S	S
Phthalic anhydride	S	S
Pickling baths	S	S
Hydrochloric acid	S	S
Sulfuric acid	S	S
Sulfuric-nitric	S	U
Pine oil	O	U
Plating solutions		
Brass	S	S
Cadmium	S	S
Chromium	S	S
Copper	S	S
Gold	S	S
Indium	S	S
Lead	S	S
Nickel	S	S
Rhodium	S	S
Silver	S	S
Tin	S	S
Zinc	S	S
Potassium bicarbonate saturated	S	S
Potassium borate (1%)	S	S
Potassium bromate (10%)	S	S
Potassium bromide saturated	S	S
Potassium carbonate	S	S
Potassium chlorate saturated	S	S
Potassium chloride saturated	S	S
Potassium chromate (40%)	S	S
Potassium cyanide saturated	S	S
Potassium dichromate (40%)	S	S
Potassium ferri / ferro cyanide	S	S
Potassium nitrate saturated	S	S
Potassium perborate saturated	S	S
Potassium perchlorate (10%)	S	S
Potassium permanganate (20%)	S	S

Reagent	70º F (21º C)	140º F (60º C)
Potassium persulfate saturated	S	S
Potassium sulfate concentrated	S	S
Potassium sulfide concentrated	S	S
Potassium sulfite concentrated	S	S
Propane gas	S	S
Propargyl alcohol	S	S
Propyl alcohol	S	S
Propylene glycol	S	S
Pyridine	S	O
R		
Rayon coagulating bath	S	S
Resorcinol	S	S
S		
Salicylic acid	S	S
Seawater	S	S
Shortening	S	S
Silicic acid	S	S
Silver nitrate solution	S	S
Soap solution concentrated	S	S
Sodium acetate saturated	S	S
Sodium benzoate (35%)	S	S
Sodium bicarbonate saturated	S	S
Sodium bisulfate saturated	S	S
Sodium bisulfite saturated	S	S
Sodium borate	S	S
Sodium carbonate concentrated	S	S
Sodium chlorate saturated	S	S
Sodium chloride saturated	S	S
Sodium cyanide	S	S
Sodium dichromate saturated	S	S
Sodium ferricyanide	S	S
Sodium ferricyanide concentrated	S	S
Sodium fluoride saturated	S	S
Sodium hydroxide concentrated	S	S
Sodium hypochlorite	S	S
Sodium nitrate	S	S
Sodium nitrite	S	S
Sodium perborate	S	S
Sodium phosphate	S	S
Sodium sulfide (25% to saturated)	S	S
Sodium sulfite saturated	S	S
Sodium thiosulphate	S	S
Soybean oil	S	S
Stannic chloride saturated	S	S
Stannous chloride saturated	S	S
Starch solution saturated	S	S
Stearic acid (100%)	S	S
Sulfuric acid (0-50%)	S	S
Sulfuric acid (70%)	S	O
Sulfuric acid (80%)	S	U
Sulfuric acid (96%)	O	U
Sulfuric acid (98% concentrated)	O	U
Sulfuric acid (fuming)	U	U
Sulfurous acid	S	S
T		
Tannic acid (10%)	S	S
Tartaric acid	S	S
Tea	S	S
Tetrahydrofuran	O	O
Toluene	U	U
Tomato juice	S	S
Transformer oil	S	O
Trichloroethylene	U	U
Trisodium phosphate saturated	S	S
Turpentine	O	U

Reagent	70° F (21° C)	140° F (60° C)
U		
Urea	S	S
Urine	S	S
V		
Vanilla extract	S	S
Vaseline	S	S
Vinegar (commercial)	S	S
W		
Wetting agents	S	S
Whiskey	S	S
Wines	S	S

Reagent	70° F (21° C)	140° F (60° C)
X		
Xylene	U	U
Y		
Yeast	S	S
Z		
Zinc chloride saturated	S	S
Zinc oxide	S	S
Zinc sulfate saturated	S	S

Note:
The preceding information concerns general chemical resistance only. Since other factors such as permeation, ESCR and container design are involved, full compatibility testing is recommended

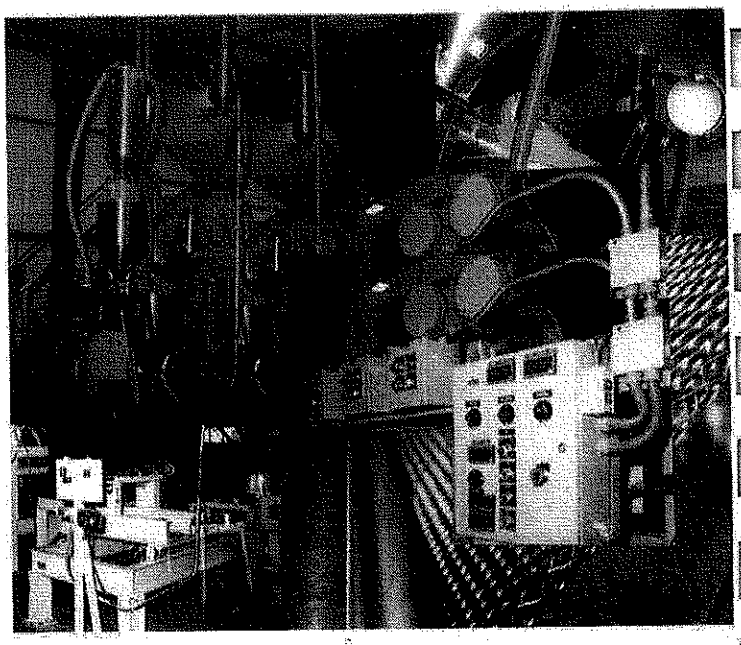
TRANSNET™

ENVIRONMENTAL DRAINAGE PRODUCTS

SKAPS

TRANSNET

SKAPS



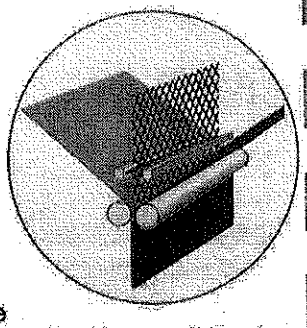
SKAPS TRANSNET is a biaxial geonet manufactured from high density polyethylene for the purpose of environmental drainage control. SKAPS produces TRANSNET in thicknesses ranging from 160 to 330 mils. The most common application is for landfill leachate collection. **TRANSNET** is specially formulated to allow for use in high load applications such as landfill cells where compression resistance is critical. The biaxial grid design, which is the proven standard in today's geonets, provides high flow characteristics in both machine and cross directions. The ability to allow complete flow in all directions is critical due to irregular surfaces caused by settlement and construction. **TRANSNET** may also be incorporated with a geotextile based on the customer specifications.

TRANSNET GEOCOMPOSITES

SKAPS TRANSNET is available as a geocomposite that is TRANSNET geonet bonded with a non-woven geotextile. The primary purpose of this material is as a filter media for leachate solutions. The fabric acts as the filter for the migrating fluid and only allows liquids to enter and be carried by the geonet. SKAPS selects only high quality polypropylene geotextiles to be used in the manufacturing of our geocomposites. These geotextiles are available in various weights and can be laminated in either a single or double-sided configuration. The final product is based upon what you the customer require in your engineered applications.

QUALITY CONTROL

SKAPS maintains strict quality control over its products using the best and latest in testing equipment and techniques. Not only do we maintain a strict QA/QC program, based on GRI and ASTM procedures, but we also utilize the most accurate and efficient equipment available. Since the critical element to geonets and geocomposites is its flow characteristics, i.e. transmissivity, SKAPS utilizes a transmissivity test unit which supplies accuracy and repeatability unmatched in the manufacturing or testing industry. By ensuring our equipment is the most accurate, we are able to supply consistent and applicable results. SKAPS Industries is setting the standard when it comes to evaluating the true function of geonets and geocomposites: drainage capability. At SKAPS, we take the guess-work out of testing and provide the customer with real and functional data.



PRODUCTION

Flame Lamination

SKAPS employs a flame lamination technique in the production of its geocomposites, (geonet bonded with geotextile) which eliminates the problems encountered in temperature control with direct contact heating elements. The use of direct flame impingement insures the proper temperature for fabric adhesion at all points along the width of the fabric resulting in positive lamination and very high peel strengths. This non-contact process greatly reduces the amount of damage to the net during the heating stage. This element of production is critical since the key function of a geonet, or geocomposite, is the conveyance of fluid. Also, the lamination method provides a clean, consistent, non-laminated edge for ease of field installation of seams and the satisfaction of field installation crews.

High Production Capacity

SKAPS Industries incorporates a streamlined high production operation for the manufacturing of our products. Our staged process offers high capacity and production flexibility. This system also allows us to service those customers requiring special widths and product needs without interfering with standard production. At SKAPS, our goal is to provide the customer with the best product possible, delivered to meet today's stringent construction deadlines.

GEOCOMPOSITE PROPERTIES[2]

PROPERTY	TEST	UNITS	NOMINAL[4] Transnet 220-2-6
Transmissivity	ASTM D4716	M^2/sec	Note 1
Ply Adhesion	GRI GC7	lbs./in.	1.0

GEONET PROPERTIES[2]

PROPERTY	TEST	UNITS	NOMINAL[4] Transnet 220
Density	ASTM D 1505	g/cm^2	0.94
Carbon Black	ASTM D 4218	%	2.0
Thickness*	ASTM D 5199	mils	220 +/- 20
Mass per unit area	ASTM D 5261	lbs./ft^2	0.162
Tensile Strength	ASTM D 5035	lbs./in	45
Transmissivity[3]	ASTM D 4716	M^2/sec	$1x10^{-9}$

* TRANSNET also available in thickness ranges of 160 - 330 mils.

1. Geocomposite transmissivity properties are directly related to textile type and weight. Contact technical representatives with specification and parameters for typical values.
2. Geonet properties are tested prior to the lamination process. They cannot be tested on the final product.
3. Transmissivity measured using water at 20 Degrees C with a gradient of 1.0 under a confining pressure of 15,000 psf, between two stainless steel plates, after 15 minutes. Values may vary based on dimension of the transmissivity specimen and specific laboratory.
4. These values represent minimum acceptable values for a roll as tested according to SKAPS Manufacturing Quality Control Manual. Individual test specimen values are not addressed on this specification.
5. Specific values regarding textile properties are available upon request. Typical supplied values are based upon the use of a 6 ounce textile laminated to both sides of the geonet.

Compressive Creed Reduction Factors for TN 330

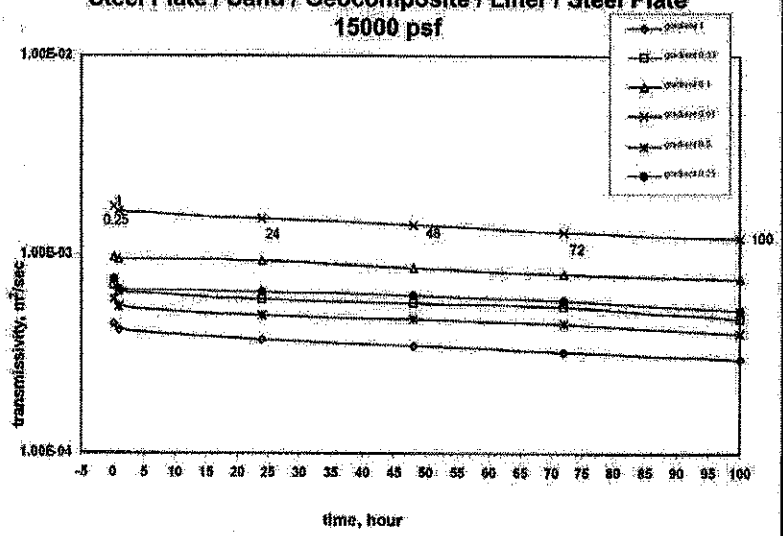
Normal Load, psf	% Thickness retained at 10,000 hours	Creep Reduction Factor, RF_{CR}
10,000	90.3	1.027
15,000	88.9	1.057
30,000	67.6	1.323

*Creep reduction factors are computed in accordance with relevant portions of GRI GC8

Information regarding the physical properties of SKAPS Industries products, including the information contained in these specification sheets, is, to the best of our knowledge, information believed repre-sentative of SKAPS Industries products.
All information, data, suggestions, opinions, and recommendations are offered without guarantee or warranty of any kind. The final determination as to the appropriate-ness or suitability of any SKAPS Industries product in any particular applications rests with the user and is the user's sole responsibility.

SKAPS Industries reserves the right to alter, change, or modify its products and its product specifications at any time without notice. Please check with your SKAPS sales or technical representative to assure that specifications are current.

Transmissivity Curve at 15000 psf
TN 330-2-6
Steel Plate / Sand / Geocomposite / Liner / Steel Plate
15000 psf



SKAPS...
Nothin' but Net

COMPANY BACKGROUND

SKAPS Industries is a leader in the fabrication of geosynthetic drainage products for the environmental industry in the U.S. and abroad. Through its exclusive manufacturing processes, SKAPS is able to meet the supply demands of even the largest orders and most rigorous schedules. Our business is only to produce the best geonets and geocomposites available without being sidetracked on other products. When it comes to geonets and geocomposites, SKAPS is the answer for environmental drainage control.

SKAPS

SALES OFFICES:

Engineered Synthetic Products, Inc.
www.espgeosynthetics.com

3985-H Steve Reynolds Blvd.
Norcross, GA 30093
(770) 564-1857
FAX (770) 564-1818

212 North Way
Birmingham, AL 35242
(205) 981-1901
FAX (205) 981-1901

SKAPS Industries
571 Industrial Parkway
Commerce, GA 30529

(706) 336-7000
(706) 336-7007
www.SKAPS.com

APPENDIX C-2

Drainage Composite Receiving Log

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/14/2008 TIME: 10:23 am PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11814

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 60 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11814

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/14/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710001	2755	17	282710017	2755
2	282710002	2755	18	282710018	2755
3	282710003	2755	19	282710019	2755
4	282710004	2755	20	282710020	2755
5	282710005	2755	21	282710021	2755
6	282710006	2755	22	282710022	2755
7	282710007	2755	23	282710023	2755
8	282710008	2755	24	282710024	2755
9	282710009	2755	25	282710025	2755
10	282710010	2755	26	282710026	2755
11	282710011	2755	27	282710027	2610
12	282710012	2755			
13	282710013	2755			
14	282710014	2755			
15	282710015	2755			
16	282710016	2755			

Inspected OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#: 16608

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Total Rolls: 27
Total Sq. feet 74,240
Total Weight: 32,664

Truck Container #:
Seal #:

Deliver by: D.M. Jones Trucking
Driver's Name: Tyrone Randolph
Driver's Sign: Tyrone Randolph
Driver's Cell Phone #: 919 921 0559
Trucking Co.:
Trucking Co.'s Phone #: 919 336-1619
Broker Trinity
DATE: 8/14/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/15/2008 TIME: 11:00 am PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11821

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.)*: 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION *(surface)*: dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 65 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11821

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/15/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710055	2755	17	282710071	2755
2	282710056	2755	18	282710072	2755
3	282710057	2755	19	282710073	2755
4	282710058	2755	20	282710074	2755
5	282710059	2755	21	282710075	2755
6	282710060	2755	22	282710076	2755
7	282710061	2755	23	282710077	2755
8	282710062	2755	24	282710078	2755
9	282710063	2755	25	282710079	2755
10	282710064	2755	26	282710080	2755
11	282710065	2755	27	282710081	2610
12	282710066	2755			
13	282710067	2755			
14	282710068	2755			
15	282710069	2755			
16	282710070	2755			

OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags
If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#: 16.6.12

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in trans
4) A copy of this packing slip must accompany Frei invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,240
Total Weight: 32,008

Truck Container #:
Seal #:

Deliver by:
Driver's Name: Jerome Simmons
Driver's Sign: Jerome Simmons
Driver's Cell Phone #: 706-664-2548
Trucking Co.: JT Bozard
Trucking Co.'s Phone #:
Broker Trinity
DATE: 8/15/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/15/2008 TIME: 11:00 am PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11832

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 65 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11832

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/18/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710109	2755	17	282710125	2755
2	282710110	2755	18	282710126	2755
3	282710111	2755	19	282710127	2755
4	282710112	2755	20	282710128	2755
5	282710113	2755	21	282710129	2755
6	282710114	2755	22	282710130	2755
7	282710115	2755	23	282710131	2755
8	282710116	2755	24	282710132	2755
9	282710117	2755	25	282710133	2900
10	282710118	2755	26	282710134	2900
11	282710119	2755	27	282710135	2610
12	282710120	2755			
13	282710121	2755			
14	282710122	2755			
15	282710123	2755			
16	282710124	2755			

OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by: [illegible]
Sign:
BOL#: 16627

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freigh invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,530
Total Weight: 32,264

Truck Container #:
Seal #:

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Deliver by: Wood Transport
Driver's Name: Victor Wood
Driver's Sign: [illegible] Wood
Driver's Cell Phone #: N/A 386 755 3197
Trucking Co.: Wood Transport
Trucking Co.'s Phone #: N/A 386-397-3536
Broker Trinity
DATE: 8/18/2008

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/15/2008 TIME: 3:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11820

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 65 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11820

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/15/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710028	2755	17	282710044	2755
2	282710029	2755	18	282710045	2755
3	282710030	2755	19	282710046	2755
4	282710031	2755	20	282710047	2755
5	282710032	2755	21	282710048	2755
6	282710033	2755	22	282710049	2755
7	282710034	2755	23	282710050	2755
8	282710035	2755	24	282710051	2755
9	282710036	2755	25	282710052	2755
10	282710037	2755	26	282710053	2755
11	282710038	2755	27	282710054	2610
12	282710039	2755			
13	282710040	2755			
14	282710041	2755			
15	282710042	2755			
16	282710043	2755			

ok

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#: 16617

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freigt invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,240
Total Weight: 31,917

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:

Trucking Co.'s Phone #:
Broker Trinity
DATE: 8/15/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/15/2008 TIME: 3:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11826

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 65 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11826

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/15/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710082	2755	17	282710098	2755
2	282710083	2755	18	282710099	2755
3	282710084	2755	19	282710100	2755
4	282710085	2755	20	282710101	2755
5	282710086	2755	21	282710102	2755
6	282710087	2755	22	282710103	2755
7	282710088	2755	23	282710104	2755
8	282710089	2755	24	282710105	2755
9	282710090	2755	25	282710106	2755
10	282710091	2755	26	282710107	2755
11	282710092	2755	27	282710108	2610
12	282710093	2755			
13	282710094	2755			
14	282710095	2755			
15	282710096	2755			
16	282710097	2755			

OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here if you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#: 11623

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freigh invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,240
Total Weight: 31,317

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker: Trinity
DATE: 8/15/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/18/2008 TIME: 3:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11831

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 65 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11831

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/18/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710163	2755	17	282710179	2755
2	282710164	2755	18	282710180	2755
3	282710165	2755	19	282710181	2755
4	282710166	2755	20	282710182	2755
5	282710167	2755	21	282710183	2755
6	282710168	2755	22	282710184	2755
7	282710169	2755	23	282710185	2755
8	282710170	2755	24	282710186	2755
9	282710171	2755	25	282710187	2755
10	282710172	2755	26	282710188	2755
11	282710173	2755	27	282710190	2755
12	282710174	2755			
13	282710175	2755			
14	282710176	2755			
15	282710177	2755			
16	282710178	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transi
4) A copy of this packing slip must accompany Freig invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 31,650

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Trinity
DATE: 8/18/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/18/2008 TIME: 3:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11835

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION (*surface*): dry and smooth (landfill crown area)

LOCATION TO PLACEMENT AREA: approximately 150 ft (crown area)

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: Sunny TEMP: 65 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11835

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/18/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710136	2755	17	282710152	2755
2	282710137	2755	18	282710153	2755
3	282710138	2755	19	282710154	2755
4	282710139	2755	20	282710155	2755
5	282710140	2755	21	282710156	2755
6	282710141	2755	22	282710157	2755
7	282710142	2755	23	282710158	2755
8	282710143	2755	24	282710159	2755
9	282710144	2755	25	282710160	2755
10	282710145	2755	26	282710161	2755
11	282710146	2755	27	282710162	2610
12	282710147	2755			
13	282710148	2755			
14	282710149	2755			
15	282710150	2755			
16	282710151	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

otal Rolls: 27
otal Sq. feet 74,240
otal Weight: 31,331

ruck Container #:
eal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Trinity
DATE: 8/18/2008

GN HERE FOR SHIPPER
HIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

ceived at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, d destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the perty) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination d as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as icated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation sting between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the vice to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official uthern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor rier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

bject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this pment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/28/2008 TIME: 3:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11905

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 46 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11905

Date Shipped: 8/28/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710317	2755	17	282710342	2755
2	282710325	2755	18	282710343	2755
3	282710326	2755	19	282710344	2755
4	282710327	2755	20	282710345	2755
5	282710328	2755	21	282710346	2755
6	282710329	2755	22	282710347	2755
7	282710332	2465	23	282710348	2755
8	282710333	2755	24	282710349	2755
9	282710334	2755	25	282710350	2755
10	282710335	2755	26	282710352	2755
11	282710336	2755	27	282710353	2755
12	282710337	2755			
13	282710338	2755			
14	282710339	2755			
15	282710340	2755			
16	282710341	2755			

OK

Please Collect
2 - Bags of Ties
From the Driver

Driver Sign Here if you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by: [illegible]

Sign:

BOL#: 16707

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,095
Total Weight: 30,009

Truck Container #:
Seal #:

Deliver by: Streafer Trucking
Driver's Name: Terry Streafer
Driver's Sign: [illegible]
Driver's Cell Phone #: 910 639 0469
Trucking Co.: National Express
Trucking Co.'s Phone #: 916 673 1423
Broker Trinity
DATE: 8/28/2008

SIGN HERE FOR SHIPPER:
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occuring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/26/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11886

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 46 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11886

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/26/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710271	2755	17	282710287	2755
2	282710272	2755	18	282710288	2755
3	282710273	2755	19	282710289	2755
4	282710274	2755	20	282710290	2755
5	282710275	2755	21	282710316	2755
6	282710276	2755	22	282710318	2755
7	282710277	2755	23	282710319	2755
8	282710278	2755	24	282710320	2755
9	282710279	2755	25	282710321	2755
10	282710280	2755	26	282710322	2755
11	282710281	2755	27	282710323	2755
12	282710282	2755			
13	282710283	2755			
14	282710284	2755			
15	282710285	2755			
16	282710286	2755			

ok

ok

ok verified.

Please Collect
2 - Bags of Ties
From the Driver

Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#: 16683

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in trans
4) A copy of this packing slip must accompany Frei invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 31,884

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker
DATE:

Charles Gossett
Trinity
8/26/2008

SIGN HERE FOR SHIPPER:
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/25/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11887

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 55 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11877

Date Shipped: 8/25/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710244	2755	17	282710260	2755
2	282710245	1450	18	282710261	2755
3	282710246	2755	19	282710262	2755
4	282710247	2755	20	282710263	2755
5	282710248	2755	21	282710264	2755
6	282710249	2755	22	282710265	2755
7	282710250	2755	23	282710266	2755
8	282710251	2755	24	282710267	2755
9	282710252	2755	25	282710268	2755
10	282710253	2755	26	282710269	2755
11	282710254	2755	27	282710270	2240
12	282710255	2755			
13	282710256	2755			
14	282710257	2755			
15	282710258	2755			
16	282710259	2755			

Verified OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#: 16676

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in trans
4) A copy of this packing slip must accompany Frei invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 72,565
Total Weight: 30,156

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker: Trinity
DATE: 8/25/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occuring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/27/2008 TIME: 1:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11893

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 55 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11893

Date Shipped: 8/27/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710217	2755	17	282710233	3045
2	282710218	2755	18	282710234	2755
3	282710219	2755	19	282710235	2755
4	282710220	2755	20	282710236	2755
5	282710221	2755	21	282710237	2755
6	282710222	2755	22	282710238	2755
7	282710223	2755	23	282710239	2755
8	282710224	2755	24	282710240	2755
9	282710225	2755	25	282710241	2755
10	282710226	2755	26	282710242	2755
11	282710227	2755	27	282710243	2610
12	282710228	2755			
13	282710229	2755			
14	282710230	2755			
15	282710231	2755			
16	282710232	2755			

OK
Verified

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here if you received 2 bags
X

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#: 166983

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit
4) A copy of this packing slip must accompany Freigl invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,530
Total Weight: 30,964

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Trinity
DATE: 8/27/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/25/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11875

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 56 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11875

Date Shipped: 8/25/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710189	2755	17	282710206	2755
2	282710191	2755	18	282710207	2755
3	282710192	2755	19	282710208	2755
4	282710193	2755	20	282710209	2755
5	282710194	2755	21	282710210	2755
6	282710195	2755	22	282710211	2755
7	282710196	2755	23	282710212	2755
8	282710197	2755	24	282710213	2755
9	282710198	2900	25	282710214	2755
10	282710199	2755	26	282710215	2755
11	282710200	2755	27	282710216	2610
12	282710201	2755			
13	282710202	2755			
14	282710203	2755			
15	282710204	2755			
16	282710205	2755			

Checked OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here Have received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#: 16673

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 31,224

Truck Container #:
Seal #:

Deliver by:
Driver's Name: Mike Johnson
Driver's Sign: Mike Johnson
Driver's Cell Phone #: 334-791-0188
Trucking Co.: 42-14 TS

Trucking Co.'s Phone #:
Broker Trinity
DATE: 8/25/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 8/25/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 11880

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 56 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 11880

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

Date Shipped: 8/25/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710330	2755	17	282710368	2755
2	282710331	2755	18	282710369	2755
3	282710354	2755	19	282710370	2755
4	282710355	2755	20	282710371	2755
5	282710356	2755	21	282710372	2755
6	282710357	2755	22	282710373	2755
7	282710358	2755	23	282710374	2755
8	282710359	2755	24	282710375	2755
9	282710360	2755	25	282710376	2755
10	282710361	2755	26	282710377	2755
11	282710362	2755	27	282710378	2610
12	282710363	2755			
13	282710364	2755			
14	282710365	2755			
15	282710366	2755			
16	282710367	2755			

Verified OK

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#: 16679

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in trans
4) A copy of this packing slip must accompany Frei invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,240
Total Weight: 30,191

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker: Trinity
DATE: 8/25/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 10/08/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12210

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.)*: 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION *(surface)*: dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 600 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 56 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7067
www.skaps.com e-mail: info@skaps.com

Shipper's # 12210

Date Shipped: 10/8/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Ryan Coward
Phone: (336) 516-2712

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710291	2755	17	282710308	2755
2	282710292	2755	18	282710309	2755
3	282710293	2755	19	282710310	2755
4	282710294	2755	20	282710311	2755
5	282710295	2755	21	282710312	2755
6	282710296	2755	22	282710313	2755
7	282710298	2755	23	282710314	2755
8	282710299	2755	24	282710315	2755
9	282710300	2755	25	282710379	2755
10	282710301	2755	26	282710380	2755
11	282710302	2755	27	282710381	2610
12	282710303	2755			
13	282710304	2755			
14	282710305	2755			
15	282710306	2755			
16	282710307	2755			

Please Collect
2 - Bags of Ties
From the Driver

Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,240
Total Weight: 29,891

Truck Container #: TRK#172 TRL#6M590
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker: Trinity
DATE: 10/8/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 10/16/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12271

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 300 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 46 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12271

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

Date Shipped: 10/16/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710517	2755	17	282710533	2755
2	282710518	2755	18	282710534	2755
3	282710519	2755	19	282710535	2755
4	282710520	2755	20	282710536	2755
5	282710521	2755	21	282710537	2755
6	282710522	2755	22	282710538	2755
7	282710523	2755	23	282710539	2755
8	282710524	2755	24	282710540	2755
9	282710525	2755	25	282710541	2755
10	282710526	2755	26	282710542	2755
11	282710527	2755	27	282710543	2755
12	282710528	2755			
13	282710529	2755			
14	282710530	2755			
15	282710531	2755			
16	282710532	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

otal Rolls: 27
otal Sq. feet 74,385
otal Weight: 31,402

uck Container #:
eal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:

Trucking Co.'s Phone #:
Broker Packard
DATE: 10/16/2008

GN HERE FOR SHIPPER
IPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

ceived at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, d destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the perty) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination d as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as icated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation sting between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the vice to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official uthern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor rier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

bject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this ipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 10/17/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12277

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 300 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: clear TEMP: 46 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12277

Date Shipped: 10/17/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
√1	282710463	2755	√17	282710480	2755
√2	282710464	2755	√18	282710481	2755
3	282710465	2755	√19	282710482	2755
√4	282710466	2755	√20	282710483	2755
√5	282710467	2755	√21	282710484	2755
√6	282710468	2755	√22	282710485	2755
√7	282710469	2755	√23	282710486	2755
√8	282710470	2755	√24	282710487	2755
√9	282710471	2755	√25	282710488	2755
√10	282710472	2755	√26	2827101490	2755
√11	282710473	2755			
√12	282710475	2755			
√13	282710476	2755			
√14	282710477	2755			
√15	282710478	2755			
√16	282710479	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 26
Total Sq. feet 71,630
Total Weight: 29,439

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Landmark
DATE: 10/17/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 10/17/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12286

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.)*: 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION *(surface)*: dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 250 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 66 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12286

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

Date Shipped: 10/17/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
√1	282710489	2755	√17	282710506	2755
√2	282710491	2755	√18	282710507	2755
√3	282710492	2755	√19	282710508	2755
√4	282710493	2755	√20	282710509	2755
√5	282710494	2755	√21	282710510	2755
√6	282710495	2755	√22	282710511	2755
√7	282710496	2755	√23	282710512	2755
√8	282710497	2755	√24	282710513	2755
√9	282710498	2755	√25	282710514	2755
√10	282710499	2755	√26	2827101515	2755
√11	282710500	2755	√27	2827101516	2755
√12	282710501	2755			
√13	282710502	2755			
√14	282710503	2755			
√15	282710504	2755			
√16	282710505	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 31,137

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Landmark
DATE: 10/17/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/10/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12398

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12398

Date Shipped: 11/10/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710544	2755	17	282710560	2755
2	282710545	2755	18	282710561	2755
3	282710546	2755	19	282710562	2755
4	282710547	2755	20	282710563	2755
5	282710548	2755	21	282710564	2755
6	282710549	2755	22	282710565	2755
7	282710550	2755	23	282710566	2755
8	282710551	2755	24	282710567	2755
9	282710552	2755	25	282710568	2755
10	282710553	2755	26	282710569	2755
11	282710554	2755	27	282710570	2755
12	282710555	2755			
13	282710556	2755			
14	282710557	2755			
15	282710558	2755			
16	282710559	2755			

Please Collect
2 - Bags of Ties
From the Driver

Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 30,961

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Load Pro
DATE: 11/10/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either, (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper. Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/10/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12397

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12397

Date Shipped: 11/10/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710571	2755	17	282710587	2755
2	282710572	2755	18	282710588	2755
3	282710573	2755	19	282710589	2755
4	282710574	2755	20	282710590	2755
5	282710575	2755	21	282710591	2755
6	282710576	2755	22	282710592	2755
7	282710577	2755	23	282710593	2755
8	282710578	2755	24	282710594	2755
9	282710579	2755	25	282710595	2755
10	282710580	2755	26	282710596	2755
11	282710581	2755	27	282710597	2755
12	282710582	2755			
13	282710583	2755			
14	282710584	2755			
15	282710585	2755			
16	282710586	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 31,243

Truck Container #:
Seal #:

Deliver by:
Driver's Name: William Sanders
Driver's Sign: William Sanders
Driver's Cell Phone #: 904-337-8609
Trucking Co.: Anderson
Trucking Co.'s Phone #: 157-(4)-1234
Broker Trinity
DATE: 11/10/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

eceived at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, d destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the party) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination d as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as cated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation ling between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the vice to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official thern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor ier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage ontainers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

ect to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this ment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/10/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12395

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12395

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

Date Shipped: 11/10/2008
Cust. P.O. # P6638
Job # 2827

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710436	2755	17	282710452	2755
2	282710437	2755	18	282710453	2755
3	282710438	2755	19	282710454	2755
4	282710439	2755	20	282710455	2755
5	282710440	2755	21	282710456	2755
6	282710441	2755	22	282710457	2755
7	282710442	2755	23	282710458	2755
8	282710443	2755	24	282710459	2755
9	282710444	2755	25	282710460	2755
10	282710445	2755	26	282710461	2755
11	282710446	2755	27	282710462	2755
12	282710447	2755			
13	282710448	2755			
14	282710449	2755			
15	282710450	2755			
16	282710451	2755			

Please Collect
2 - Bags of Ties
From the Driver

Driver Sign Here if you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 29,845

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker: Trinity
DATE: 11/10/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/10/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12394

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.)*: 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION *(surface)*: dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12394

Date Shipped: 11/10/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710409	2755	17	282710425	2885
2	282710410	2755	18	282710426	2885
3	282710411	2755	19	282710427	2885
4	282710412	2755	20	282710428	2885
5	282710413	2755	21	282710429	2885
6	282710414	2755	22	282710430	2885
7	282710415	2755	23	282710431	2755
8	282710416	2755	24	282710432	2755
9	282710417	2755	25	282710433	2755
10	282710418	2755	26	282710434	2755
11	282710419	2755	27	282710435	2755
12	282710420	2755			
13	282710421	2885			
14	282710422	2885			
15	282710423	2885			
16	282710424	2885			

Please Collect
2 - Bags of Ties
From the Driver

Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#: 7

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 75,685
Total Weight: 29,742

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Load Pro
DATE: 11/10/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) If the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/07/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12388

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12388

Date Shipped: 11/7/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710652	2755	17	282710668	2755
2	282710653	2755	18	282710669	2755
3	282710654	2755	19	282710670	2755
4	282710655	2755	20	282710671	2610
5	282710656	2755	21	282710672	2755
6	282710657	2755	22	282710673	2755
7	282710658	2755	23	282710674	2755
8	282710659	2755	24	282710675	2755
9	282710660	2755	25	282710676	2755
10	282710661	2755	26	282710677	2755
11	282710662	2755	27	282710678	2755
12	282710663	2755			
13	282710664	2755			
14	282710665	2755			
15	282710666	2610			
16	282710667	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,095
Total Weight: 31,183

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:

Trucking Co.'s Phone #:
Broker Load Pro
DATE: 11/7/2008

SIGN HERE FOR SHIPPER

SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/7/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12387

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12387

Date Shipped: 11/7/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710625	2755	17	282710641	2755
2	282710626	2755	18	282710642	2755
3	282710627	2755	19	282710643	2755
4	282710628	2755	20	282710644	2755
5	282710629	2755	21	282710645	2755
6	282710630	2755	22	282710646	2755
7	282710631	2755	23	282710647	2755
8	282710632	2755	24	282710648	2755
9	282710633	2755	25	282710649	2755
10	282710634	2755	26	282710650	2755
11	282710635	2755	27	282710651	2755
12	282710636	2755			
13	282710637	2755			
14	282710638	2755			
15	282710639	2755			
16	282710640	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here if you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 30,685

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Trinity
DATE: 11/7/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/7/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12386

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12386

Date Shipped: 11/7/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710382	2755	17	282710398	2755
2	282710383	2755	18	282710399	2755
3	282710384	2755	19	282710400	2755
4	282710385	2755	20	282710401	2755
5	282710386	2755	21	282710402	2755
6	282710387	2755	22	282710403	2755
7	282710388	2755	23	282710404	2755
8	282710389	2755	24	282710405	2755
9	282710390	2755	25	282710406	2755
10	282710391	2755	26	282710407	2755
11	282710392	2755	27	282710408	2755
12	282710393	2755			
13	282710394	2755			
14	282710395	2755			
15	282710396	2755			
16	282710397	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 30,623

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:

Trucking Co.'s Phone #:
Broker: Load Pro
DATE: 11/7/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 11/7/2008 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12384

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 59 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph. 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12384

Date Shipped: 11/7/2008

Cust. P.O. # P6638

Job # 2827

Job Name: Hallaton, Inc. - North Wake Landfill
Address: 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY

Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710598	2755	17	282710614	2755
2	282710599	2755	18	282710615	2755
3	282710600	2755	19	282710616	2755
4	282710601	2755	20	282710617	2755
5	282710602	2755	21	282710618	2755
6	282710603	2755	22	282710619	2755
7	282710604	2755	23	282710620	2755
8	282710605	2755	24	282710621	2755
9	282710606	2755	25	282710622	2755
10	282710607	2755	26	282710623	2755
11	282710608	2755	27	282710624	2755
12	282710609	2755			
13	282710610	2755			
14	282710611	2755			
15	282710612	2755			
16	282710613	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here if you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 30,635

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker
DATE: 11/7/2008

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 1/15/2009 TIME: 7:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12596

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.)*: 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Edilzar Enzueto (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION *(surface)*: dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 200 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 62 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

COM

Shipper's # 12596

Job Name: Hallaton, Inc. - c/o Thalle Construction
Address: North Wake Landfill, 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

Date Shipped: 1/15/2009

Cust. P.O. # P6638-2 & P6638-2 Rev.A

Job # 2827 & 2827-A

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710679	2755	17	282710695	2755
2	282710680	2755	18	282710696	2755
3	282710681	2755	19	282710697	2755
4	282710682	2755	20	282710698	2755
5	282710683	2755	21	282710699	2755
6	282710684	2755	22	282710700	2755
7	282710685	2755	23	282710701	2755
8	282710686	2755	24	282710702	2755
9	282710687	2755	25	282710703	2755
10	282710688	2755	26	282710704	2755
11	282710689	2755	27	282710705	2755
12	282710690	2755			
13	282710691	2755			
14	282710692	2755			
15	282710693	2755			
16	282710694	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags
X
If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#: 17464

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 74,385
Total Weight: 31,199

Truck Container #:
Seal #:

Deliver by:
Driver's Name: JEFFERY W SMITH
Driver's Sign:
Driver's Cell Phone #: (252) 268-2943
Trucking Co.: ROAD READY
Trucking Co.'s Phone #:
Broker Gerico
DATE: 1/15/2009

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 1/16/2009 TIME: 4:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12603

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS: None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 100 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 55 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12603

Job Name: Hallaton, Inc. - c/o Thalle Construction
Address: North Wake Landfill, 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

Date Shipped: 1/16/2009
Cust. P.O. # P6638-2 Rev.A
Job # 2827-A

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710706	2175	17	282710728	2755
2	282710707	2175	18	282710731	2730
3	282710708	2755	19	272710733	2755
4	282710709	2755	20	282710737	2755
5	282710710	2755	21	282710738	2240
6	282710711	2755	22	282710739	2755
7	282710712	2755	23	282710744	2800
8	282710713	2755	24	282710746A	1680
9	282710714	2755	25	282710749A	1820
10	282710715	2755	26	282710749B	1680
11	282710716	2755	27	282710751	2800
12	282710717	2755			
13	282710718	2755			
14	282710719	2755			
15	282710721	2755			
16	282710724	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here If you received 2 bags
X
If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:
Sign:
BOL#: 17471

Driver Requirements
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Total Rolls: 27
Total Sq. feet 69,690
Total Weight: 28,745

Truck Container #:
Seal #:

Deliver by:
Driver's Name: Terry Rice
Driver's Sign:
Driver's Cell Phone #: 410 590-2420
Trucking Co.: Lanes Inc.
Trucking Co.'s Phone #:
Broker SRMA
DATE: 1/16/2009

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either, (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

6172-55752

FORM CQC - 101
RECEIVING QC LOG
(one sheet per truck)

PROJECT NAME: North Wake Landfill Phase 2 Closure Project

DATE: 1/19/2009 TIME: 1:00 pm PROJECT NUMBER: 6172-55752

TRUCKERS ID: 12607

NO. OF PIECES ON BOARD: 27 Composite DN rolls AGREE WITH PACKING LIST? Yes

CONDITION OF PACKAGING: Satisfactory

VERIFY PROPER MATERIALS: by label VERIFY PROPER THICKNESS: by label

IDENTIFY ROLL NUMBERS: See packing list

IDENTIFY ACCESSORIES (*adhesive, battens, boots, etc.*): 2 bags of tie

IDENTIFY DAMAGED ITEMS: None

TYPE OF UNLOADING EQUIPMENT USED: Grad-all

OPERATOR: Arturo Sanchez (Hallaton)

COMMENTS:None

STORAGE AREA

CONDITION (*surface*): dry and smooth (toe of the slope by Sandtek shop)

LOCATION TO PLACEMENT AREA: approximately 100 ft

MATERIAL PROPERLY COVERED: Yes

WEATHER

CONDITIONS: cloudy TEMP: 61 degree F

SIGNATURES

QC INSPECTOR: *Farouk Banna*

SITE SUPERVISOR: *Josh Baldwin*

Use back for other comments

SHIPPING ORDER-PACKING LIST-ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007
www.skaps.com e-mail: info@skaps.com

Shipper's # 12607

Job Name: Hallaton, Inc. - c/o Thalle Construction
Address: North Wake Landfill, 9016 Deponie Dr.
City, State, Zip : Raleigh, NC 27615
Contact: Kennedy Garber
Phone: 410-583-7700

Date Shipped: 1/19/2009
Cust. P.O. # P6638-2 Rev.A
Job # 2827-A

DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY
Product Code: TN 330-2-6

No	Roll#	Sq. Ft.	No	Roll#	Sq. Ft.
1	282710720	2755	17	282710743	2755
2	282710722	2755	18	282710745	2755
3	282710723	2755	19	282710746B	1610
4	282710725	2755	20	282710747	2755
5	282710726	2755	21	272710748	2755
6	282710727	2755	22	282710750	2755
7	282710729	2755	23	282710752	2755
8	282710730	2755	24	282710753	2755
9	282710732	2755	25	282710754	2755
10	282710734	2755	26	282710755	2755
11	282710735	2755	27	282710756	2755
12	282710736	2755			
13	282710740	2755			
14	282710741A	1750			
15	282710741B	1680			
16	282710742	2755			

Please Collect
2 - Bags of Ties
From the Driver
Driver Sign Here if you received 2 bags

If ties are not collected from driver, SKAPS will not assume responsibility.

Received by:

Sign:

BOL#:

Directions : Take Interstate 40 East, get on Interstate 540 North (exit 283). Take Interstate 540 to exit 14. Make a left at exit. Go to third stop light and make a right, the road name is Durant road. Go to second stop light and make a left, this is the entrance to the landfill.

Driver Requirements

1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise on any delay in transit.
4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 27
Total Sq. feet 71,160
Total Weight: 26,776

Truck Container #:
Seal #:

Deliver by:
Driver's Name:
Driver's Sign:
Driver's Cell Phone #:
Trucking Co.:
Trucking Co.'s Phone #:
Broker Loadpro
DATE: 1/19/2009

SIGN HERE FOR SHIPPER
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

APPENDIX C-3

Drainage Composite Manufacturer Certification Reports and Conformance Testings

SKAPS Industries

Engineered Synthetic Products, Inc.

August 14, 2008
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152

Ref. : North Wake Landfill, NC
Customer P.O. # P6638
Transnet 330-2-6

We certify that the Transnet 330-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet[3]				
Mass per Unit Area	ASTM D 5261	lbs/ft^2	0.3	Minimum
Thickness	ASTM D 5199	mil	300	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	65	Minimum
Melt Flow	ASTM D 1238[2]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.940	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	0.5	MARV[5]
Transmissivity[1]	ASTM D 4716	m^2/sec	8.6×10^{-4}	MARV
Geotextile[3 & 4]				
Fabric Weight	ASTM D 5261	oz/yd^2	6.0	MARV
Grab Strength	ASTM D 4632	lbs	160	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Puncture Resistance	ASTM D 4833	lbs	56	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

2 Condition 190/2.16

3 Geotextile and Geonet properties are prior to lamination.

4 Geotextile data is provided by the supplier.

5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

571 Industrial Parkway, Commerce, GA 30529 **Phone**: 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710001	282710001 - N	2827.002	2827.011	1.27	1.82	9.31×10^{-4}
2	282710002	282710002 - N	2827.002	2827.011			
3	282710003	282710003 - N	2827.002	2827.011			
4	282710004	282710004 - N	2827.002	2827.011			
5	282710005	282710005 - N	2827.002	2827.011			
6	282710006	282710006 - N	2827.002	2827.011			
7	282710007	282710007 - N	2827.002	2827.011			
8	282710008	282710008 - N	2827.014	2827.004			
9	282710009	282710009 - N	2827.014	2827.004			
10	282710010	282710010 - N	2827.014	2827.004			
11	282710011	282710011 - N	2827.014	2827.004			
12	282710012	282710012 - N	2827.014	2827.004			
13	282710013	282710013 - N	2827.014	2827.004			
14	282710014	282710014 - N	2827.014	2827.004			
15	282710015	282710015 - N	2827.006	2827.017	1.18	1.70	
16	282710016	282710016 - N	2827.006	2827.017			
17	282710017	282710017 - N	2827.006	2827.017			
18	282710018	282710018 - N	2827.006	2827.017			
19	282710019	282710019 - N	2827.006	2827.017			
20	282710020	282710020 - N	2827.006	2827.017			
21	282710021	282710021 - N	2827.006	2827.017			
22	282710022	282710022 - N	2827.019	2827.001			
23	282710023	282710023 - N	2827.019	2827.001			
24	282710024	282710024 - N	2827.019	2827.001			
25	282710025	282710025 - N	2827.019	2827.001			
26	282710026	282710026 - N	2827.019	2827.001			
27	282710027	282710027 - N	2827.019	2827.001			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710001 - N	26609-9	0.9557	0.349	320	2.59	108	
282710002 - N	26609-9	0.9557					
282710003 - N	26609-9	0.9557					
282710004 - N	26609-9	0.9557					
282710005 - N	26609-9	0.9557					
282710006 - N	26609-9	0.9557					
282710007 - N	26609-9	0.9557					
282710008 - N	26609-9	0.9557					
282710009 - N	26609-9	0.9557					
282710010 - N	26609-9	0.9557					
282710011 - N	26609-9	0.9557					
282710012 - N	26609-9	0.9557					
282710013 - N	26609-9	0.9557					
282710014 - N	26609-9	0.9557					
282710015 - N	26609-9	0.9552	0.343	315	2.45	105	
282710016 - N	26609-9	0.9552					
282710017 - N	26609-9	0.9552					
282710018 - N	26609-9	0.9552					
282710019 - N	26609-9	0.9552					
282710020 - N	26609-9	0.9552					
282710021 - N	26609-9	0.9552					
282710022 - N	26609-9	0.9552					
282710023 - N	26609-9	0.9552					
282710024 - N	26609-9	0.9552					
282710025 - N	26609-9	0.9552					
282710026 - N	26609-9	0.9552					
282710027 - N	26609-9	0.9552					

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710028	282710028 - N	2827.019	2827.001			
2	282710029	282710029 - N	2827.003	2827.015			
3	282710030	282710030 - N	2827.003	2827.015	1.30	1.79	
4	282710031	282710031 - N	2827.003	2827.015			
5	282710032	282710032 - N	2827.003	2827.015			
6	282710033	282710033 - N	2827.003	2827.015			
7	282710034	282710034 - N	2827.003	2827.015			
8	282710035	282710035 - N	2827.003	2827.015			
9	282710036	282710036 - N	2827.023	2827.005			
10	282710037	282710037 - N	2827.023	2827.005			
11	282710038	282710038 - N	2827.023	2827.005			
12	282710039	282710039 - N	2827.023	2827.005			
13	282710040	282710040 - N	2827.023	2827.005			
14	282710041	282710041 - N	2827.023	2827.005			
15	282710042	282710042 - N	2827.023	2827.005			
16	282710043	282710043 - N	2827.008	2827.020			
17	282710044	282710044 - N	2827.008	2827.020			
18	282710045	282710045 - N	2827.008	2827.020	1.13	1.61	
19	282710046	282710046 - N	2827.008	2827.020			
20	282710047	282710047 - N	2827.008	2827.020			
21	282710048	282710048 - N	2827.008	2827.020			
22	282710049	282710049 - N	2827.008	2827.020			
23	282710050	282710050 - N	2827.016	2827.010			
24	282710051	282710051 - N	2827.016	2827.010			
25	282710052	282710052 - N	2827.016	2827.010			
26	282710053	282710053 - N	2827.016	2827.010			
27	282710054	282710054 - N	2827.016	2827.010			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710028 - N	26609-9	0.9552					
282710029 - N	26609-9	0.9552					
282710030 - N	26609-9	0.9556	0.347	319	2.62	110	
282710031 - N	26609-9	0.9556					
282710032 - N	26609-9	0.9556					
282710033 - N	26609-9	0.9556					
282710034 - N	26609-9	0.9556					
282710035 - N	26609-9	0.9556					
282710036 - N	26609-9	0.9556					
282710037 - N	26609-9	0.9556					
282710038 - N	26609-9	0.9556					
282710039 - N	26609-9	0.9556					
282710040 - N	26609-9	0.9556					
282710041 - N	26609-9	0.9556					
282710042 - N	26609-9	0.9556					
282710043 - N	26609-9	0.9556					
282710044 - N	26609-9	0.9556					
282710045 - N	26609-9	0.9550	0.341	317	2.38	106	
282710046 - N	26609-9	0.9550					
282710047 - N	26609-9	0.9550					
282710048 - N	26609-9	0.9550					
282710049 - N	26609-9	0.9550					
282710050 - N	26609-9	0.9550					
282710051 - N	26609-9	0.9550					
282710052 - N	26609-9	0.9550					
282710053 - N	26609-9	0.9550					
282710054 - N	26609-9	0.9550					

APPROVED 5 QA

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Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710055	282710055 - N	2827.016	2827.010			
2	282710056	282710056 - N	2827.016	2827.010			
3	282710057	282710057 - N	2827.007	2827.026			
4	282710058	282710058 - N	2827.007	2827.026			
5	282710059	282710059 - N	2827.007	2827.026			
6	282710060	282710060 - N	2827.007	2827.026	1.31	1.90	
7	282710061	282710061 - N	2827.007	2827.026			
8	282710062	282710062 - N	2827.007	2827.026			
9	282710063	282710063 - N	2827.007	2827.026			
10	282710064	282710064 - N	2827.021	2827.009			
11	282710065	282710065 - N	2827.021	2827.009			
12	282710066	282710066 - N	2827.021	2827.009			
13	282710067	282710067 - N	2827.021	2827.009			
14	282710068	282710068 - N	2827.021	2827.009			
15	282710069	282710069 - N	2827.021	2827.009			
16	282710070	282710070 - N	2827.021	2827.009			9.29×10^{-4}
17	282710071	282710071 - N	2827.012	2827.024			
18	282710072	282710072 - N	2827.012	2827.024			
19	282710073	282710073 - N	2827.012	2827.024			
20	282710074	282710074 - N	2827.012	2827.024			
21	282710075	282710075 - N	2827.012	2827.024	1.22	1.72	
22	282710076	282710076 - N	2827.012	2827.024			
23	282710077	282710077 - N	2827.012	2827.024			
24	282710078	282710078 - N	2827.025	2827.013			
25	282710079	282710079 - N	2827.025	2827.013			
26	282710080	282710080 - N	2827.025	2827.013			
27	282710081	282710081 - N	2827.025	2827.013			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710055 - N	26609-9	0.9550					
282710056 - N	26609-9	0.9550					
282710057 - N	26609-9	0.9550					
282710058 - N	26609-9	0.9550					
282710059 - N	26609-9	0.9550					
282710060 - N	26609-9	0.9558	0.350	324	2.51	109	
282710061 - N	26609-9	0.9558					
282710062 - N	26609-9	0.9558					
282710063 - N	26609-9	0.9558					
282710064 - N	26609-9	0.9558					
282710065 - N	26609-9	0.9558					
282710066 - N	26609-9	0.9558					
282710067 - N	26609-9	0.9558					
282710068 - N	26609-9	0.9558					
282710069 - N	26609-9	0.9558					
282710070 - N	26609-9	0.9558					
282710071 - N	26609-9	0.9558					
282710072 - N	26609-9	0.9558					
282710073 - N	26609-9	0.9558					
282710074 - N	26609-9	0.9558					
282710075 - N	26609-9	0.9553	0.345	321	2.29	107	
282710076 - N	26609-9	0.9553					
282710077 - N	26609-9	0.9553					
282710078 - N	26609-9	0.9553					
282710079 - N	26609-9	0.9553					
282710080 - N	26609-9	0.9553					
282710081 - N	26609-9	0.9553					

APPROVED 5 QA

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SKAPS Industries

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Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710082	282710082 - N	2827.025	2827.013			
2	282710083	282710083 - N	2827.025	2827.013			
3	282710084	282710084 - N	2827.025	2827.013			
4	282710085	282710085 - N	2827.018	2827.027			
5	282710086	282710086 - N	2827.018	2827.027			
6	282710087	282710087 - N	2827.018	2827.027			
7	282710088	282710088 - N	2827.018	2827.027			
8	282710089	282710089 - N	2827.018	2827.027			
9	282710090	282710090 - N	2827.018	2827.027	1.34	1.95	
10	282710091	282710091 - N	2827.018	2827.027			
11	282710092	282710092 - N	2827.041	2827.022			
12	282710093	282710093 - N	2827.041	2827.022			
13	282710094	282710094 - N	2827.041	2827.022			
14	282710095	282710095 - N	2827.041	2827.022			
15	282710096	282710096 - N	2827.041	2827.022			
16	282710097	282710097 - N	2827.041	2827.022			
17	282710098	282710098 - N	2827.041	2827.022			
18	282710099	282710099 - N	2827.028	2827.039			
19	282710100	282710100 - N	2827.028	2827.039			
20	282710101	282710101 - N	2827.028	2827.039			
21	282710102	282710102 - N	2827.028	2827.039			
22	282710103	282710103 - N	2827.028	2827.039			
23	282710104	282710104 - N	2827.028	2827.039			
24	282710105	282710105 - N	2827.028	2827.039	1.15	1.67	
25	282710106	282710106 - N	2827.045	2827.030			
26	282710107	282710107 - N	2827.045	2827.030			
27	282710108	282710108 - N	2827.045	2827.030			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710082 - N	26609-9	0.9553					
282710083 - N	26609-9	0.9553					
282710084 - N	26609-9	0.9553					
282710085 - N	26609-9	0.9553					
282710086 - N	26609-9	0.9553					
282710087 - N	26609-9	0.9553					
282710088 - N	26609-9	0.9553					
282710089 - N	26609-9	0.9553					
282710090 - N	26609-9	0.9560	0.348	323	2.60	110	
282710091 - N	26609-9	0.9560					
282710092 - N	26609-9	0.9560					
282710093 - N	26609-9	0.9560					
282710094 - N	26609-9	0.9560					
282710095 - N	26609-9	0.9560					
282710096 - N	26609-9	0.9560					
282710097 - N	26609-9	0.9560					
282710098 - N	26609-9	0.9560					
282710099 - N	26609-9	0.9560					
282710100 - N	26609-9	0.9560					
282710101 - N	26609-9	0.9560					
282710102 - N	26609-9	0.9560					
282710103 - N	26609-9	0.9560					
282710104 - N	26609-9	0.9560					
282710105 - N	26609-9	0.9554	0.340	316	2.43	105	
282710106 - N	26609-9	0.9554					
282710107 - N	26609-9	0.9554					
282710108 - N	26609-9	0.9554					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710109	282710109 - N	2827.045	2827.030			
2	282710110	282710110 - N	2827.045	2827.030			
3	282710111	282710111 - N	2827.045	2827.030			
4	282710112	282710112 - N	2827.045	2827.030			
5	282710113	282710113 - N	2827.033	2827.042			
6	282710114	282710114 - N	2827.033	2827.042			
7	282710115	282710115 - N	2827.033	2827.042			
8	282710116	282710116 - N	2827.033	2827.042			
9	282710117	282710117 - N	2827.033	2827.042			
10	282710118	282710118 - N	2827.033	2827.042			
11	282710119	282710119 - N	2827.033	2827.042			
12	282710120	282710120 - N	2827.047	2827.029	1.33	1.88	
13	282710121	282710121 - N	2827.047	2827.029			
14	282710122	282710122 - N	2827.047	2827.029			
15	282710123	282710123 - N	2827.047	2827.029			
16	282710124	282710124 - N	2827.047	2827.029			
17	282710125	282710125 - N	2827.047	2827.029			
18	282710126	282710126 - N	2827.047	2827.029			
19	282710127	282710127 - N	2827.031	2827.050			
20	282710128	282710128 - N	2827.031	2827.050			
21	282710129	282710129 - N	2827.031	2827.050			
22	282710130	282710130 - N	2827.031	2827.050			
23	282710131	282710131 - N	2827.031	2827.050			
24	282710132	282710132 - N	2827.031	2827.050			
25	282710133	282710133 - N	2827.031	2827.050			
26	282710134	282710134 - N	2827.043	2827.034			
27	282710135	282710135 - N	2827.043	2827.034	1.20	1.76	

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710109 - N	26609-9	0.9554					
282710110 - N	26609-9	0.9554					
282710111 - N	26609-9	0.9554					
282710112 - N	26609-9	0.9554					
282710113 - N	26609-9	0.9554					
282710114 - N	26609-9	0.9554					
282710115 - N	26609-9	0.9554					
282710116 - N	26609-9	0.9554					
282710117 - N	26609-9	0.9554					
282710118 - N	26609-9	0.9554					
282710119 - N	26609-9	0.9554					
282710120 - N	26609-9	0.9559	0.346	325	2.57	109	
282710121 - N	26609-9	0.9559					
282710122 - N	26609-9	0.9559					
282710123 - N	26609-9	0.9559					
282710124 - N	26609-9	0.9559					
282710125 - N	26609-9	0.9559					
282710126 - N	26609-9	0.9559					
282710127 - N	26609-9	0.9559					
282710128 - N	26609-9	0.9559					
282710129 - N	26609-9	0.9559					
282710130 - N	26609-9	0.9559					
282710131 - N	26609-9	0.9559					
282710132 - N	26609-9	0.9559					
282710133 - N	26609-9	0.9559					
282710134 - N	26609-9	0.9559					
282710135 - N	26609-9	0.9551	0.344	318	2.36	106	

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710136	282710136 - N	2827.043	2827.034			
2	282710137	282710137 - N	2827.043	2827.034			
3	282710138	282710138 - N	2827.043	2827.034			
4	282710139	282710139 - N	2827.043	2827.034			
5	282710140	282710140 - N	2827.043	2827.034			9.35×10^{-4}
6	282710141	282710141 - N	2827.037	2827.046			
7	282710142	282710142 - N	2827.037	2827.046			
8	282710143	282710143 - N	2827.037	2827.046			
9	282710144	282710144 - N	2827.037	2827.046			
10	282710145	282710145 - N	2827.037	2827.046			
11	282710146	282710146 - N	2827.037	2827.046			
12	282710147	282710147 - N	2827.037	2827.046			
13	282710148	282710148 - N	2827.049	2827.032			
14	282710149	282710149 - N	2827.049	2827.032			
15	282710150	282710150 - N	2827.049	2827.032	1.32	1.93	
16	282710151	282710151 - N	2827.049	2827.032			
17	282710152	282710152 - N	2827.049	2827.032			
18	282710153	282710153 - N	2827.049	2827.032			
19	282710154	282710154 - N	2827.049	2827.032			
20	282710155	282710155 - N	2827.035	2827.048			
21	282710156	282710156 - N	2827.035	2827.048			
22	282710157	282710157 - N	2827.035	2827.048			
23	282710158	282710158 - N	2827.035	2827.048			
24	282710159	282710159 - N	2827.035	2827.048			
25	282710160	282710160 - N	2827.035	2827.048			
26	282710161	282710161 - N	2827.035	2827.048			
27	282710162	282710162 - N	2827.051	2827.038			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710136 - N	26609-9	0.9551					
282710137 - N	26609-9	0.9551					
282710138 - N	26609-9	0.9551					
282710139 - N	26609-9	0.9551					
282710140 - N	26609-9	0.9551					
282710141 - N	26609-9	0.9551					
282710142 - N	26609-9	0.9551					
282710143 - N	26609-9	0.9551					
282710144 - N	26609-9	0.9551					
282710145 - N	26609-9	0.9551					
282710146 - N	26609-9	0.9551					
282710147 - N	26609-9	0.9551					
282710148 - N	26609-9	0.9551					
282710149 - N	26609-9	0.9551					
282710150 - N	26609-9	0.9555	0.351	322	2.66	108	
282710151 - N	26609-9	0.9555					
282710152 - N	26609-9	0.9555					
282710153 - N	26609-9	0.9555					
282710154 - N	26609-9	0.9555					
282710155 - N	26609-9	0.9555					
282710156 - N	26609-9	0.9555					
282710157 - N	26609-9	0.9555					
282710158 - N	26609-9	0.9555					
282710159 - N	26609-9	0.9555					
282710160 - N	26609-9	0.9555					
282710161 - N	26609-9	0.9555					
282710162 - N	26609-9	0.9555					

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571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710163	282710163 - N	2827.051	2827.038			
2	282710164	282710164 - N	2827.051	2827.038			
3	282710165	282710165 - N	2827.051	2827.038	1.11	1.69	
4	282710166	282710166 - N	2827.051	2827.038			
5	282710167	282710167 - N	2827.051	2827.038			
6	282710168	282710168 - N	2827.051	2827.038			
7	282710169	282710169 - N	2827.040	2827.054			
8	282710170	282710170 - N	2827.040	2827.054			
9	282710171	282710171 - N	2827.040	2827.054			
10	282710172	282710172 - N	2827.040	2827.054			
11	282710173	282710173 - N	2827.040	2827.054			
12	282710174	282710174 - N	2827.040	2827.054			
13	282710175	282710175 - N	2827.040	2827.054			
14	282710176	282710176 - N	2827.053	2827.036			
15	282710177	282710177 - N	2827.053	2827.036			
16	282710178	282710178 - N	2827.053	2827.036			
17	282710179	282710179 - N	2827.053	2827.036			
18	282710180	282710180 - N	2827.053	2827.036	1.29	1.84	
19	282710181	282710181 - N	2827.053	2827.036			
20	282710182	282710182 - N	2827.053	2827.036			
21	282710183	282710183 - N	2827.044	2827.052			
22	282710184	282710184 - N	2827.044	2827.052			
23	282710185	282710185 - N	2827.044	2827.052			
24	282710186	282710186 - N	2827.044	2827.052			
25	282710187	282710187 - N	2827.044	2827.052			
26	282710188	282710188 - N	2827.044	2827.052			
27	282710189	282710189 - N	2827.044	2827.052			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710163 - N	26609-9	0.9555					
282710164 - N	26609-9	0.9555					
282710165 - N	26609-9	0.9553	0.342	315	2.41	105	
282710166 - N	26609-9	0.9553					
282710167 - N	26609-9	0.9553					
282710168 - N	26609-9	0.9553					
282710169 - N	26609-9	0.9553					
282710170 - N	26609-9	0.9553					
282710171 - N	26609-9	0.9553					
282710172 - N	26609-9	0.9553					
282710173 - N	26609-9	0.9553					
282710174 - N	26609-9	0.9553					
282710175 - N	26609-9	0.9553					
282710176 - N	26609-9	0.9553					
282710177 - N	26609-9	0.9553					
282710178 - N	26609-9	0.9553					
282710179 - N	26609-9	0.9553					
282710180 - N	26609-9	0.9557	0.349	320	2.53	110	
282710181 - N	26609-9	0.9557					
282710182 - N	26609-9	0.9557					
282710183 - N	26609-9	0.9557					
282710184 - N	26609-9	0.9557					
282710185 - N	26609-9	0.9557					
282710186 - N	26609-9	0.9557					
282710187 - N	26609-9	0.9557					
282710188 - N	26609-9	0.9557					
282710189 - N	26609-9	0.9557					

APPROVED 5 QA

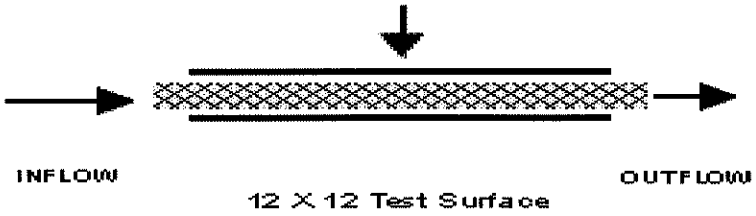
571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

ASTM D 4716

Client:	Hallaton, Inc.	**Job #**	2827
Project:	North Wake Landfill, NC		
Product:	TN330-2-6		

Test Configuration:



Test Information:

Boundary Conditions:	Sand Geocomposite Liner	**Normal Load:**	1000 psf
		Gradient:	0.25 ft
		Seating Time:	100 hours
		Flow Direction:	MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m^2/sec
			100 hours
282710001	1000	0.25	9.31×10^{-4}
282710070			9.29×10^{-4}
282710140			9.35×10^{-4}

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Hallaton, Inc.
Project Name : North Wake Landfill, NC
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN330-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymer Inc	Chevron, TX	HDPE	26609-9	Density	ASTM D 1505	gm/cc	0.950	0.950
				Melt Flow Index	ASTM D 1238[(a)]	gm/10 min	0.3	0.3

(a) Condition 190/2.16
* Data from SKAPS Quality Control

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-6
Project : North Wake Landfill, NC

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
282710001	2827.002	6.56	169	65	179	80	99	70	1.77
	2827.011	6.21	165	70	176	83	96	70	1.77
282710035	2827.003	6.56	169	65	179	80	99	70	1.77
	2827.015	6.44	160	67	173	75	96	70	1.77
282710070	2827.021	6.37	168	72	171	81	100	70	1.77
	2827.009	6.70	162	74	170	77	99	70	1.77
282710105	2827.028	6.52	163	69	177	79	100	70	1.77
	2827.039	6.25	166	71	172	76	98	70	1.77
282710140	2827.043	6.48	170	66	180	80	95	70	1.77
	2827.034	6.60	161	75	174	84	98	70	1.77
282710175	2827.040	6.48	170	66	180	80	95	70	1.77
	2827.054	6.36	167	68	178	78	97	70	1.82

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

August 22, 2008
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152

Ref. : North Wake Landfill, NC
Customer P.O. # P6638
Transnet 330-2-6

We certify that the Transnet 330-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet[3]				
Mass per Unit Area	ASTM D 5261	lbs/ft^2	0.3	Minimum
Thickness	ASTM D 5199	mil	300	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	65	Minimum
Melt Flow	ASTM D 1238[2]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.940	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	0.5	MARV[5]
Transmissivity[1]	ASTM D 4716	m^2/sec	8.6×10^{-4}	MARV
Geotextile[3 & 4]				
Fabric Weight	ASTM D 5261	oz/yd^2	6.0	MARV
Grab Strength	ASTM D 4632	lbs	160	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Puncture Resistance	ASTM D 4833	lbs	56	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

2 Condition 190/2.16

3 Geotextile and Geonet properties are prior to lamination.

4 Geotextile data is provided by the supplier.

5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

571 Industrial Parkway, Commerce, GA 30529 **Phone**: 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710190	282710190 - N	2827.068	2827.058			
2	282710191	282710191 - N	2827.068	2827.058			
3	282710192	282710192 - N	2827.068	2827.058			
4	282710193	282710193 - N	2827.068	2827.058			
5	282710194	282710194 - N	2827.068	2827.058			
6	282710195	282710195 - N	2827.068	2827.058	1.21	1.74	
7	282710196	282710196 - N	2827.068	2827.058			
8	282710197	282710197 - N	2827.055	2827.075			
9	282710198	282710198 - N	2827.055	2827.075			
10	282710199	282710199 - N	2827.055	2827.075			
11	282710200	282710200 - N	2827.055	2827.075			
12	282710201	282710201 - N	2827.055	2827.075			
13	282710202	282710202 - N	2827.055	2827.075			
14	282710203	282710203 - N	2827.055	2827.075			
15	282710204	282710204 - N	2827.072	2827.062			
16	282710205	282710205 - N	2827.072	2827.062			
17	282710206	282710206 - N	2827.072	2827.062			
18	282710207	282710207 - N	2827.072	2827.062			
19	282710208	282710208 - N	2827.072	2827.062			
20	282710209	282710209 - N	2827.072	2827.062			
21	282710210	282710210 - N	2827.072	2827.062	1.28	1.91	9.33×10^{-4}
22	282710211	282710211 - N	2827.059	2827.077			
23	282710212	282710212 - N	2827.059	2827.077			
24	282710213	282710213 - N	2827.059	2827.077			
25	282710214	282710214 - N	2827.059	2827.077			
26	282710215	282710215 - N	2827.059	2827.077			
27	282710216	282710216 - N	2827.059	2827.077			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710190 - N	26609-9	0.9557					
282710191 - N	26609-9	0.9557					
282710192 - N	26609-9	0.9557					
282710193 - N	26609-9	0.9557					
282710194 - N	26609-9	0.9557					
282710195 - N	26609-10	0.9554	0.341	317	2.32	107	
282710196 - N	26609-10	0.9554					
282710197 - N	26609-10	0.9554					
282710198 - N	26609-10	0.9554					
282710199 - N	26609-10	0.9554					
282710200 - N	26609-10	0.9554					
282710201 - N	26609-10	0.9554					
282710202 - N	26609-10	0.9554					
282710203 - N	26609-10	0.9554					
282710204 - N	26609-10	0.9554					
282710205 - N	26609-10	0.9554					
282710206 - N	26609-10	0.9554					
282710207 - N	26609-10	0.9554					
282710208 - N	26609-10	0.9554					
282710209 - N	26609-10	0.9554					
282710210 - N	26609-10	0.9560	0.347	319	2.64	109	
282710211 - N	26609-10	0.9560					
282710212 - N	26609-10	0.9560					
282710213 - N	26609-10	0.9560					
282710214 - N	26609-10	0.9560					
282710215 - N	26609-10	0.9560					
282710216 - N	26609-10	0.9560					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710217	282710217 - N	2827.059	2827.077			
2	282710218	282710218 - N	2827.070	2827.064			
3	282710219	282710219 - N	2827.070	2827.064			
4	282710220	282710220 - N	2827.070	2827.064			
5	282710221	282710221 - N	2827.070	2827.064			
6	282710222	282710222 - N	2827.070	2827.064			
7	282710223	282710223 - N	2827.070	2827.064			
8	282710224	282710224 - N	2827.070	2827.064			
9	282710225	282710225 - N	2827.057	2827.073	1.19	1.63	
10	282710226	282710226 - N	2827.057	2827.073			
11	282710227	282710227 - N	2827.057	2827.073			
12	282710228	282710228 - N	2827.057	2827.073			
13	282710229	282710229 - N	2827.057	2827.073			
14	282710230	282710230 - N	2827.057	2827.073			
15	282710231	282710231 - N	2827.057	2827.073			
16	282710232	282710232 - N	2827.066	2827.060			
17	282710233	282710233 - N	2827.066	2827.060			
18	282710234	282710234 - N	2827.066	2827.060			
19	282710235	282710235 - N	2827.066	2827.060			
20	282710236	282710236 - N	2827.066	2827.060			
21	282710237	282710237 - N	2827.066	2827.060			
22	282710238	282710238 - N	2827.066	2827.060			
23	282710239	282710239 - N	2827.061	2827.069			
24	282710240	282710240 - N	2827.061	2827.069	1.35	1.86	
25	282710241	282710241 - N	2827.061	2827.069			
26	282710242	282710242 - N	2827.061	2827.069			
27	282710243	282710243 - N	2827.061	2827.069			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710217 - N	26609-10	0.9560					
282710218 - N	26609-10	0.9560					
282710219 - N	26609-10	0.9560					
282710220 - N	26609-10	0.9560					
282710221 - N	26609-10	0.9560					
282710222 - N	26609-10	0.9560					
282710223 - N	26609-10	0.9560					
282710224 - N	26609-10	0.9560					
282710225 - N	26609-10	0.9558	0.340	316	2.30	106	
282710226 - N	26609-10	0.9558					
282710227 - N	26609-10	0.9558					
282710228 - N	26609-10	0.9558					
282710229 - N	26609-10	0.9558					
282710230 - N	26609-10	0.9558					
282710231 - N	26609-10	0.9558					
282710232 - N	26609-10	0.9558					
282710233 - N	26609-10	0.9558					
282710234 - N	26609-10	0.9558					
282710235 - N	26609-10	0.9558					
282710236 - N	26609-10	0.9558					
282710237 - N	26609-10	0.9558					
282710238 - N	26609-10	0.9558					
282710239 - N	26609-10	0.9558					
282710240 - N	26609-10	0.9552	0.350	324	2.55	110	
282710241 - N	26609-10	0.9552					
282710242 - N	26609-10	0.9552					
282710243 - N	26609-10	0.9552					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710244	282710244 - N	2827.061	2827.069			
2	282710245	282710245 - N	2827.061	2827.069			
3	282710246	282710246 - N	2827.074	2827.056			
4	282710247	282710247 - N	2827.074	2827.056			
5	282710248	282710248 - N	2827.074	2827.056			
6	282710249	282710249 - N	2827.074	2827.056			
7	282710250	282710250 - N	2827.074	2827.056			
8	282710251	282710251 - N	2827.074	2827.056			
9	282710252	282710252 - N	2827.074	2827.056			
10	282710253	282710253 - N	2827.063	2827.081			
11	282710254	282710254 - N	2827.063	2827.081			
12	282710255	282710255 - N	2827.063	2827.081	1.10	1.78	
13	282710256	282710256 - N	2827.063	2827.081			
14	282710257	282710257 - N	2827.063	2827.081			
15	282710258	282710258 - N	2827.063	2827.081			
16	282710259	282710259 - N	2827.063	2827.081			
17	282710260	282710260 - N	2827.078	2827.067			
18	282710261	282710261 - N	2827.078	2827.067			
19	282710262	282710262 - N	2827.078	2827.067			
20	282710263	282710263 - N	2827.078	2827.067			
21	282710264	282710264 - N	2827.078	2827.067			
22	282710265	282710265 - N	2827.078	2827.067			
23	282710266	282710266 - N	2827.078	2827.067			
24	282710267	282710267 - N	2827.065	2827.080			
25	282710268	282710268 - N	2827.065	2827.080			
26	282710269	282710269 - N	2827.065	2827.080			
27	282710270	282710270 - N	2827.065	2827.080	1.24	1.94	

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710244 - N	26609-10	0.9552					
282710245 - N	26609-10	0.9552					
282710246 - N	26609-10	0.9552					
282710247 - N	26609-10	0.9552					
282710248 - N	26609-10	0.9552					
282710249 - N	26609-10	0.9552					
282710250 - N	26609-10	0.9552					
282710251 - N	26609-10	0.9552					
282710252 - N	26609-10	0.9552					
282710253 - N	26609-10	0.9552					
282710254 - N	26609-10	0.9552					
282710255 - N	26609-10	0.9556	0.345	318	2.34	105	
282710256 - N	26609-10	0.9556					
282710257 - N	26609-10	0.9556					
282710258 - N	26609-10	0.9556					
282710259 - N	26609-10	0.9556					
282710260 - N	26609-10	0.9556					
282710261 - N	26609-10	0.9556					
282710262 - N	26609-10	0.9556					
282710263 - N	26609-10	0.9556					
282710264 - N	26609-10	0.9556					
282710265 - N	26609-10	0.9556					
282710266 - N	26609-10	0.9556					
282710267 - N	26609-10	0.9556					
282710268 - N	26609-10	0.9556					
282710269 - N	26609-10	0.9556					
282710270 - N	26609-10	0.9550	0.348	325	2.66	108	

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710271	282710271 - N	2827.065	2827.080			
2	282710272	282710272 - N	2827.065	2827.080			
3	282710273	282710273 - N	2827.065	2827.080			
4	282710274	282710274 - N	2827.079	2827.071			
5	282710275	282710275 - N	2827.079	2827.071			
6	282710276	282710276 - N	2827.079	2827.071			
7	282710277	282710277 - N	2827.079	2827.071			
8	282710278	282710278 - N	2827.079	2827.071			
9	282710279	282710279 - N	2827.079	2827.071			
10	282710280	282710280 - N	2827.079	2827.071			9.28×10^{-4}
11	282710281	282710281 - N	2827.076	2827.097			
12	282710282	282710282 - N	2827.076	2827.097			
13	282710283	282710283 - N	2827.076	2827.097			
14	282710284	282710284 - N	2827.076	2827.097			
15	282710285	282710285 - N	2827.076	2827.097	1.16	1.65	
16	282710286	282710286 - N	2827.076	2827.097			
17	282710287	282710287 - N	2827.076	2827.097			
18	282710288	282710288 - N	2827.094	2827.082			
19	282710289	282710289 - N	2827.094	2827.082			
20	282710290	282710290 - N	2827.094	2827.082			
21	282710291	282710291 - N	2827.094	2827.082			
22	282710292	282710292 - N	2827.094	2827.082			
23	282710293	282710293 - N	2827.094	2827.082			
24	282710294	282710294 - N	2827.094	2827.082			
25	282710295	282710295 - N	2827.085	2827.099			
26	282710296	282710296 - N	2827.085	2827.099			
27	282710297	282710297 - N	2827.085	2827.099			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710271 - N	26609-10	0.9550					
282710272 - N	26609-10	0.9550					
282710273 - N	26609-10	0.9550					
282710274 - N	26609-10	0.9550					
282710275 - N	26609-10	0.9550					
282710276 - N	26609-10	0.9550					
282710277 - N	26609-10	0.9550					
282710278 - N	26609-10	0.9550					
282710279 - N	26609-10	0.9550					
282710280 - N	26609-10	0.9550					
282710281 - N	26609-10	0.9550					
282710282 - N	26609-10	0.9550					
282710283 - N	26609-10	0.9550					
282710284 - N	26609-10	0.9550					
282710285 - N	26609-10	0.9559	0.342	321	2.49	106	
282710286 - N	26609-10	0.9559					
282710287 - N	26609-10	0.9559					
282710288 - N	26609-10	0.9559					
282710289 - N	26609-10	0.9559					
282710290 - N	26609-10	0.9559					
282710291 - N	26609-10	0.9559					
282710292 - N	26609-10	0.9559					
282710293 - N	26609-10	0.9559					
282710294 - N	26609-10	0.9559					
282710295 - N	26609-10	0.9559					
282710296 - N	26609-10	0.9559					
282710297 - N	26609-10	0.9559					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710298	282710298 - N	2827.085	2827.099			
2	282710299	282710299 - N	2827.085	2827.099			
3	282710300	282710300 - N	2827.085	2827.099	1.27	1.80	
4	282710301	282710301 - N	2827.085	2827.099			
5	282710302	282710302 - N	2827.096	2827.088			
6	282710303	282710303 - N	2827.096	2827.088			
7	282710304	282710304 - N	2827.096	2827.088			
8	282710305	282710305 - N	2827.096	2827.088			
9	282710306	282710306 - N	2827.096	2827.088			
10	282710307	282710307 - N	2827.096	2827.088			
11	282710308	282710308 - N	2827.096	2827.088			
12	282710309	282710309 - N	2827.083	2827.103			
13	282710310	282710310 - N	2827.083	2827.103			
14	282710311	282710311 - N	2827.083	2827.103			
15	282710312	282710312 - N	2827.083	2827.103			
16	282710313	282710313 - N	2827.083	2827.103			
17	282710314	282710314 - N	2827.083	2827.103			
18	282710315	282710315 - N	2827.083	2827.103	1.14	1.58	
19	282710316	282710316 - N	2827.100	2827.092			
20	282710317	282710317 - N	2827.100	2827.092			
21	282710318	282710318 - N	2827.100	2827.092			
22	282710319	282710319 - N	2827.100	2827.092			
23	282710320	282710320 - N	2827.100	2827.092			
24	282710321	282710321 - N	2827.100	2827.092			
25	282710322	282710322 - N	2827.100	2827.092			
26	282710323	282710323 - N	2827.087	2827.105			
27	282710324	282710324 - N	2827.087	2827.105			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710298 - N	26609-10	0.9559					
282710299 - N	26609-10	0.9559					
282710300 - N	26609-10	0.9551	0.346	323	2.70	109	
282710301 - N	26609-10	0.9551					
282710302 - N	26609-10	0.9551					
282710303 - N	26609-10	0.9551					
282710304 - N	26609-10	0.9551					
282710305 - N	26609-10	0.9551					
282710306 - N	26609-10	0.9551					
282710307 - N	26609-10	0.9551					
282710308 - N	26609-10	0.9551					
282710309 - N	26609-10	0.9551					
282710310 - N	26609-10	0.9551					
282710311 - N	26609-10	0.9551					
282710312 - N	26609-10	0.9551					
282710313 - N	26609-10	0.9551					
282710314 - N	26609-10	0.9551					
282710315 - N	26609-10	0.9557	0.343	315	2.27	107	
282710316 - N	26609-10	0.9557					
282710317 - N	26609-10	0.9557					
282710318 - N	26609-10	0.9557					
282710319 - N	26609-10	0.9557					
282710320 - N	26609-10	0.9557					
282710321 - N	26609-10	0.9557					
282710322 - N	26609-10	0.9557					
282710323 - N	26609-10	0.9557					
282710324 - N	26609-10	0.9557					

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571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710325	282710325 - N	2827.087	2827.105			
2	282710326	282710326 - N	2827.087	2827.105			
3	282710327	282710327 - N	2827.087	2827.105			
4	282710328	282710328 - N	2827.087	2827.105			
5	282710329	282710329 - N	2827.087	2827.105			
6	282710330	282710330 - N	2827.098	2827.090	1.26	1.92	
7	282710331	282710331 - N	2827.098	2827.090			
8	282710332	282710332 - N	2827.098	2827.090			
9	282710333	282710333 - N	2827.098	2827.090			
10	282710334	282710334 - N	2827.098	2827.090			
11	282710335	282710335 - N	2827.098	2827.090			
12	282710336	282710336 - N	2827.098	2827.090			
13	282710337	282710337 - N	2827.084	2827.101			
14	282710338	282710338 - N	2827.084	2827.101			
15	282710339	282710339 - N	2827.084	2827.101			
16	282710340	282710340 - N	2827.084	2827.101			
17	282710341	282710341 - N	2827.084	2827.101			
18	282710342	282710342 - N	2827.084	2827.101			
19	282710343	282710343 - N	2827.084	2827.101			
20	282710344	282710344 - N	2827.102	2827.086			
21	282710345	282710345 - N	2827.102	2827.086	1.17	1.56	
22	282710346	282710346 - N	2827.102	2827.086			
23	282710347	282710347 - N	2827.102	2827.086			
24	282710348	282710348 - N	2827.102	2827.086			
25	282710349	282710349 - N	2827.102	2827.086			
26	282710350	282710350 - N	2827.102	2827.086			9.32×10^{-4}
27	282710351	282710351 - N	2827.089	2827.107			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710325 - N	26609-10	0.9557					
282710326 - N	26609-10	0.9557					
282710327 - N	26609-10	0.9557					
282710328 - N	26609-10	0.9557					
282710329 - N	26609-10	0.9557					
282710330 - N	26609-10	0.9553	0.351	322	2.63	110	
282710331 - N	26609-10	0.9553					
282710332 - N	26609-10	0.9553					
282710333 - N	26609-10	0.9553					
282710334 - N	26609-10	0.9553					
282710335 - N	26609-10	0.9553					
282710336 - N	26609-10	0.9553					
282710337 - N	26609-10	0.9553					
282710338 - N	26609-10	0.9553					
282710339 - N	26609-10	0.9553					
282710340 - N	26609-10	0.9553					
282710341 - N	26609-10	0.9553					
282710342 - N	26609-10	0.9553					
282710343 - N	26609-10	0.9553					
282710344 - N	26609-10	0.9553					
282710345 - N	26609-10	0.9555	0.341	317	2.47	106	
282710346 - N	26609-10	0.9555					
282710347 - N	26609-10	0.9555					
282710348 - N	26609-10	0.9555					
282710349 - N	26609-10	0.9555					
282710350 - N	26609-10	0.9555					
282710351 - N	26609-10	0.9555					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710352	282710352 - N	2827.089	2827.107			
2	282710353	282710353 - N	2827.089	2827.107			
3	282710354	282710354 - N	2827.089	2827.107			
4	282710355	282710355 - N	2827.089	2827.107			
5	282710356	282710356 - N	2827.089	2827.107			
6	282710357	282710357 - N	2827.089	2827.107			
7	282710358	282710358 - N	2827.104	2827.093			
8	282710359	282710359 - N	2827.104	2827.093			
9	282710360	282710360 - N	2827.104	2827.093	1.23	1.77	
10	282710361	282710361 - N	2827.104	2827.093			
11	282710362	282710362 - N	2827.104	2827.093			
12	282710363	282710363 - N	2827.104	2827.093			
13	282710364	282710364 - N	2827.104	2827.093			
14	282710365	282710365 - N	2827.091	2827.106			
15	282710366	282710366 - N	2827.091	2827.106			
16	282710367	282710367 - N	2827.091	2827.106			
17	282710368	282710368 - N	2827.091	2827.106			
18	282710369	282710369 - N	2827.091	2827.106			
19	282710370	282710370 - N	2827.091	2827.106			
20	282710371	282710371 - N	2827.091	2827.106			
21	282710372	282710372 - N	2827.108	2827.095			
22	282710373	282710373 - N	2827.108	2827.095			
23	282710374	282710374 - N	2827.108	2827.095			
24	282710375	282710375 - N	2827.108	2827.095	1.12	1.62	
25	282710376	282710376 - N	2827.108	2827.095			
26	282710377	282710377 - N	2827.108	2827.095			
27	282710378	282710378 - N	2827.108	2827.095			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710352 - N	26609-10	0.9555					
282710353 - N	26609-10	0.9555					
282710354 - N	26609-10	0.9555					
282710355 - N	26609-10	0.9555					
282710356 - N	26609-10	0.9555					
282710357 - N	26609-10	0.9555					
282710358 - N	26609-10	0.9555					
282710359 - N	26609-10	0.9555					
282710360 - N	26609-10	0.9552	0.347	324	2.72	108	
282710361 - N	26609-10	0.9552					
282710362 - N	26609-10	0.9552					
282710363 - N	26609-10	0.9552					
282710364 - N	26609-10	0.9552					
282710365 - N	26609-10	0.9552					
282710366 - N	26609-10	0.9552					
282710367 - N	26609-10	0.9552					
282710368 - N	26609-10	0.9552					
282710369 - N	26609-10	0.9552					
282710370 - N	26609-10	0.9552					
282710371 - N	26609-10	0.9552					
282710372 - N	26609-10	0.9552					
282710373 - N	26609-10	0.9552					
282710374 - N	26609-10	0.9552					
282710375 - N	26609-10	0.9558	0.342	320	2.25	105	
282710376 - N	26609-10	0.9558					
282710377 - N	26609-10	0.9558					
282710378 - N	26609-10	0.9558					

APPROVED 5 QA

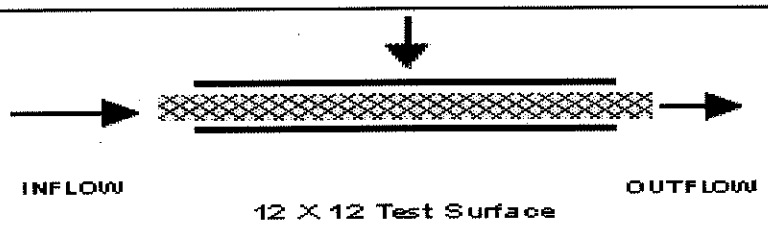
571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

ASTM D 4716

Client:	Hallaton, Inc.	**Job #**	2827
Project:	North Wake Landfill, NC		
Product:	TN330-2-6		

Test Configuration:



Test Information:

Boundary Conditions:	Sand Geocomposite Liner	**Normal Load:** **Gradient:** **Seating Time:** **Flow Direction:**	1000 psf 0.25 ft 100 hours MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m^2/sec 100 hours
282710210	1000	0.25	9.33×10^{-4}
282710280			9.28×10^{-4}
282710350			9.32×10^{-4}

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Hallaton, Inc.
Project Name : North Wake Landfill, NC
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN330-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymer Inc	Chevron, TX	HDPE	26609-10	Density	ASTM D 1505	gm/cc	0.950	0.950
				Melt Flow Index	ASTM D 1238[a]	gm/10 min	0.3	0.3

(a) Condition 190/2.16
* Data from SKAPS Quality Control

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-6
Project : North Wake Landfill, NC

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
282710210	2827.072	6.45	160	71	179	81	96	70	1.82
	2827.062	6.20	162	75	171	83	100	70	1.82
282710245	2827.061	6.20	162	75	171	83	100	70	1.82
	2827.069	6.37	165	67	176	76	100	70	1.82
282710280	2827.079	6.53	168	65	170	79	96	70	1.82
	2827.071	6.45	160	71	179	81	96	70	1.82
282710315	2827.083	6.69	163	69	175	84	98	70	1.82
	2827.103	6.58	164	70	179	85	97	70	1.75
282710350	2827.102	6.58	164	70	179	85	97	70	1.75
	2827.086	6.62	161	74	178	82	98	70	1.82

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

October 7, 2008
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152

Ref. : North Wake Landfill, NC
Customer P.O. # P6638
Transnet 330-2-6

We certify that the Transnet 330-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet[3]				
Mass per Unit Area	ASTM D 5261	lbs/ft^2	0.3	Minimum
Thickness	ASTM D 5199	mil	300	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	65	Minimum
Melt Flow	ASTM D 1238[2]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.94	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	0.5	MARV[5]
Transmissivity[1]	ASTM D 4716	m^2/sec	8.6×10^{-4}	MARV
Geotextile[3&4]				
Fabric Weight	ASTM D 5261	oz/yd^2	6.0	MARV
Grab Strength	ASTM D 4632	lbs	160	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Puncture Resistance	ASTM D 4833	lbs	56	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

2 Condition 190/2.16

3 Geotextile and Geonet properties are prior to lamination.

4 Geotextile data is provided by the supplier.

5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710379	282710379 - N	2827.117	2827.114			
2	282710380	282710380 - N	2827.117	2827.114			
3	282710381	282710381 - N	2827.117	2827.114			
4	282710382	282710382 - N	2827.117	2827.114			
5	282710383	282710383 - N	2827.117	2827.114			
6	282710384	282710384 - N	2827.117	2827.114			
7	282710385	282710385 - N	2827.117	2827.114			9.27×10^{-4}
8	282710386	282710386 - N	2827.125	2827.130			
9	282710387	282710387 - N	2827.125	2827.130			
10	282710388	282710388 - N	2827.125	2827.130			
11	282710389	282710389 - N	2827.125	2827.130			
12	282710390	282710390 - N	2827.125	2827.130	1.29	1.83	
13	282710391	282710391 - N	2827.125	2827.130			
14	282710392	282710392 - N	2827.125	2827.130			
15	282710393	282710393 - N	2827.111	2827.109			
16	282710394	282710394 - N	2827.111	2827.109			
17	282710395	282710395 - N	2827.111	2827.109			
18	282710396	282710396 - N	2827.111	2827.109			
19	282710397	282710397 - N	2827.111	2827.109			
20	282710398	282710398 - N	2827.111	2827.109			
21	282710399	282710399 - N	2827.111	2827.109			
22	282710400	282710400 - N	2827.132	2827.127			
23	282710401	282710401 - N	2827.132	2827.127			
24	282710402	282710402 - N	2827.132	2827.127			
25	282710403	282710403 - N	2827.132	2827.127			
26	282710404	282710404 - N	2827.132	2827.127			
27	282710405	282710405 - N	2827.132	2827.127	1.16	1.46	

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710379 - N	26609-10	0.9558					
282710380 - N	26609-10	0.9558					
282710381 - N	26609-10	0.9558					
282710382 - N	26609-10	0.9558					
282710383 - N	26609-10	0.9558					
282710384 - N	26609-10	0.9558					
282710385 - N	26609-10	0.9558					
282710386 - N	26609-10	0.9558					
282710387 - N	26609-10	0.9558					
282710388 - N	26609-10	0.9558					
282710389 - N	26609-10	0.9558					
282710390 - N	26676-7	0.9543	0.349	317	2.61	110	
282710391 - N	26676-7	0.9543					
282710392 - N	26676-7	0.9543					
282710393 - N	26676-7	0.9543					
282710394 - N	26676-7	0.9543					
282710395 - N	26676-7	0.9543					
282710396 - N	26676-7	0.9543					
282710397 - N	26676-7	0.9543					
282710398 - N	26676-7	0.9543					
282710399 - N	26676-7	0.9543					
282710400 - N	26676-7	0.9543					
282710401 - N	26676-7	0.9543					
282710402 - N	26676-7	0.9543					
282710403 - N	26676-7	0.9543					
282710404 - N	26676-7	0.9543					
282710405 - N	26676-7	0.9547	0.344	324	2.27	106	

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710406	282710406 - N	2827.132	2827.127			
2	282710407	282710407 - N	2827.112	2827.110			
3	282710408	282710408 - N	2827.112	2827.110			
4	282710409	282710409 - N	2827.112	2827.110			
5	282710410	282710410 - N	2827.112	2827.110			
6	282710411	282710411 - N	2827.112	2827.110			
7	282710412	282710412 - N	2827.112	2827.110			
8	282710413	282710413 - N	2827.112	2827.110			
9	282710414	282710414 - N	2827.120	2827.134			
10	282710415	282710415 - N	2827.120	2827.134			
11	282710416	282710416 - N	2827.120	2827.134			
12	282710417	282710417 - N	2827.120	2827.134			
13	282710418	282710418 - N	2827.120	2827.134			
14	282710419	282710419 - N	2827.120	2827.134			
15	282710420	282710420 - N	2827.120	2827.134	1.33	1.65	9.34×10^{-4}
16	282710421	282710421 - N	2827.116	2827.122			
17	282710422	282710422 - N	2827.116	2827.122			
18	282710423	282710423 - N	2827.116	2827.122			
19	282710424	282710424 - N	2827.116	2827.122			
20	282710425	282710425 - N	2827.116	2827.122			
21	282710426	282710426 - N	2827.116	2827.122			
22	282710427	282710427 - N	2827.116	2827.122			
23	282710428	282710428 - N	2827.128	2827.131			
24	282710429	282710429 - N	2827.128	2827.131			
25	282710430	282710430 - N	2827.128	2827.131			
26	282710431	282710431 - N	2827.128	2827.131			
27	282710432	282710432 - N	2827.128	2827.131			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710406 - N	26676-7	0.9547					
282710407 - N	26676-7	0.9547					
282710408 - N	26676-7	0.9547					
282710409 - N	26676-7	0.9547					
282710410 - N	26676-7	0.9547					
282710411 - N	26676-7	0.9547					
282710412 - N	26676-7	0.9547					
282710413 - N	26676-7	0.9547					
282710414 - N	26676-7	0.9547					
282710415 - N	26676-7	0.9547					
282710416 - N	26676-7	0.9547					
282710417 - N	26676-7	0.9547					
282710418 - N	26676-7	0.9547					
282710419 - N	26676-7	0.9547					
282710420 - N	26676-7	0.9541	0.351	319	2.43	108	
282710421 - N	26676-7	0.9541					
282710422 - N	26676-7	0.9541					
282710423 - N	26676-7	0.9541					
282710424 - N	26676-7	0.9541					
282710425 - N	26676-7	0.9541					
282710426 - N	26676-7	0.9541					
282710427 - N	26676-7	0.9541					
282710428 - N	26676-7	0.9541					
282710429 - N	26676-7	0.9541					
282710430 - N	26676-7	0.9541					
282710431 - N	26676-7	0.9541					
282710432 - N	26676-7	0.9541					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710433	282710433 - N	2827.128	2827.131			
2	282710434	282710434 - N	2827.128	2827.131			
3	282710435	282710435 - N	2827.113	2827.118	1.21	1.51	
4	282710436	282710436 - N	2827.113	2827.118			
5	282710437	282710437 - N	2827.113	2827.118			
6	282710438	282710438 - N	2827.113	2827.118			
7	282710439	282710439 - N	2827.113	2827.118			
8	282710440	282710440 - N	2827.113	2827.118			
9	282710441	282710441 - N	2827.113	2827.118			
10	282710442	282710442 - N	2827.135	2827.129			
11	282710443	282710443 - N	2827.135	2827.129			
12	282710444	282710444 - N	2827.135	2827.129			
13	282710445	282710445 - N	2827.135	2827.129			
14	282710446	282710446 - N	2827.135	2827.129			
15	282710447	282710447 - N	2827.135	2827.129			
16	282710448	282710448 - N	2827.135	2827.129			
17	282710449	282710449 - N	2827.115	2827.121			
18	282710450	282710450 - N	2827.115	2827.121	1.14	1.74	
19	282710451	282710451 - N	2827.115	2827.121			
20	282710452	282710452 - N	2827.115	2827.121			
21	282710453	282710453 - N	2827.115	2827.121			
22	282710454	282710454 - N	2827.115	2827.121			
23	282710455	282710455 - N	2827.115	2827.121			9.25×10^{-4}
24	282710456	282710456 - N	2827.133	2827.126			
25	282710457	282710457 - N	2827.133	2827.126			
26	282710458	282710458 - N	2827.133	2827.126			
27	282710459	282710459 - N	2827.133	2827.126			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710433 - N	26676-7	0.9541					
282710434 - N	26676-7	0.9541					
282710435 - N	26676-7	0.9549	0.346	321	2.33	105	
282710436 - N	26676-7	0.9549					
282710437 - N	26676-7	0.9549					
282710438 - N	26676-7	0.9549					
282710439 - N	26676-7	0.9549					
282710440 - N	26676-7	0.9549					
282710441 - N	26676-7	0.9549					
282710442 - N	26676-7	0.9549					
282710443 - N	26676-7	0.9549					
282710444 - N	26676-7	0.9549					
282710445 - N	26676-7	0.9549					
282710446 - N	26676-7	0.9549					
282710447 - N	26676-7	0.9549					
282710448 - N	26676-7	0.9549					
282710449 - N	26676-7	0.9549					
282710450 - N	26676-7	0.9544	0.348	315	2.59	109	
282710451 - N	26676-7	0.9544					
282710452 - N	26676-7	0.9544					
282710453 - N	26676-7	0.9544					
282710454 - N	26676-7	0.9544					
282710455 - N	26676-7	0.9544					
282710456 - N	26676-7	0.9544					
282710457 - N	26676-7	0.9544					
282710458 - N	26676-7	0.9544					
282710459 - N	26676-7	0.9544					

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710460	282710460 - N	2827.133	2827.126			
2	282710461	282710461 - N	2827.133	2827.126			
3	282710462	282710462 - N	2827.133	2827.126			
4	282710463	282710463 - N	2827.119	2827.123			
5	282710464	282710464 - N	2827.119	2827.123			
6	282710465	282710465 - N	2827.119	2827.123	1.31	1.48	
7	282710466	282710466 - N	2827.119	2827.123			
8	282710467	282710467 - N	2827.119	2827.123			
9	282710468	282710468 - N	2827.119	2827.123			
10	282710469	282710469 - N	2827.119	2827.123			
11	282710470	282710470 - N	2827.145	2827.154			
12	282710471	282710471 - N	2827.145	2827.154			
13	282710472	282710472 - N	2827.145	2827.154			
14	282710473	282710473 - N	2827.145	2827.154			
15	282710474	282710474 - N	2827.145	2827.154			
16	282710475	282710475 - N	2827.145	2827.154			
17	282710476	282710476 - N	2827.145	2827.154			
18	282710477	282710477 - N	2827.124	2827.137			
19	282710478	282710478 - N	2827.124	2827.137			
20	282710479	282710479 - N	2827.124	2827.137			
21	282710480	282710480 - N	2827.124	2827.137	1.24	1.90	
22	282710481	282710481 - N	2827.124	2827.137			
23	282710482	282710482 - N	2827.124	2827.137			
24	282710483	282710483 - N	2827.124	2827.137			
25	282710484	282710484 - N	2827.139	2827.152			
26	282710485	282710485 - N	2827.139	2827.152			
27	282710486	282710486 - N	2827.139	2827.152			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710460 - N	26676-7	0.9544					
282710461 - N	26676-7	0.9544					
282710462 - N	26676-7	0.9544					
282710463 - N	26676-7	0.9544					
282710464 - N	26676-7	0.9544					
282710465 - N	26676-7	0.9546	0.340	324	2.36	107	
282710466 - N	26676-7	0.9546					
282710467 - N	26676-7	0.9546					
282710468 - N	26676-7	0.9546					
282710469 - N	26676-7	0.9546					
282710470 - N	26676-7	0.9546					
282710471 - N	26676-7	0.9546					
282710472 - N	26676-7	0.9546					
282710473 - N	26676-7	0.9546					
282710474 - N	26676-7	0.9546					
282710475 - N	26676-7	0.9546					
282710476 - N	26676-7	0.9546					
282710477 - N	26676-7	0.9546					
282710478 - N	26676-7	0.9546					
282710479 - N	26676-7	0.9546					
282710480 - N	26676-7	0.9540	0.350	318	2.65	110	
282710481 - N	26676-7	0.9540					
282710482 - N	26676-7	0.9540					
282710483 - N	26676-7	0.9540					
282710484 - N	26676-7	0.9540					
282710485 - N	26676-7	0.9540					
282710486 - N	26676-7	0.9540					

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710487	282710487 - N	2827.139	2827.152			
2	282710488	282710488 - N	2827.139	2827.152			
3	282710489	282710489 - N	2827.139	2827.152			
4	282710490	282710490 - N	2827.139	2827.152			9.30×10^{-4}
5	282710491	282710491 - N	2827.136	2827.140			
6	282710492	282710492 - N	2827.136	2827.140			
7	282710493	282710493 - N	2827.136	2827.140			
8	282710494	282710494 - N	2827.136	2827.140			
9	282710495	282710495 - N	2827.136	2827.140	1.35	1.83	
10	282710496	282710496 - N	2827.136	2827.140			
11	282710497	282710497 - N	2827.136	2827.140			
12	282710498	282710498 - N	2827.158	2827.161			
13	282710499	282710499 - N	2827.158	2827.161			
14	282710500	282710500 - N	2827.158	2827.161			
15	282710501	282710501 - N	2827.158	2827.161			
16	282710502	282710502 - N	2827.158	2827.161			
17	282710503	282710503 - N	2827.158	2827.161			
18	282710504	282710504 - N	2827.158	2827.161			
19	282710505	282710505 - N	2827.141	2827.138			
20	282710506	282710506 - N	2827.141	2827.138			
21	282710507	282710507 - N	2827.141	2827.138			
22	282710508	282710508 - N	2827.141	2827.138			
23	282710509	282710509 - N	2827.141	2827.138			
24	282710510	282710510 - N	2827.141	2827.138	1.18	1.94	
25	282710511	282710511 - N	2827.141	2827.138			
26	282710512	282710512 - N	2827.156	2827.153			
27	282710513	282710513 - N	2827.156	2827.153			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710487 - N	26676-7	0.9540					
282710488 - N	26676-7	0.9540					
282710489 - N	26676-7	0.9540					
282710490 - N	26676-7	0.9540					
282710491 - N	26676-7	0.9540					
282710492 - N	26676-7	0.9540					
282710493 - N	26676-7	0.9540					
282710494 - N	26676-7	0.9540					
282710495 - N	26676-7	0.9548	0.343	322	2.28	106	
282710496 - N	26676-7	0.9548					
282710497 - N	26676-7	0.9548					
282710498 - N	26676-7	0.9548					
282710499 - N	26676-7	0.9548					
282710500 - N	26676-7	0.9548					
282710501 - N	26676-7	0.9548					
282710502 - N	26676-7	0.9548					
282710503 - N	26676-7	0.9548					
282710504 - N	26676-7	0.9548					
282710505 - N	26676-7	0.9548					
282710506 - N	26676-7	0.9548					
282710507 - N	26676-7	0.9548					
282710508 - N	26676-7	0.9548					
282710509 - N	26676-7	0.9548					
282710510 - N	26676-7	0.9542	0.347	320	2.40	108	
282710511 - N	26676-7	0.9542					
282710512 - N	26676-7	0.9542					
282710513 - N	26676-7	0.9542					

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Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710514	282710514 - N	2827.156	2827.153			
2	282710515	282710515 - N	2827.156	2827.153			
3	282710516	282710516 - N	2827.156	2827.153			
4	282710517	282710517 - N	2827.156	2827.153			
5	282710518	282710518 - N	2827.156	2827.153			
6	282710519	282710519 - N	2827.142	2827.146			
7	282710520	282710520 - N	2827.142	2827.146			
8	282710521	282710521 - N	2827.142	2827.146			
9	282710522	282710522 - N	2827.142	2827.146			
10	282710523	282710523 - N	2827.142	2827.146			
11	282710524	282710524 - N	2827.142	2827.146			
12	282710525	282710525 - N	2827.142	2827.146	1.30	1.50	9.28×10^{-4}
13	282710526	282710526 - N	2827.159	2827.150			
14	282710527	282710527 - N	2827.159	2827.150			
15	282710528	282710528 - N	2827.159	2827.150			
16	282710529	282710529 - N	2827.159	2827.150			
17	282710530	282710530 - N	2827.159	2827.150			
18	282710531	282710531 - N	2827.159	2827.150			
19	282710532	282710532 - N	2827.159	2827.150			
20	282710533	282710533 - N	2827.144	2827.148			
21	282710534	282710534 - N	2827.144	2827.148			
22	282710535	282710535 - N	2827.144	2827.148			
23	282710536	282710536 - N	2827.144	2827.148			
24	282710537	282710537 - N	2827.144	2827.148			
25	282710538	282710538 - N	2827.144	2827.148			
26	282710539	282710539 - N	2827.144	2827.148			
27	282710540	282710540 - N	2827.151	2827.155	1.12	1.72	

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710514 - N	26676-7	0.9542					
282710515 - N	26676-7	0.9542					
282710516 - N	26676-7	0.9542					
282710517 - N	26676-7	0.9542					
282710518 - N	26676-7	0.9542					
282710519 - N	26676-7	0.9542					
282710520 - N	26676-7	0.9542					
282710521 - N	26676-7	0.9542					
282710522 - N	26676-7	0.9542					
282710523 - N	26676-7	0.9542					
282710524 - N	26676-7	0.9542					
282710525 - N	26676-7	0.9545	0.345	325	2.38	105	
282710526 - N	26676-7	0.9545					
282710527 - N	26676-7	0.9545					
282710528 - N	26676-7	0.9545					
282710529 - N	26676-7	0.9545					
282710530 - N	26676-7	0.9545					
282710531 - N	26676-7	0.9545					
282710532 - N	26676-7	0.9545					
282710533 - N	26676-7	0.9545					
282710534 - N	26676-7	0.9545					
282710535 - N	26676-7	0.9545					
282710536 - N	26676-7	0.9545					
282710537 - N	26676-7	0.9545					
282710538 - N	26676-7	0.9545					
282710539 - N	26676-7	0.9545					
282710540 - N	26676-7	0.9540	0.351	316	2.71	109	

APPROVED 5 QA

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Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710541	282710541 - N	2827.151	2827.155			
2	282710542	282710542 - N	2827.151	2827.155			
3	282710543	282710543 - N	2827.151	2827.155			
4	282710544	282710544 - N	2827.151	2827.155			
5	282710545	282710545 - N	2827.151	2827.155			
6	282710546	282710546 - N	2827.151	2827.155			
7	282710547	282710547 - N	2827.143	2827.147			
8	282710548	282710548 - N	2827.143	2827.147			
9	282710549	282710549 - N	2827.143	2827.147			
10	282710550	282710550 - N	2827.143	2827.147			
11	282710551	282710551 - N	2827.143	2827.147			
12	282710552	282710552 - N	2827.143	2827.147			
13	282710553	282710553 - N	2827.143	2827.147			
14	282710554	282710554 - N	2827.157	2827.162			
15	282710555	282710555 - N	2827.157	2827.162	1.25	1.57	
16	282710556	282710556 - N	2827.157	2827.162			
17	282710557	282710557 - N	2827.157	2827.162			
18	282710558	282710558 - N	2827.157	2827.162			
19	282710559	282710559 - N	2827.157	2827.162			
20	282710560	282710560 - N	2827.157	2827.162			9.20×10^{-4}
21	282710561	282710561 - N	2827.149	2827.160			
22	282710562	282710562 - N	2827.149	2827.160			
23	282710563	282710563 - N	2827.149	2827.160			
24	282710564	282710564 - N	2827.149	2827.160			
25	282710565	282710565 - N	2827.149	2827.160			
26	282710566	282710566 - N	2827.149	2827.160			
27	282710567	282710567 - N	2827.149	2827.160			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710541 - N	26676-7	0.9540					
282710542 - N	26676-7	0.9540					
282710543 - N	26676-7	0.9540					
282710544 - N	26676-7	0.9540					
282710545 - N	26676-7	0.9540					
282710546 - N	26676-7	0.9540					
282710547 - N	26676-7	0.9540					
282710548 - N	26676-7	0.9540					
282710549 - N	26676-7	0.9540					
282710550 - N	26676-7	0.9540					
282710551 - N	26676-7	0.9540					
282710552 - N	26676-7	0.9540					
282710553 - N	26676-7	0.9540					
282710554 - N	26676-7	0.9540					
282710555 - N	26676-7	0.9547	0.341	323	2.53	107	
282710556 - N	26676-7	0.9547					
282710557 - N	26676-7	0.9547					
282710558 - N	26676-7	0.9547					
282710559 - N	26676-7	0.9547					
282710560 - N	26676-7	0.9547					
282710561 - N	26676-7	0.9547					
282710562 - N	26676-7	0.9547					
282710563 - N	26676-7	0.9547					
282710564 - N	26676-7	0.9547					
282710565 - N	26676-7	0.9547					
282710566 - N	26676-7	0.9547					
282710567 - N	26676-7	0.9547					

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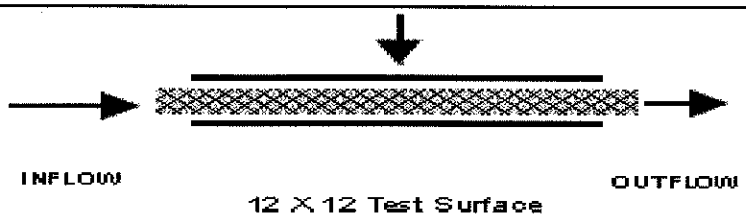
SKAPS Industries

ASTM D 4716

Client:	Hallaton, Inc.	**Job #**	2827
Project:	North Wake Landfill, NC		
Product:	TN330-2-6		

Test Configuration:



Test Information:

Boundary Conditions:	Sand Geocomposite Liner	**Normal Load:**	1000 psf
		Gradient:	0.25 ft
		Seating Time:	100 hours
		Flow Direction:	MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m^2/sec 100 hours
282710385	1000	0.25	9.27×10^{-4}
282710420			9.34×10^{-4}
282710455			9.25×10^{-4}
282710490			9.30×10^{-4}
282710525			9.28×10^{-4}
282710560			9.20×10^{-4}

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Hallaton, Inc.
Project Name : North Wake Landfill, NC
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN330-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymers Inc	Chevron, TX	HDPE	26676-7	Density	ASTM D 1505	gm/cc	0.949	0.949
				Melt Flow Index	ASTM D 1238[(a)]	gm/10 min	0.16	0.16

(a) Condition 190/2.16
* Data from SKAPS Quality Control

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-6
Project : North Wake Landfill, NC

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
282710385	2827.117	6.54	161	69	180	82	99	70	1.75
	2827.114	6.43	170	75	172	78	99	70	1.75
282710420	2827.120	6.35	168	74	175	77	96	70	1.75
	2827.134	6.41	166	71	170	75	98	70	1.75
282710455	2827.115	6.54	161	69	180	82	99	70	1.75
	2827.121	6.35	168	74	175	77	96	70	1.75
282710490	2827.139	6.57	162	65	177	81	98	70	1.75
	2827.152	6.28	169	72	173	76	100	70	1.79
282710525	2827.142	6.39	167	73	172	79	95	70	1.75
	2827.146	6.67	163	68	179	83	95	70	1.75
282710560	2827.157	6.50	164	66	176	85	100	70	1.79
	2827.162	6.34	170	75	171	78	97	70	1.79

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SKAPS Industries

Engineered Synthetic Products, Inc.

October 24, 2008
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152

Ref. : North Wake Landfill, NC
Customer P.O. # P6638
Transnet 330-2-6

We certify that the Transnet 330-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet[3]				
Mass per Unit Area	ASTM D 5261	lbs/ft^2	0.3	Minimum
Thickness	ASTM D 5199	mil	300	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	65	Minimum
Melt Flow	ASTM D 1238[2]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.94	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	0.5	MARV[5]
Transmissivity[1]	ASTM D 4716	m^2/sec	8.6×10^{-4}	MARV
Geotextile[3&4]				
Fabric Weight	ASTM D 5261	oz/yd^2	6.0	MARV
Grab Strength	ASTM D 4632	lbs	160	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Puncture Resistance	ASTM D 4833	lbs	56	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

2 Condition 190/2.16

3 Geotextile and Geonet properties are prior to lamination.

4 Geotextile data is provided by the supplier.

5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710568	282710568 - N	2827.171	2827.178			
2	282710569	282710569 - N	2827.171	2827.178			
3	282710570	282710570 - N	2827.171	2827.178	1.14	1.81	
4	282710571	282710571 - N	2827.171	2827.178			
5	282710572	282710572 - N	2827.171	2827.178			
6	282710573	282710573 - N	2827.171	2827.178			
7	282710574	282710574 - N	2827.171	2827.178			
8	282710575	282710575 - N	2827.183	2827.164			
9	282710576	282710576 - N	2827.183	2827.164			
10	282710577	282710577 - N	2827.183	2827.164			
11	282710578	282710578 - N	2827.183	2827.164			
12	282710579	282710579 - N	2827.183	2827.164			
13	282710580	282710580 - N	2827.183	2827.164			
14	282710581	282710581 - N	2827.183	2827.164			
15	282710582	282710582 - N	2827.167	2827.184			
16	282710583	282710583 - N	2827.167	2827.184			
17	282710584	282710584 - N	2827.167	2827.184			
18	282710585	282710585 - N	2827.167	2827.184	1.32	1.52	
19	282710586	282710586 - N	2827.167	2827.184			
20	282710587	282710587 - N	2827.167	2827.184			
21	282710588	282710588 - N	2827.167	2827.184			
22	282710589	282710589 - N	2827.186	2827.172			
23	282710590	282710590 - N	2827.186	2827.172			
24	282710591	282710591 - N	2827.186	2827.172			
25	282710592	282710592 - N	2827.186	2827.172			
26	282710593	282710593 - N	2827.186	2827.172			
27	282710594	282710594 - N	2827.186	2827.172			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710568 - N	26676-7	0.9547					
282710569 - N	26676-7	0.9547					
282710570 - N	26676-14	0.9547	0.350	316	2.23	105	
282710571 - N	26676-14	0.9547					
282710572 - N	26676-14	0.9547					
282710573 - N	26676-14	0.9547					
282710574 - N	26676-14	0.9547					
282710575 - N	26676-14	0.9547					
282710576 - N	26676-14	0.9547					
282710577 - N	26676-14	0.9547					
282710578 - N	26676-14	0.9547					
282710579 - N	26676-14	0.9547					
282710580 - N	26676-14	0.9547					
282710581 - N	26676-14	0.9547					
282710582 - N	26676-14	0.9547					
282710583 - N	26676-14	0.9547					
282710584 - N	26676-14	0.9547					
282710585 - N	26676-14	0.9547	0.341	321	2.72	109	
282710586 - N	26676-14	0.9547					
282710587 - N	26676-14	0.9547					
282710588 - N	26676-14	0.9547					
282710589 - N	26676-14	0.9547					
282710590 - N	26676-14	0.9547					
282710591 - N	26676-14	0.9547					
282710592 - N	26676-14	0.9547					
282710593 - N	26676-14	0.9547					
282710594 - N	26676-14	0.9547					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710595	282710595 - N	2827.186	2827.172			9.31×10^{-4}
2	282710596	282710596 - N	2827.169	2827.182			
3	282710597	282710597 - N	2827.169	2827.182			
4	282710598	282710598 - N	2827.169	2827.182			
5	282710599	282710599 - N	2827.169	2827.182			
6	282710600	282710600 - N	2827.169	2827.182	1.17	1.92	
7	282710601	282710601 - N	2827.169	2827.182			
8	282710602	282710602 - N	2827.169	2827.182			
9	282710603	282710603 - N	2827.181	2827.168			
10	282710604	282710604 - N	2827.181	2827.168			
11	282710605	282710605 - N	2827.181	2827.168			
12	282710606	282710606 - N	2827.181	2827.168			
13	282710607	282710607 - N	2827.181	2827.168			
14	282710608	282710608 - N	2827.181	2827.168			
15	282710609	282710609 - N	2827.181	2827.168			
16	282710610	282710610 - N	2827.163	2827.180			
17	282710611	282710611 - N	2827.163	2827.180			
18	282710612	282710612 - N	2827.163	2827.180			
19	282710613	282710613 - N	2827.163	2827.180			
20	282710614	282710614 - N	2827.163	2827.180			
21	282710615	282710615 - N	2827.163	2827.180	1.30	1.64	
22	282710616	282710616 - N	2827.163	2827.180			
23	282710617	282710617 - N	2827.188	2827.174			
24	282710618	282710618 - N	2827.188	2827.174			
25	282710619	282710619 - N	2827.188	2827.174			
26	282710620	282710620 - N	2827.188	2827.174			
27	282710621	282710621 - N	2827.188	2827.174			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710595 - N	26676-14	0.9547					
282710596 - N	26676-14	0.9547					
282710597 - N	26676-14	0.9547					
282710598 - N	26676-14	0.9547					
282710599 - N	26676-14	0.9547					
282710600 - N	26676-14	0.9547	0.346	319	2.31	107	
282710601 - N	26676-14	0.9547					
282710602 - N	26676-14	0.9547					
282710603 - N	26676-14	0.9547					
282710604 - N	26676-14	0.9547					
282710605 - N	26676-14	0.9547					
282710606 - N	26676-14	0.9547					
282710607 - N	26676-14	0.9547					
282710608 - N	26676-14	0.9547					
282710609 - N	26676-14	0.9547					
282710610 - N	26676-14	0.9547					
282710611 - N	26676-14	0.9547					
282710612 - N	26676-14	0.9547					
282710613 - N	26676-14	0.9547					
282710614 - N	26676-14	0.9547					
282710615 - N	26676-14	0.9547	0.342	322	2.67	110	
282710616 - N	26676-14	0.9547					
282710617 - N	26676-14	0.9547					
282710618 - N	26676-14	0.9547					
282710619 - N	26676-14	0.9547					
282710620 - N	26676-14	0.9547					
282710621 - N	26676-14	0.9547					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-6
Project : North Wake Landfill, NC

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710622	282710622 - N	2827.188	2827.174			
2	282710623	282710623 - N	2827.188	2827.174			
3	282710624	282710624 - N	2827.165	2827.187			
4	282710625	282710625 - N	2827.165	2827.187			
5	282710626	282710626 - N	2827.165	2827.187			
6	282710627	282710627 - N	2827.165	2827.187			
7	282710628	282710628 - N	2827.165	2827.187			
8	282710629	282710629 - N	2827.165	2827.187			
9	282710630	282710630 - N	2827.165	2827.187	1.21	1.87	9.23×10^{-4}
10	282710631	282710631 - N	2827.177	2827.166			
11	282710632	282710632 - N	2827.177	2827.166			
12	282710633	282710633 - N	2827.177	2827.166			
13	282710634	282710634 - N	2827.177	2827.166			
14	282710635	282710635 - N	2827.177	2827.166			
15	282710636	282710636 - N	2827.177	2827.166			
16	282710637	282710637 - N	2827.177	2827.166			
17	282710638	282710638 - N	2827.173	2827.176			
18	282710639	282710639 - N	2827.173	2827.176			
19	282710640	282710640 - N	2827.173	2827.176			
20	282710641	282710641 - N	2827.173	2827.176			
21	282710642	282710642 - N	2827.173	2827.176			
22	282710643	282710643 - N	2827.173	2827.176			
23	282710644	282710644 - N	2827.173	2827.176			
24	282710645	282710645 - N	2827.179	2827.170	1.28	1.68	
25	282710646	282710646 - N	2827.179	2827.170			
26	282710647	282710647 - N	2827.179	2827.170			
27	282710648	282710648 - N	2827.179	2827.170			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710622 - N	26676-14	0.9547					
282710623 - N	26676-14	0.9547					
282710624 - N	26676-14	0.9547					
282710625 - N	26676-14	0.9547					
282710626 - N	26676-14	0.9547					
282710627 - N	26676-14	0.9547					
282710628 - N	26676-14	0.9547					
282710629 - N	26676-14	0.9547					
282710630 - N	26676-14	0.9547	0.344	315	2.37	106	
282710631 - N	26676-14	0.9547					
282710632 - N	26676-14	0.9547					
282710633 - N	26676-14	0.9547					
282710634 - N	26676-14	0.9547					
282710635 - N	26676-14	0.9547					
282710636 - N	26676-14	0.9547					
282710637 - N	26676-14	0.9547					
282710638 - N	26676-14	0.9547					
282710639 - N	26676-14	0.9547					
282710640 - N	26676-14	0.9547					
282710641 - N	26676-14	0.9547					
282710642 - N	26676-14	0.9547					
282710643 - N	26676-14	0.9547					
282710644 - N	26676-14	0.9547					
282710645 - N	26676-14	0.9547	0.340	325	2.63	108	
282710646 - N	26676-14	0.9547					
282710647 - N	26676-14	0.9547					
282710648 - N	26676-14	0.9547					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710649	282710649 - N	2827.179	2827.170			
2	282710650	282710650 - N	2827.179	2827.170			
3	282710651	282710651 - N	2827.179	2827.170			
4	282710652	282710652 - N	2827.175	2827.199			
5	282710653	282710653 - N	2827.175	2827.199			
6	282710654	282710654 - N	2827.175	2827.199			
7	282710655	282710655 - N	2827.175	2827.199			
8	282710656	282710656 - N	2827.175	2827.199			
9	282710657	282710657 - N	2827.175	2827.199			
10	282710658	282710658 - N	2827.175	2827.199			
11	282710659	282710659 - N	2827.189	2827.192			
12	282710660	282710660 - N	2827.189	2827.192	1.26	1.95	
13	282710661	282710661 - N	2827.189	2827.192			
14	282710662	282710662 - N	2827.189	2827.192			
15	282710663	282710663 - N	2827.189	2827.192			
16	282710664	282710664 - N	2827.189	2827.192			
17	282710665	282710665 - N	2827.189	2827.192			9.33×10^{-4}
18	282710666	282710666 - N	2827.185	2827.202			
19	282710667	282710667 - N	2827.185	2827.202			
20	282710668	282710668 - N	2827.185	2827.202			
21	282710669	282710669 - N	2827.185	2827.202			
22	282710670	282710670 - N	2827.185	2827.202			
23	282710671	282710671 - N	2827.185	2827.202			
24	282710672	282710672 - N	2827.185	2827.202			
25	282710673	282710673 - N	2827.201	2827.190			
26	282710674	282710674 - N	2827.201	2827.190			
27	282710675	282710675 - N	2827.201	2827.190	1.35	1.61	

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710649 - N	26676-14	0.9547					
282710650 - N	26676-14	0.9547					
282710651 - N	26676-14	0.9547					
282710652 - N	26676-14	0.9547					
282710653 - N	26676-14	0.9547					
282710654 - N	26676-14	0.9547					
282710655 - N	26676-14	0.9547					
282710656 - N	26676-14	0.9547					
282710657 - N	26676-14	0.9547					
282710658 - N	26676-14	0.9547					
282710659 - N	26676-14	0.9547					
282710660 - N	26676-14	0.9547	0.351	318	2.41	105	
282710661 - N	26676-14	0.9547					
282710662 - N	26676-14	0.9547					
282710663 - N	26676-14	0.9547					
282710664 - N	26676-14	0.9547					
282710665 - N	26676-14	0.9547					
282710666 - N	26676-14	0.9547					
282710667 - N	26676-14	0.9547					
282710668 - N	26676-14	0.9547					
282710669 - N	26676-14	0.9547					
282710670 - N	26676-14	0.9547					
282710671 - N	26676-14	0.9547					
282710672 - N	26676-14	0.9547					
282710673 - N	26676-14	0.9547					
282710674 - N	26676-14	0.9547					
282710675 - N	26676-14	0.9547	0.344	323	2.59	109	

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710676	282710676 - N	2827.201	2827.190			
2	282710677	282710677 - N	2827.201	2827.190			
3	282710678	282710678 - N	2827.201	2827.190			
4	282710679	282710679 - N	2827.201	2827.190			
5	282710680	282710680 - N	2827.194	2827.197			
6	282710681	282710681 - N	2827.194	2827.197			
7	282710682	282710682 - N	2827.194	2827.197			
8	282710683	282710683 - N	2827.194	2827.197			
9	282710684	282710684 - N	2827.194	2827.197			
10	282710685	282710685 - N	2827.194	2827.197			
11	282710686	282710686 - N	2827.194	2827.197			
12	282710687	282710687 - N	2827.198	2827.195			
13	282710688	282710688 - N	2827.198	2827.195			
14	282710689	282710689 - N	2827.198	2827.195			
15	282710690	282710690 - N	2827.198	2827.195	1.13	1.77	
16	282710691	282710691 - N	2827.198	2827.195			
17	282710692	282710692 - N	2827.198	2827.195			
18	282710693	282710693 - N	2827.198	2827.195			
19	282710694	282710694 - N	2827.191	2827.200			
20	282710695	282710695 - N	2827.191	2827.200			
21	282710696	282710696 - N	2827.191	2827.200			
22	282710697	282710697 - N	2827.191	2827.200			
23	282710698	282710698 - N	2827.191	2827.200			
24	282710699	282710699 - N	2827.191	2827.200			
25	282710700	282710700 - N	2827.191	2827.200			9.26×10^{-4}
26	282710701	282710701 - N	2827.203	2827.193			
27	282710702	282710702 - N	2827.203	2827.193			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710676 - N	26676-14	0.9547					
282710677 - N	26676-14	0.9547					
282710678 - N	26676-14	0.9547					
282710679 - N	26676-14	0.9547					
282710680 - N	26676-14	0.9547					
282710681 - N	26676-14	0.9547					
282710682 - N	26676-14	0.9547					
282710683 - N	26676-14	0.9547					
282710684 - N	26676-14	0.9547					
282710685 - N	26676-14	0.9547					
282710686 - N	26676-14	0.9547					
282710687 - N	26676-14	0.9547					
282710688 - N	26676-14	0.9547					
282710689 - N	26676-14	0.9547					
282710690 - N	26676-14	0.9547	0.348	320	2.44	106	
282710691 - N	26676-14	0.9547					
282710692 - N	26676-14	0.9547					
282710693 - N	26676-14	0.9547					
282710694 - N	26676-14	0.9547					
282710695 - N	26676-14	0.9547					
282710696 - N	26676-14	0.9547					
282710697 - N	26676-14	0.9547					
282710698 - N	26676-14	0.9547					
282710699 - N	26676-14	0.9547					
282710700 - N	26676-14	0.9547					
282710701 - N	26676-14	0.9547					
282710702 - N	26676-14	0.9547					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710703	282710703 - N	2827.203	2827.193			
2	282710704	282710704 - N	2827.203	2827.193			
3	282710705	282710705 - N	2827.203	2827.193	1.33	1.63	
4	282710706	282710706 - N	2827.203	2827.193			
5	282710707	282710707 - N	2827.203	2827.193			
6	282710708	282710708 - N	2827.196	2827.204			
7	282710709	282710709 - N	2827.196	2827.204			
8	282710710	282710710 - N	2827.196	2827.204			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710703 - N	26676-14	0.9547					
282710704 - N	26676-14	0.9547					
282710705 - N	26676-14	0.9547	0.342	324	2.55	110	
282710706 - N	26676-14	0.9547					
282710707 - N	26676-14	0.9547					
282710708 - N	26676-14	0.9547					
282710709 - N	26676-14	0.9547					
282710710 - N	26676-14	0.9547					

APPROVED 5 QA

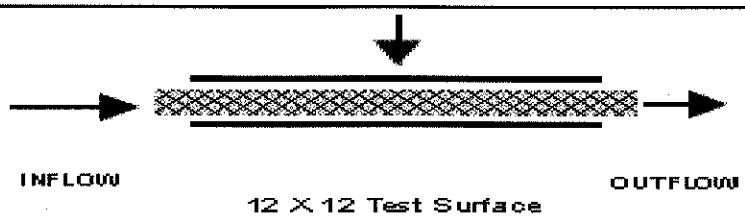
571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

ASTM D 4716

Client:	Hallaton, Inc.	**Job #**	2827
Project:	North Wake Landfill, NC		
Product:	TN330-2-6		

Test Configuration:



Test Information:

Boundary Conditions:	Sand Geocomposite Liner	**Normal Load:** **Gradient:** **Seating Time:** **Flow Direction:**	1000 psf 0.25 ft 100 hours MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m^2/sec 100 hours
282710595	1000	0.25	9.31×10^{-4}
282710630			9.23×10^{-4}
282710665			9.33×10^{-4}
282710700			9.26×10^{-4}

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Hallaton, Inc.
Project Name : North Wake Landfill, NC
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN330-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymers Inc	Formosa, TX	HDPE	26676-7	Density	ASTM D 1505	gm/cc	0.949	0.949
				Melt Flow Index	ASTM D 1238[a]	gm/10 min	0.16	0.16
			26676-14	Density	ASTM D 1505	gm/cc	0.950	0.950
				Melt Flow Index	ASTM D 1238[a]	gm/10 min	0.15	0.15

(a) Condition 190/2.16
* Data from SKAPS Quality Control

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-6
Project : North Wake Landfill, NC

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
282710595	2827.186	6.49	162	66	180	81	95	70	1.79
	2827.172	6.22	168	74	172	77	99	70	1.79
282710630	2827.165	6.64	161	67	179	83	97	70	1.79
	2827.187	6.49	162	66	180	81	95	70	1.79
282710665	2827.189	6.49	162	66	180	81	95	70	1.79
	2827.192	6.43	169	70	170	76	97	70	1.79
282710700	2827.191	6.43	169	70	170	76	97	70	1.79
	2827.200	6.29	167	73	173	78	96	70	1.76

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

December 30, 2008
Hallaton, Inc.
1206 Sparks Road
Sparks, MD 21152

Ref. : North Wake Landfill, NC
Customer P.O. # P6638
Transnet 330-2-6

We certify that the Transnet 330-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet[3]				
Mass per Unit Area	ASTM D 5261	lbs/ft^2	0.3	Minimum
Thickness	ASTM D 5199	mil	300	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	65	Minimum
Melt Flow	ASTM D 1238[2]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.94	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	0.5	MARV[5]
Transmissivity[1]	ASTM D 4716	m^2/sec	8.6×10^{-4}	MARV
Geotextile[3 & 4]				
Fabric Weight	ASTM D 5261	oz/yd^2	6.0	MARV
Grab Strength	ASTM D 4632	lbs	160	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Puncture Resistance	ASTM D 4833	lbs	56	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

2 Condition 190/2.16

3 Geotextile and Geonet properties are prior to lamination.

4 Geotextile data is provided by the supplier.

5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

571 Industrial Parkway, Commerce, GA 30529 **Phone**: 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710703	282710703 - N	2827.203	2827.193			
2	282710704	282710704 - N	2827.203	2827.193			
3	282710705	282710705 - N	2827.203	2827.193	1.33	1.63	
4	282710706	282710706 - N	2827.203	2827.193			
5	282710707	282710707 - N	2827.203	2827.193			
6	282710708	282710708 - N	2827.196	2827.204			
7	282710709	282710709 - N	2827.196	2827.204			
8	282710710	282710710 - N	2827.196	2827.204			
9	282710711	282710711 - N	2827.196	2827.204			
10	282710712	282710712 - N	2827.196	2827.204			
11	282710713	282710713 - N	2827.196	2827.204			
12	282710714	282710714 - N	2827.196	2827.204			
13	282710715	282710715 - N	2827.224	2827.213			
14	282710716	282710716 - N	2827.224	2827.213			
15	282710717	282710717 - N	2827.224	2827.213			
16	282710718	282710718 - N	2827.224	2827.213			
17	282710719	282710719 - N	2827.224	2827.213			
18	282710720	282710720 - N	2827.224	2827.213	1.18	1.83	
19	282710721	282710721 - N	2827.224	2827.213			
20	282710722	282710722 - N	2827.207	2827.221			
21	282710723	282710723 - N	2827.207	2827.221			
22	282710724	282710724 - N	2827.207	2827.221			
23	282710725	282710725 - N	2827.207	2827.221			
24	282710726	282710726 - N	2827.207	2827.221			
25	282710727	282710727 - N	2827.207	2827.221			
26	282710728	282710728 - N	2827.207	2827.221			
27	282710729	282710729 - N	2827.226	2827.209			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710703 - N	26676-14	0.9547					
282710704 - N	26676-14	0.9547					
282710705 - N	26676-14	0.9547	0.342	324	2.55	110	
282710706 - N	26676-14	0.9547					
282710707 - N	26676-14	0.9547					
282710708 - N	26676-14	0.9547					
282710709 - N	26676-14	0.9547					
282710710 - N	26676-14	0.9547					
282710711 - N	26676-14	0.9547					
282710712 - N	26676-14	0.9547					
282710713 - N	26676-14	0.9547					
282710714 - N	26676-14	0.9547					
282710715 - N	26676-14	0.9547					
282710716 - N	26676-14	0.9547					
282710717 - N	26676-14	0.9547					
282710718 - N	26676-14	0.9547					
282710719 - N	26676-14	0.9547					
282710720 - N	26676-14	0.9547	0.345	317	2.52	108	
282710721 - N	26676-14	0.9547					
282710722 - N	26676-14	0.9547					
282710723 - N	26676-14	0.9547					
282710724 - N	26676-14	0.9547					
282710725 - N	26676-14	0.9547					
282710726 - N	26676-14	0.9547					
282710727 - N	26676-14	0.9547					
282710728 - N	26676-14	0.9547					
282710729 - N	26676-14	0.9547					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710730	282710730 - N	2827.226	2827.209			
2	282710731	282710731 - N	2827.226	2827.209			
3	282710732	282710732 - N	2827.226	2827.209			
4	282710733	282710733 - N	2827.226	2827.209			
5	282710734	282710734 - N	2827.226	2827.209			
6	282710735	282710735 - N	2827.226	2827.209	1.11	1.55	9.22×10^{-4}
7	282710736	282710736 - N	2827.216	2827.225			
8	282710737	282710737 - N	2827.216	2827.225			
9	282710738	282710738 - N	2827.216	2827.225			
10	282710739	282710739 - N	2827.216	2827.225			
11	282710740	282710740 - N	2827.216	2827.225			
12	282710741	282710741 - N	2827.216	2827.225			
13	282710742	282710742 - N	2827.216	2827.225			
14	282710743	282710743 - N	2827.220	2827.215			
15	282710744	282710744 - N	2827.220	2827.215			
16	282710745	282710745 - N	2827.220	2827.215			
17	282710746	282710746 - N	2827.220	2827.215			
18	282710747	282710747 - N	2827.220	2827.215			
19	282710748	282710748 - N	2827.220	2827.215			
20	282710749	282710749 - N	2827.220	2827.215			
21	282710750	282710750 - N	2827.205	2827.219	1.31	1.89	
22	282710751	282710751 - N	2827.205	2827.219			
23	282710752	282710752 - N	2827.205	2827.219			
24	282710753	282710753 - N	2827.205	2827.219			
25	282710754	282710754 - N	2827.205	2827.219			
26	282710755	282710755 - N	2827.205	2827.219			
27	282710756	282710756 - N	2827.205	2827.219			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710730 - N	26676-14	0.9547					
282710731 - N	26676-14	0.9547					
282710732 - N	26676-14	0.9547					
282710733 - N	26676-14	0.9547					
282710734 - N	26676-14	0.9547					
282710735 - N	26676-14	0.9547	0.349	321	2.26	105	
282710736 - N	26676-14	0.9547					
282710737 - N	26676-14	0.9547					
282710738 - N	26676-14	0.9547					
282710739 - N	26676-14	0.9547					
282710740 - N	26676-14	0.9547					
282710741 - N	26676-14	0.9547					
282710742 - N	26676-14	0.9547					
282710743 - N	26676-14	0.9547					
282710744 - N	26676-14	0.9547					
282710745 - N	26676-14	0.9547					
282710746 - N	26676-14	0.9547					
282710747 - N	26676-14	0.9547					
282710748 - N	26676-14	0.9547					
282710749 - N	26676-14	0.9547					
282710750 - N	26676-14	0.9547	0.341	315	2.69	109	
282710751 - N	26676-14	0.9547					
282710752 - N	26676-14	0.9547					
282710753 - N	26676-14	0.9547					
282710754 - N	26676-14	0.9547					
282710755 - N	26676-14	0.9547					
282710756 - N	26676-14	0.9547					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710757	282710757 - N	2827.222	2827.206			
2	282710758	282710758 - N	2827.222	2827.206			
3	282710759	282710759 - N	2827.222	2827.206			
4	282710760	282710760 - N	2827.222	2827.206			
5	282710761	282710761 - N	2827.222	2827.206			
6	282710762	282710762 - N	2827.222	2827.206			
7	282710763	282710763 - N	2827.222	2827.206			
8	282710764	282710764 - N	2827.210	2827.227			
9	282710765	282710765 - N	2827.210	2827.227	1.16	1.66	
10	282710766	282710766 - N	2827.210	2827.227			
11	282710767	282710767 - N	2827.210	2827.227			
12	282710768	282710768 - N	2827.210	2827.227			
13	282710769	282710769 - N	2827.210	2827.227			
14	282710770	282710770 - N	2827.210	2827.227			9.29×10^{-4}
15	282710771	282710771 - N	2827.218	2827.211			
16	282710772	282710772 - N	2827.218	2827.211			
17	282710773	282710773 - N	2827.218	2827.211			
18	282710774	282710774 - N	2827.218	2827.211			
19	282710775	282710775 - N	2827.218	2827.211			
20	282710776	282710776 - N	2827.218	2827.211			
21	282710777	282710777 - N	2827.218	2827.211			
22	282710778	282710778 - N	2827.212	2827.223			
23	282710779	282710779 - N	2827.212	2827.223			
24	282710780	282710780 - N	2827.212	2827.223	1.25	1.80	
25	282710781	282710781 - N	2827.212	2827.223			
26	282710782	282710782 - N	2827.212	2827.223			
27	282710783	282710783 - N	2827.212	2827.223			

* Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710757 - N	26676-14	0.9547					
282710758 - N	26676-14	0.9547					
282710759 - N	26676-14	0.9547					
282710760 - N	26676-14	0.9547					
282710761 - N	26676-14	0.9547					
282710762 - N	26676-14	0.9547					
282710763 - N	26676-14	0.9547					
282710764 - N	26676-14	0.9547					
282710765 - N	PSPX8170	0.9552	0.347	325	2.32	106	
282710766 - N	PSPX8170	0.9552					
282710767 - N	PSPX8170	0.9552					
282710768 - N	PSPX8170	0.9552					
282710769 - N	PSPX8170	0.9552					
282710770 - N	PSPX8170	0.9552					
282710771 - N	PSPX8170	0.9552					
282710772 - N	PSPX8170	0.9552					
282710773 - N	PSPX8170	0.9552					
282710774 - N	PSPX8170	0.9552					
282710775 - N	PSPX8170	0.9552					
282710776 - N	PSPX8170	0.9552					
282710777 - N	PSPX8170	0.9552					
282710778 - N	PSPX8170	0.9552					
282710779 - N	PSPX8170	0.9552					
282710780 - N	PSPX8170	0.9552	0.343	318	2.61	110	
282710781 - N	PSPX8170	0.9552					
282710782 - N	PSPX8170	0.9552					
282710783 - N	PSPX8170	0.9552					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m^2/sec)
			Top	Bottom	Minimum	Average	
1	282710784	282710784 - N	2827.212	2827.223			
2	282710785	282710785 - N	2827.217	2827.214			
3	282710786	282710786 - N	2827.217	2827.214			
4	282710787	282710787 - N	2827.217	2827.214			
5	282710788	282710788 - N	2827.217	2827.214			
6	282710789	282710789 - N	2827.217	2827.214			
7	282710790	282710790 - N	2827.217	2827.214			
8	282710791	282710791 - N	2827.217	2827.214			
9	282710792	282710792 - N	2827.208	2827.228			
10	282710793	282710793 - N	2827.208	2827.228			
11	282710794	282710794 - N	2827.208	2827.228			
12	282710795	282710795 - N	2827.208	2827.228	1.20	1.73	
13	282710796	282710796 - N	2827.208	2827.228			
14	282710797	282710797 - N	2827.208	2827.228			
15	282710798	282710798 - N	2827.208	2827.228			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.25 and a confining pressure of 1000 psf between sand & liner after 100 hours.

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-6**
Project : **North Wake Landfill, NC**

We, the Geonet Manufacturer, hereby ceritify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
282710784 - N	PSPX8170	0.9552					
282710785 - N	PSPX8170	0.9552					
282710786 - N	PSPX8170	0.9552					
282710787 - N	PSPX8170	0.9552					
282710788 - N	PSPX8170	0.9552					
282710789 - N	PSPX8170	0.9552					
282710790 - N	PSPX8170	0.9552					
282710791 - N	PSPX8170	0.9552					
282710792 - N	PSPX8170	0.9552					
282710793 - N	PSPX8170	0.9552					
282710794 - N	PSPX8170	0.9552					
282710795 - N	PSPX8170	0.9552	0.350	320	2.45	108	
282710796 - N	PSPX8170	0.9552					
282710797 - N	PSPX8170	0.9552					
282710798 - N	PSPX8170	0.9552					

APPROVED 5 QA

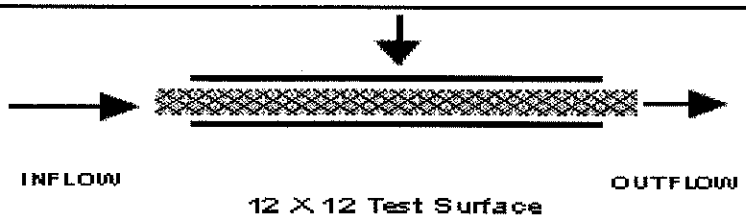
571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

ASTM D 4716

Client:	Hallaton, Inc.	**Job #**	2827
Project:	North Wake Landfill, NC		
Product:	TN330-2-6		

Test Configuration:



Test Information:

Boundary Conditions:	Sand Geocomposite Liner	**Normal Load:**	1000 psf
		Gradient:	0.25 ft
		Seating Time:	100 hours
		Flow Direction:	MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m^2/sec
			100 hours
282710735	1000	0.25	9.22×10^{-4}
282710770			9.29×10^{-4}

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Hallaton, Inc.
Project Name : North Wake Landfill, NC
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN330-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymers Inc	Formosa, TX	HDPE	26676-14	Density	ASTM D 1505	gm/cc	0.950	0.950
				Melt Flow Index	ASTM D 1238[a]	gm/10 min	0.15	0.15
Matrix Polymers			PSPX8170	Density	ASTM D 1505	gm/cc	0.950	0.950
				Melt Flow Index	ASTM D 1238[a]	gm/10 min	0.30	0.30

(a) Condition 190/2.16
* Data from SKAPS Quality Control

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-6
Project : North Wake Landfill, NC

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
282710735	2827.226	6.70	168	72	179	85	98	70	1.76
	2827.209	6.45	169	66	180	75	96	70	1.76
282710770	2827.210	6.31	163	70	177	83	100	70	1.76
	2827.227	6.70	168	72	179	85	98	70	1.76

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

August 8, 2008
August 12, 2008 (Updated)

Mail To:	**Bill To:**
Mr. Kennedy Garber **Hallaton, Inc.**	**<= Same**

email: kgarber@hallaton.com

Dear Mr. Garber:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**North Wake**
TRI Job Reference Number:	E2317-09-01
Material(s) Tested:	6 SKAPS TN330-2-6 Double Sided Geocomposite(s)
Test(s) Requested:	Transmissivity (ASTM D 4716) - GC Peel Strength (GRI GC7) - GC Thickness (ASTM D 5199) - GN Density (ASTM D 1505) - GN Carbon Content (ASTM D 4218) - GN Melt Index (ASTM D 1238) - GN Strip Tensile (ASTM D 5035) - GN

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

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710005
TRI Log #: E2317-09-01

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

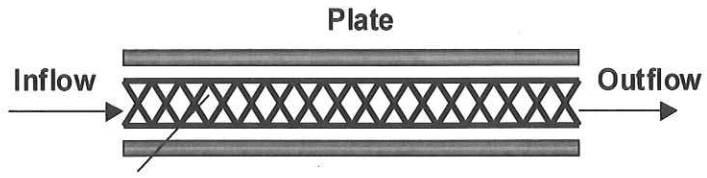


Plate / Sample / Plate

Seat Time (hours)		Specimen	1			2		MEAN	STD. DEV.
	Volume (cc)	812	811	818	799	799	806		
	Time (s)	10.01	10.03	10.06	10.05	10.04	10.11		
0.25	Flow Rate (GPM/ft width)	1.29	1.28	1.29	1.26	1.26	1.26	1.27	0.01
	Transmissivity (m^2/s)	2.66E-03	2.65E-03	2.67E-03	2.61E-03	2.61E-03	2.62E-03	2.64E-03	2.74E-05
	Test Temp (C)		20.0			20.0			
	Temp. Corr. Factor		1.000			1.000			

Peel Strength (GRI GC7)

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	1.4	2.4	3.8	4.1	3.3	3.0	1.1
A - MD Average Peel Strength (g/in)	636	1090	1725	1861	1498	1362	500
B - MD Average Peel Strength (ppi)	4.5	1.7	5.2	4.0	6.3	4.3	1.7
B - MD Average Peel Strength (g/in)	2043	772	2361	1816	2860	1970	776

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199)

Geonet Component

PARAMETER	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (mils)	330	344	340	341	325	334	336	350	324	327	335	9
											324	<< min

Density (ASTM D 1505)

Geonet Component

PARAMETER	1	2	3	MEAN	STD. DEV.
Density (g/cm3)	0.948	0.948	0.948	0.948	0.000

Carbon Black Content (ASTM D 4218)

Geonet Component

PARAMETER	1	2	MEAN	STD. DEV.
% Carbon Black	2.49	2.47	2.48	0.01

Melt Flow Index (ASTM D 1238, 190/2.16)

Geonet Component

PARAMETER	1	MEAN
Melt Flow Index (g/10 min)	0.10	0.10

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)

Geonet Component

PARAMETER	1	2	3	4	5	MEAN	STD. DEV.
MD Max. Strength (ppi)	114	110	126	119	120	118	6
MD Elong. @ Max. Strength (%)	19	22	25	25	22	23	3

MD Machine Direction TD Transverse Direction

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction: of this report, except in full, without prior approval of TRI.

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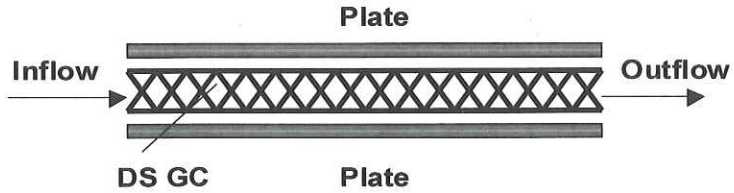
GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710044
TRI Log #: E2317-09-01

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1			2						
Volume (cc)		794	791	791	782	786	788					
Time (s)		10.01	10.00	10.02	9.93	10.04	10.09					
0.25 Flow Rate (GPM/ft width)		1.26	1.25	1.25	1.25	1.24	1.24				1.25	0.01
0.25 Transmissivity (m^2/s)		2.60E-03	2.60E-03	2.59E-03	2.58E-03	2.57E-03	2.56E-03				2.58E-03	1.56E-05
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	5.1	3.0	1.3	6.1	1.1						3.3	2.2
A - MD Average Peel Strength (g/in)	2315	1362	590	2769	499						1507	1015
B - MD Average Peel Strength (ppi)	2.4	0.9	0.9	2.4	2.6						1.8	0.9
B - MD Average Peel Strength (g/in)	1090	409	409	1090	1180						835	391
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	346	334	324	348	340	339	338	325	309	317	332	13
											309	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.949	0.949	0.949								0.949	0.000
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.49	2.49									2.49	0.00
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.10										0.10	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	125	90	97	99	93						101	14
MD Elong. @ Max. Strength (%)	22	23	19	26	20						22	3



MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710082
TRI Log #: E2317-09-01

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	1,000
Hydraulic Gradient:	0.25
Test Length (in)	12
Test Width (in)	12

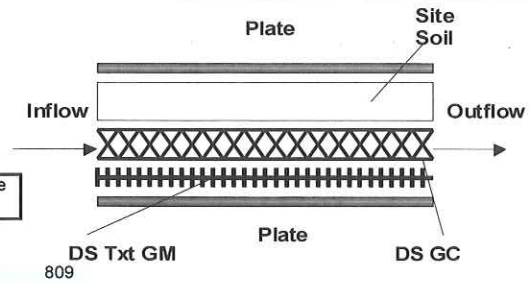

Plate / Soil / Sample / Agru 40 mil Microspike LLDPE Geomembrane / Plate

Seat Time (hours)		Specimen	1			MEAN	STD. DEV.
	Volume (cc)		782	793	809		
	Time (s)		5.15	5.18	5.26		
100	Flow Rate (GPM/ft width)		2.41	2.43	2.44	2.42	0.02
	Transmissivity (m^2/s)		1.99E-03	2.01E-03	2.02E-03	2.01E-03	1.30E-05
	Test Temp (C)			20.0			
	Temp. Corr. Factor			1.000			

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710082
TRI Log #: E2317-09-01

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

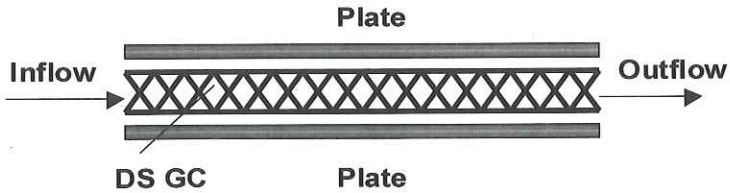

Plate / Sample / Plate

Seat Time (hours)		Specimen	1				2						
	Volume (cc)		672	663	660	691	690	687					
	Time (s)		10.20	10.09	10.12	10.09	10.04	10.01					
0.25	Flow Rate (GPM/ft width)		1.04	1.04	1.03	1.09	1.09	1.09				1.06	0.03
	Transmissivity (m^2/s)		2.16E-03	2.16E-03	2.14E-03	2.25E-03	2.25E-03	2.25E-03				2.20E-03	5.46E-05
	Test Temp (C)			20.0			20.0						
	Temp. Corr. Factor			1.000			1.000						

Peel Strength (GRI GC7)	1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	2.9	4.6	3.6	3.2	3.5	3.6	0.6
A - MD Average Peel Strength (g/in)	1317	2088	1634	1453	1589	1616	292
B - MD Average Peel Strength (ppi)	1.4	2.1	0.7	4.7	4.1	2.6	1.7
B - MD Average Peel Strength (g/in)	636	953	318	2134	1861	1180	785

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199)	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
				Geonet Component								
Thickness (mils)	338	354	339	344	338	335	344	338	351	356	344	7
											335	<< min

Density (ASTM D 1505)	1	2	3	MEAN	STD. DEV.
			Geonet Component		
Density (g/cm3)	0.948	0.948	0.948	0.948	0.000

Carbon Black Content (ASTM D 4218)	1	2	MEAN	STD. DEV.
		Geonet Component		
% Carbon Black	2.46	2.46	2.46	0.00

Melt Flow Index (ASTM D 1238, 190/2.16)	1	MEAN
	Geonet Component	
Melt Flow Index (g/10 min)	0.10	0.10

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)	1	2	3	4	5	MEAN	STD. DEV.
				Geonet Component			
MD Max. Strength (ppi)	124	107	115	130	104	116	11
MD Elong. @ Max. Strength (%)	28	21	24	25	23	24	3

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710113
TRI Log #: E2317-09-01

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

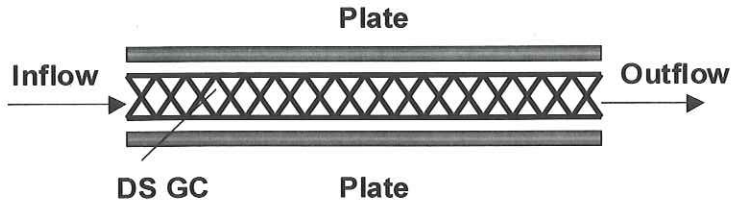

Plate / Sample / Plate

Seat Time (hours)		Specimen	1			2			MEAN	STD. DEV.
	Volume (cc)		868	866	865	886	887	884		
	Time (s)		10.06	10.01	10.00	10.10	10.09	10.06		
0.25	Flow Rate (GPM/ft width)		1.37	1.37	1.37	1.39	1.39	1.39	1.38	0.01
	Transmissivity (m^2/s)		2.83E-03	2.84E-03	2.84E-03	2.88E-03	2.88E-03	2.88E-03	2.86E-03	2.54E-05
	Test Temp (C)			20.0			20.0			
	Temp. Corr. Factor			1.000			1.000			

Peel Strength (GRI GC7)

PARAMETER	1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	2.5	2.5	3.5	2.9	3.9	3.1	0.6
A - MD Average Peel Strength (g/in)	1135	1135	1589	1317	1771	1389	283
B - MD Average Peel Strength (ppi)	5.2	2.1	2.0	4.2	5.4	3.8	1.6
B - MD Average Peel Strength (g/in)	2361	953	908	1907	2452	1716	746

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199)

Geonet Component

PARAMETER	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (mils)	336	355	349	334	339	341	333	339	313	335	337	11
											313	<< min

Density (ASTM D 1505)

Geonet Component

PARAMETER	1	2	3	MEAN	STD. DEV.
Density (g/cm3)	0.950	0.950	0.951	0.950	0.001

Carbon Black Content (ASTM D 4218)

Geonet Component

PARAMETER	1	2	MEAN	STD. DEV.
% Carbon Black	2.48	2.49	2.49	0.01

Melt Flow Index (ASTM D 1238, 190/2.16)

Geonet Component

PARAMETER	1	MEAN
Melt Flow Index (g/10 min)	0.1	0.10

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)

Geonet Component

PARAMETER	1	2	3	4	5	MEAN	STD. DEV.
MD Max. Strength (ppi)	103	114	88	126	87	103	17
MD Elong. @ Max. Strength (%)	23	24	19	21	20	21	2

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710148
TRI Log #: E2317-09-01

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

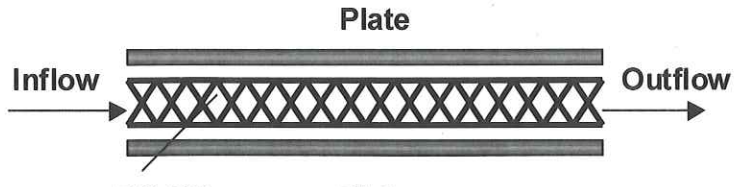

Plate / Sample / Plate

Seat Time (hours)		Specimen 1			Specimen 2			MEAN	STD. DEV.
0.25	Volume (cc)	891	891	892	714	709	706		
	Time (s)	10.02	10.00	10.06	10.09	10.09	10.07		
	Flow Rate (GPM/ft width)	1.41	1.41	1.41	1.12	1.11	1.11	1.26	0.16
	Transmissivity (m^2/s)	2.92E-03	2.92E-03	2.91E-03	2.32E-03	2.31E-03	2.30E-03	2.61E-03	3.33E-04
	Test Temp (C)		20.0			20.0			
	Temp. Corr. Factor		1.000			1.000			

Peel Strength (GRI GC7)

	1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	2.4	2.4	3.7	4.6	3.8	3.4	1.0
A - MD Average Peel Strength (g/in)	1090	1090	1680	2088	1725	1535	436
B - MD Average Peel Strength (ppi)	2.2	2.8	2.6	0.7	1.4	1.9	0.9
B - MD Average Peel Strength (g/in)	999	1271	1180	318	636	881	398

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199)

Geonet Component

	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (mils)	318	316	323	339	319	317	310	318	333	343	324	11
											310	<< min

Density (ASTM D 1505)

Geonet Component

	1	2	3	MEAN	STD. DEV.
Density (g/cm3)	0.947	0.947	0.947	0.947	0.000

Carbon Black Content (ASTM D 4218)

Geonet Component

	1	2	MEAN	STD. DEV.
% Carbon Black	2.50	2.50	2.50	0.00

Melt Flow Index (ASTM D 1238, 190/2.16)

Geonet Component

	1	MEAN
Melt Flow Index (g/10 min)	0.10	0.10

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)

Geonet Component

	1	2	3	4	5	MEAN	STD. DEV.
MD Max. Strength (ppi)	104	100	80	120	80	96	17
MD Elong. @ Max. Strength (%)	28	17	18	23	17	21	5

MD Machine Direction TD Transverse Direction

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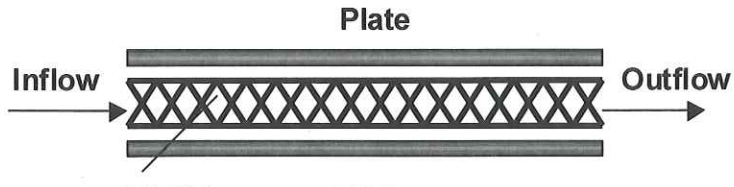
GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710184
TRI Log #: E2317-09-01

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1			2						
Volume (cc)		814	812	806	797	795	791					
Time (s)		10.13	10.10	10.03	10.07	10.07	10.05					
0.25 Flow Rate (GPM/ft width)		1.27	1.27	1.27	1.25	1.25	1.25				1.26	0.01
0.25 Transmissivity (m^2/s)		2.64E-03	2.64E-03	2.64E-03	2.60E-03	2.59E-03	2.58E-03				2.61E-03	2.62E-05
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	1.8	5.0	5.6	3.5	2.7						3.7	1.6
A - MD Average Peel Strength (g/in)	817	2270	2542	1589	1226						1689	716
B - MD Average Peel Strength (ppi)	7.4	3.0	6.0	3.2	6.3						5.2	2.0
B - MD Average Peel Strength (g/in)	3360	1362	2724	1453	2860						2352	895
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	351	323	323	315	324	323	325	316	335	334	327	11
											315	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.948	0.948	0.948								0.948	0.000
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.46	2.51									2.49	0.04
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.10										0.10	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	97	117	105	114	107						108	8
MD Elong. @ Max. Strength (%)	23	27	27	21	20						24	3



MD Machine Direction TD Transverse Direction

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August 19, 2008

Mail To:	**Bill To:**
Mr. Kennedy Garber **Hallaton, Inc.**	**<= Same**

email: kgarber@hallaton.com

Dear Mr. Garber:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**North Wake**
TRI Job Reference Number:	E2317-25-08
Material(s) Tested:	5 SKAPS TN330-2-6 Double Sided Geocomposite(s)
Test(s) Requested:	Transmissivity (ASTM D 4716) - GC Peel Strength (GRI GC7) - GC Thickness (ASTM D 5199) - GN Density (ASTM D 1505) - GN Carbon Content (ASTM D 4218) - GN Melt Index (ASTM D 1238) - GN Strip Tensile (ASTM D 5035) - GN

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

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

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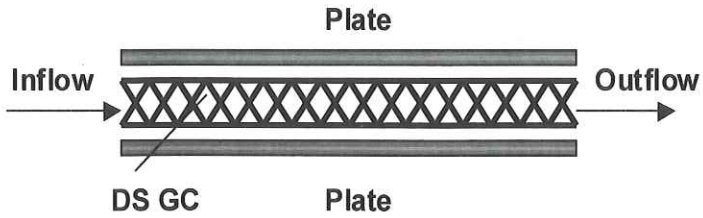
GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710217
TRI Log #: E2317-25-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1			2						
Volume (cc)		677	694	684	942	936	946					
Time (s)		7.25	7.43	7.37	7.34	7.37	7.34					
0.25 Flow Rate (GPM/ft width)		1.48	1.48	1.47	2.03	2.01	2.04				1.75	0.30
0.25 Transmissivity (m^2/s)		3.06E-03	3.06E-03	3.04E-03	4.21E-03	4.17E-03	4.23E-03				3.63E-03	6.27E-04
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	4.9	2.7	5.8	4.2	1.7						3.9	1.7
A - MD Average Peel Strength (g/in)	2225	1226	2633	1907	772						1752	752
B - MD Average Peel Strength (ppi)	6.1	3.6	5.8	4.1	2.9						4.5	1.4
B - MD Average Peel Strength (g/in)	2769	1634	2633	1861	1317						2043	633
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	337	328	339	344	324	339	320	321	343	326	332	9
											320	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.950	0.950	0.950								0.950	0.000
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.42	2.36									2.39	0.04
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.10										0.10	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	114	87	115	105	97						103	12
MD Elong. @ Max. Strength (%)	25	18	22	24	20						22	3



MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710256
TRI Log #: E2317-25-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

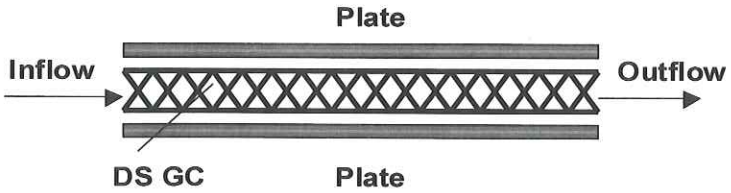

Plate / Sample / Plate

Seat Time (hours)		Specimen	1			2			
	Volume (cc)	997	1000	996	956	977	934		
	Time (s)	7.43	7.46	7.46	7.40	7.62	7.25		
0.25	Flow Rate (GPM/ft width)	2.13	2.12	2.12	2.05	2.03	2.04	2.08	0.05
	Transmissivity (m^2/s)	4.40E-03	4.40E-03	4.38E-03	4.24E-03	4.21E-03	4.23E-03	4.31E-03	9.38E-05
	Test Temp (C)		20.0			20.0			
	Temp. Corr. Factor		1.000			1.000			

Peel Strength (GRI GC7)

	1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	3.6	3.0	3.8	5.7	3.9	4.0	1.0
A - MD Average Peel Strength (g/in)	1634	1362	1725	2588	1771	1816	460
B - MD Average Peel Strength (ppi)	4.0	3.9	3.0	4.9	4.0	4.0	0.7
B - MD Average Peel Strength (g/in)	1816	1771	1362	2225	1816	1798	306

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199) — Geonet Component

	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (mils)	349	337	350	341	359	348	329	331	321	329	339	12
											321	<< min

Density (ASTM D 1505) — Geonet Component

	1	2	3	MEAN	STD. DEV.
Density (g/cm3)	0.949	0.949	0.949	0.949	0.000

Carbon Black Content (ASTM D 4218) — Geonet Component

	1	2	MEAN	STD. DEV.
% Carbon Black	2.42	2.39	2.41	0.02

Melt Flow Index (ASTM D 1238, 190/2.16) — Geonet Component

	1	MEAN
Melt Flow Index (g/10 min)	0.10	0.10

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate) — Geonet Component

	1	2	3	4	5	MEAN	STD. DEV.
MD Max. Strength (ppi)	102	88	119	90	94	98	13
MD Elong. @ Max. Strength (%)	19	23	23	18	21	21	2

MD Machine Direction TD Transverse Direction

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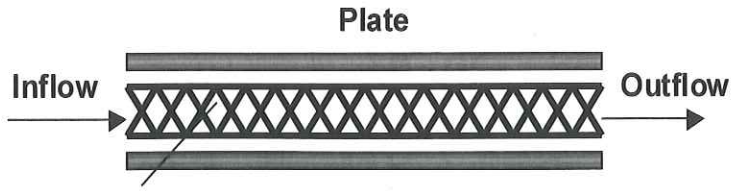
GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710298
TRI Log #: E2317-25-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1				2					
Volume (cc)		951	930	959	1014	1033	1018					
Time (s)		7.43	7.34	7.53	7.37	7.50	7.40					
0.25 Flow Rate (GPM/ft width)		2.03	2.01	2.02	2.18	2.18	2.18				2.10	0.09
0.25 Transmissivity (m^2/s)		4.20E-03	4.16E-03	4.18E-03	4.51E-03	4.52E-03	4.51E-03				4.35E-03	1.85E-04
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	2.2	4.4	5.6	2.5	1.7						3.3	1.7
A - MD Average Peel Strength (g/in)	999	1998	2542	1135	772						1489	750
B - MD Average Peel Strength (ppi)	3.6	4.8	4.4	3.5	2.9						3.8	0.8
B - MD Average Peel Strength (g/in)	1634	2179	1998	1589	1317						1743	344
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	338	333	340	322	346	338	355	348	338	349	341	9
											322	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.949	0.949	0.949								0.949	0.000
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.44	2.44									2.44	0.00
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.10										0.10	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	90	109	74	97	88						91	13
MD Elong. @ Max. Strength (%)	17	17	17	24	18						19	3



MD Machine Direction TD Transverse Direction

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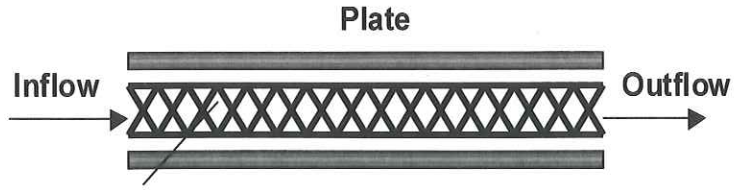
GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710329
TRI Log #: E2317-25-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1			2						
Volume (cc)		973	961	1006	952	958	931					
Time (s)		7.28	7.31	7.56	7.50	7.50	7.28					
0.25 Flow Rate (GPM/ft width)		2.12	2.08	2.11	2.01	2.02	2.03				2.06	0.05
0.25 Transmissivity (m^2/s)		4.38E-03	4.31E-03	4.37E-03	4.16E-03	4.19E-03	4.20E-03				4.27E-03	9.71E-05
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	6.2	3.9	3.3	2.7	4.2						4.1	1.3
A - MD Average Peel Strength (g/in)	2815	1771	1498	1226	1907						1843	603
B - MD Average Peel Strength (ppi)	4.6	4.9	4.7	3.2	3.7						4.2	0.7
B - MD Average Peel Strength (g/in)	2088	2225	2134	1453	1680						1916	333
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	354	352	333	309	327	336	335	323	332	349	335	14
											309	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.950	0.950	0.950								0.950	0.000
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.46	2.43									2.45	0.02
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.1										0.06	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	105	127	93	93	101						103	14
MD Elong. @ Max. Strength (%)	24	25	18	21	22						22	3



MD Machine Direction TD Transverse Direction

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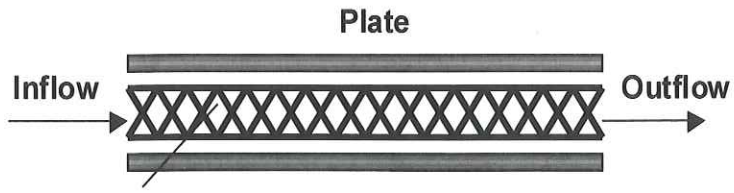
GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710361
TRI Log #: E2317-25-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen	1				2						
Volume (cc)		783	795	783	881	887	911					
Time (s)		7.28	7.34	7.25	7.21	7.40	7.53					
0.25 Flow Rate (GPM/ft width)		1.70	1.72	1.71	1.94	1.90	1.92				1.81	0.11
0.25 Transmissivity (m^2/s)		3.53E-03	3.55E-03	3.54E-03	4.01E-03	3.93E-03	3.97E-03				3.76E-03	2.36E-04
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	6.6	4.9	3.4	2.8	0.9						3.7	2.2
A - MD Average Peel Strength (g/in)	2996	2225	1544	1271	409						1689	979
B - MD Average Peel Strength (ppi)	5.5	4.4	3.3	3.7	2.7						3.9	1.1
B - MD Average Peel Strength (g/in)	2497	1998	1498	1680	1226						1780	489
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	351	347	340	337	334	332	330	330	325	332	336	8
											325	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.949	0.949	0.949								0.949	0.000
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.51	2.54									2.53	0.02
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.10										0.10	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	89	101	110	109	103						102	9
MD Elong. @ Max. Strength (%)	21	22	26	23	23						23	2



MD Machine Direction TD Transverse Direction

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GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

TRI / Environmental, Inc.
A Texas Research International Company

December 16, 2008

Mail To:	**Bill To:**
Mr. Kennedy Garber **Hallaton, Inc.**	**<= Same**

email: kgarber@hallaton.com

Dear Mr. Garber:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**North Wake**
TRI Job Reference Number:	E2320-93-05
Material(s) Tested:	3 SKAPS TN330-2-6 Double Sided Geocomposite(s)
Test(s) Requested:	Transmissivity (ASTM D 4716) - GC Peel Strength (GRI GC7) - GC Thickness (ASTM D 5199) - GN Density (ASTM D 1505) - GN Carbon Content (ASTM D 4218) - GN Melt Index (ASTM D 1238) - GN Strip Tensile (ASTM D 5035) - GN

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

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

TRI / Environmental, Inc.
A Texas Research International Company

GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710711
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

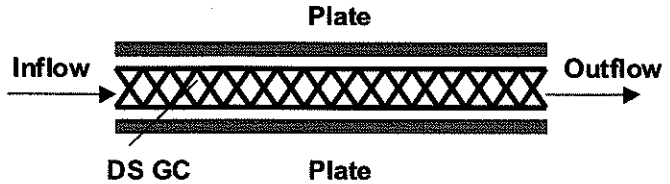

Plate / Sample / Plate

Seat Time (hours)	Specimen	1			2				
0.25	Volume (cc)	547	525	572	513	512	532		
	Time (s)	4.18	4.12	4.21	4.12	4.21	4.37		
	Flow Rate (GPM/ft width)	2.07	2.02	2.15	1.97	1.93	1.93	2.01	0.09
	Transmissivity (m^2/s)	4.29E-03	4.18E-03	4.46E-03	4.09E-03	3.99E-03	3.99E-03	4.17E-03	1.84E-04
	Test Temp (C)		20.0			20.0			
	Temp. Corr. Factor		1.000			1.000			

Peel Strength (GRI GC7)

	1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	5.0	3.5	3.3	4.7	6.1	4.5	1.1
A - MD Average Peel Strength (g/in)	2270	1589	1498	2134	2769	2052	522
B - MD Average Peel Strength (ppi)	4.3	1.8	5.2	6.5	5.4	4.6	1.8
B - MD Average Peel Strength (g/in)	1952	817	2361	2951	2452	2107	804

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199) — Geonet Component

	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (mils)	336	328	324	332	336	311	321	323	316	331	326	8
											311	<< min

Density (ASTM D 1505) — Geonet Component

	1	2	3	MEAN	STD. DEV.
Density (g/cm3)	0.948	0.948	0.948	0.948	0.000

Carbon Black Content (ASTM D 4218) — Geonet Component

	1	2	MEAN	STD. DEV.
% Carbon Black	2.49	2.54	2.52	0.04

Melt Flow Index (ASTM D 1238, 190/2.16) — Geonet Component

	1	MEAN
Melt Flow Index (g/10 min)	0.23	0.23

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate) — Geonet Component

	1	2	3	4	5	MEAN	STD. DEV.
MD Max. Strength (ppi)	130	146	139	119	117	130	12
MD Elong. @ Max. Strength (%)	25	22	26	20	24	23	2

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710745
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

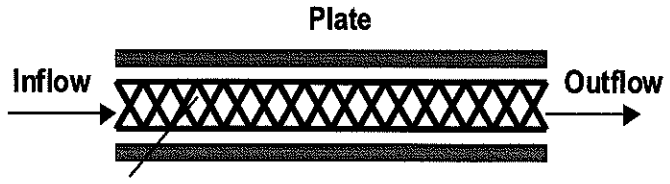

Plate / Sample / Plate

Seat Time (hours)	Specimen	1	2	3	4	5	6	MEAN	STD. DEV.
	Volume (cc)	517	593	575	549	545	529		
	Time (s)	4.21	4.78	4.68	4.62	4.50	4.43		
0.25	Flow Rate (GPM/ft width)	1.95	1.97	1.95	1.88	1.92	1.89	1.93	0.03
	Transmissivity (m^2/s)	4.03E-03	4.07E-03	4.03E-03	3.90E-03	3.97E-03	3.92E-03	3.99E-03	6.84E-05
	Test Temp (C)	20.0				20.0			
	Temp. Corr. Factor	1.000				1.000			

Peel Strength (GRI GC7)

	1	2	3	4	5	MEAN	STD. DEV.
A - MD Average Peel Strength (ppi)	2.0	8.5	3.4	6.0	4.7	4.9	2.5
A - MD Average Peel Strength (g/in)	908	3859	1544	2724	2134	2234	1132
B - MD Average Peel Strength (ppi)	2.7	4.8	2.4	5.0	3.6	3.7	1.2
B - MD Average Peel Strength (g/in)	1226	2179	1090	2270	1634	1680	537

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199) — Geonet Component

	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (mils)	333	332	327	326	314	323	325	332	329	325	327	6
											314	<< min

Density (ASTM D 1505) — Geonet Component

	1	2	3	MEAN	STD. DEV.
Density (g/cm3)	0.952	0.952	0.952	0.952	0.000

Carbon Black Content (ASTM D 4218) — Geonet Component

	1	2	MEAN	STD. DEV.
% Carbon Black	2.66	2.65	2.66	0.01

Melt Flow Index (ASTM D 1238, 190/2.16) — Geonet Component

	1	MEAN
Melt Flow Index (g/10 min)	0.23	0.23

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate) — Geonet Component

	1	2	3	4	5	MEAN	STD. DEV.
MD Max. Strength (ppi)	139	113	149	149	122	134	16
MD Elong. @ Max. Strength (%)	25	23	27	19	25	24	3

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710774
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

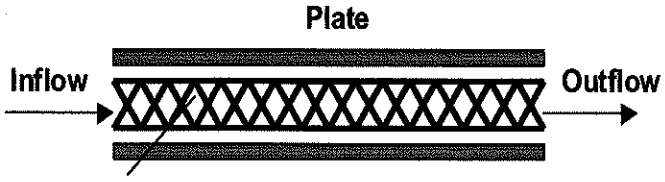

Plate / Sample / Plate

Seat Time (hours)		Specimen	1			2			
	Volume (cc)		566	545	546	505	558	516	
	Time (s)		5.25	5.03	5.03	4.06	4.37	4.12	
0.25	Flow Rate (GPM/ft width)		1.71	1.72	1.72	1.97	2.02	1.99	1.85 / 0.15
	Transmissivity (m^2/s)		3.54E-03	3.55E-03	3.56E-03	4.08E-03	4.19E-03	4.11E-03	3.84E-03 / 3.17E-04
	Test Temp (C)			20.0			20.0		
	Temp. Corr. Factor			1.000			1.000		

	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	5.7	2.8	6.1	3.2	3.1						4.2	1.6
A - MD Average Peel Strength (g/in)	2588	1271	2769	1453	1407						1898	719
B - MD Average Peel Strength (ppi)	2.6	5.2	6.1	3.6	4.6						4.4	1.4
B - MD Average Peel Strength (g/in)	1180	2361	2769	1634	2088						2007	620

Note: A and B represent a randomly assigned top and bottom of the sample

	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	307	307	315	311	296	303	318	303	303	308	307	6
											296	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.950	0.951	0.951								0.951	0.001
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.74	2.70									2.72	0.03
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.22										0.22	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	116	124	139	125	133						127	9
MD Elong. @ Max. Strength (%)	24	27	29	23	29						26	3

MD Machine Direction TD Transverse Direction

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TRI / Environmental, Inc.
A Texas Research International Company

December 16, 2008
December 31, 2008 Updating 100 HoursTrans

Mail To:

Mr. Kennedy Garber
Hallaton, Inc.

email: kgarber@hallaton.com

Bill To:

<= Same

Dear Mr. Garber:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**North Wake**
TRI Job Reference Number:	E2320-93-05
Material(s) Tested:	3 SKAPS TN330-2-6 Double Sided Geocomposite(s)
Test(s) Requested:	Transmissivity (ASTM D 4716) - GC - 100HR < == Updating Transmissivity (ASTM D 4716) - GC - 15 minute Peel Strength (GRI GC7) - GC Thickness (ASTM D 5199) - GN Density (ASTM D 1505) - GN Carbon Content (ASTM D 4218) - GN Melt Index (ASTM D 1238) - GN Strip Tensile (ASTM D 5035) - GN

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

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

TRI / Environmental, Inc.
A Texas Research International Company

GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710711
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Hydraulic Transmissivity (ASTM D 4716)												

Direction Tested: Machine Direction

Normal Load (psf):	1,000
Hydraulic Gradient:	0.25
Test Length (in)	12
Test Width (in)	12

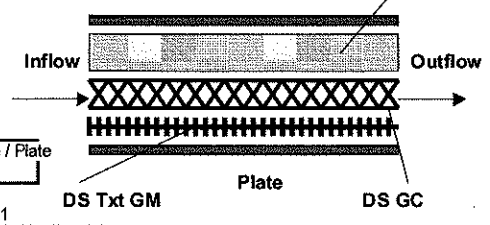

Plate / Soil / Sample / Agru 40 mil Microspike LLDPE Geomembrane / Plate

Seat Time (hours)		Specimen	1				
	Volume (cc)		1017	1031	1063		
	Time (s)		5.07	5.09	5.20		
100	Flow Rate (GPM/ft width)		3.18	3.21	3.24	3.21	0.03
	Transmissivity (m^2/s)		2.63E-03	2.66E-03	2.68E-03	2.66E-03	2.51E-05
	Test Temp (C)			20.0			
	Temp. Corr. Factor			1.000			

MD Machine Direction TD Transverse Direction

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TRI / Environmental, Inc.
A Texas Research International Company

GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710711
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												

Direction Tested: Machine Direction

Normal Load (psf):	10,000
Hydraulic Gradient:	0.1
Test Length (in)	12
Test Width (in)	12

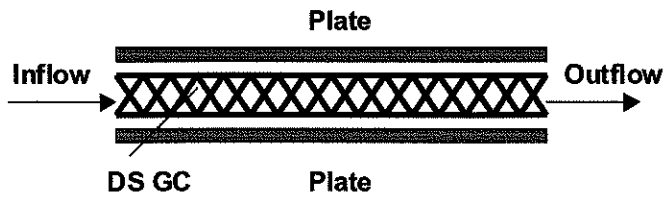

Plate / Sample / Plate

Seat Time (hours)	Specimen	1			2							
	Volume (cc)	547	526	572	513	512	532					
	Time (s)	4.18	4.12	4.21	4.12	4.21	4.37					
0.25	Flow Rate (GPM/ft width)	2.07	2.02	2.15	1.97	1.93	1.93				2.01	0.09
	Transmissivity (m^2/s)	4.29E-03	4.18E-03	4.46E-03	4.09E-03	3.99E-03	3.99E-03				4.17E-03	1.84E-04
	Test Temp (C)	20.0			20.0							
	Temp. Corr. Factor	1.000			1.000							

Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	5.0	3.5	3.3	4.7	6.1						4.5	1.1
A - MD Average Peel Strength (g/in)	2270	1589	1498	2134	2769						2052	522
B - MD Average Peel Strength (ppi)	4.3	1.8	5.2	6.5	5.4						4.6	1.8
B - MD Average Peel Strength (g/in)	1952	817	2361	2951	2452						2107	804

Note: A and B represent a randomly assigned top and bottom of the sample

Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	336	328	324	332	336	311	321	323	316	331	326	8
											311	<< min

Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.948	0.948	0.948								0.948	0.000

Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.49	2.54									2.52	0.04

Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.23										0.23	

Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	130	146	139	119	117						130	12
MD Elong. @ Max. Strength (%)	25	22	26	20	24						23	2

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710745
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf):	10,000											
Hydraulic Gradient:	0.1											
Test Length (in)	12											
Test Width (in)	12											
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1			2						
Volume (cc)		517	593	575	549	545	529					
Time (s)		4.21	4.78	4.68	4.62	4.50	4.43					
0.25 Flow Rate (GPM/ft width)		1.95	1.97	1.95	1.88	1.92	1.89				1.93	0.03
Transmissivity (m^2/s)		4.03E-03	4.07E-03	4.03E-03	3.90E-03	3.97E-03	3.92E-03				3.99E-03	6.84E-05
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	2.0	8.5	3.4	6.0	4.7						4.9	2.5
A - MD Average Peel Strength (g/in)	908	3859	1544	2724	2134						2234	1132
B - MD Average Peel Strength (ppi)	2.7	4.8	2.4	5.0	3.6						3.7	1.2
B - MD Average Peel Strength (g/in)	1226	2179	1090	2270	1634						1680	537
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				**Geonet Component**								
Thickness (mils)	333	332	327	326	314	323	325	332	329	325	327	6
											314	<< min
Density (ASTM D 1505)				**Geonet Component**								
Density (g/cm3)	0.952	0.952	0.952								0.952	0.000
Carbon Black Content (ASTM D 4218)				**Geonet Component**								
% Carbon Black	2.66	2.65									2.66	0.01
Melt Flow Index (ASTM D 1238, 190/2.16)				**Geonet Component**								
Melt Flow Index (g/10 min)	0.23										0.23	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				**Geonet Component**								
MD Max. Strength (ppi)	139	113	149	149	122						134	16
MD Elong. @ Max. Strength (%)	25	23	27	19	25						24	3

MD Machine Direction TD Transverse Direction

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TRI / Environmental, Inc.
A Texas Research International Company

GEOCOMPOSITE TEST RESULTS

TRI Client: Hallaton, Inc.
Project: North Wake

Material: SKAPS TN330-2-6 Double Sided Geocomposite
Sample Identification: 282710774
TRI Log #: E2320-93-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.
Hydraulic Transmissivity (ASTM D 4716)												
Direction Tested: Machine Direction												
Normal Load (psf): 10,000												
Hydraulic Gradient: 0.1												
Test Length (in) 12												
Test Width (in) 12												
Plate / Sample / Plate												
Seat Time (hours)	Specimen		1			2						
Volume (cc)		566	545	546	505	558	516					
Time (s)		5.25	5.03	5.03	4.06	4.37	4.12					
0.25 Flow Rate (GPM/ft width)		1.71	1.72	1.72	1.97	2.02	1.99				1.85	0.15
Transmissivity (m^2/s)		3.54E-03	3.55E-03	3.56E-03	4.08E-03	4.19E-03	4.11E-03				3.84E-03	3.17E-04
Test Temp (C)			20.0			20.0						
Temp. Corr. Factor			1.000			1.000						
Peel Strength (GRI GC7)												
A - MD Average Peel Strength (ppi)	5.7	2.8	6.1	3.2	3.1						4.2	1.6
A - MD Average Peel Strength (g/in)	2588	1271	2769	1453	1407						1898	719
B - MD Average Peel Strength (ppi)	2.6	5.2	6.1	3.6	4.6						4.4	1.4
B - MD Average Peel Strength (g/in)	1180	2361	2769	1634	2088						2007	620
Note: A and B represent a randomly assigned top and bottom of the sample												
Thickness (ASTM D 5199)				Geonet Component								
Thickness (mils)	307	307	315	311	296	303	318	303	303	308	307	6
											296	<< min
Density (ASTM D 1505)				Geonet Component								
Density (g/cm3)	0.950	0.951	0.951								0.951	0.001
Carbon Black Content (ASTM D 4218)				Geonet Component								
% Carbon Black	2.74	2.70									2.72	0.03
Melt Flow Index (ASTM D 1238, 190/2.16)				Geonet Component								
Melt Flow Index (g/10 min)	0.22										0.22	
Strip Tensile Properties (ASTM D 5035, 12 ipm strain rate)				Geonet Component								
MD Max. Strength (ppi)	116	124	139	125	133						127	9
MD Elong. @ Max. Strength (%)	24	27	29	23	29						26	3

MD Machine Direction TD Transverse Direction

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ALOIS CALLEMYN, PLS — LICENSE NO. L-2544

NORTH CAROLINA PROFESSIONAL SEAL L-2544 LAND SURVEYOR ALOIS CALLEMYN

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CHRIS HAVERSTRUM, PE THALLE CONSTRUCTION COMPANY
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NOTE:
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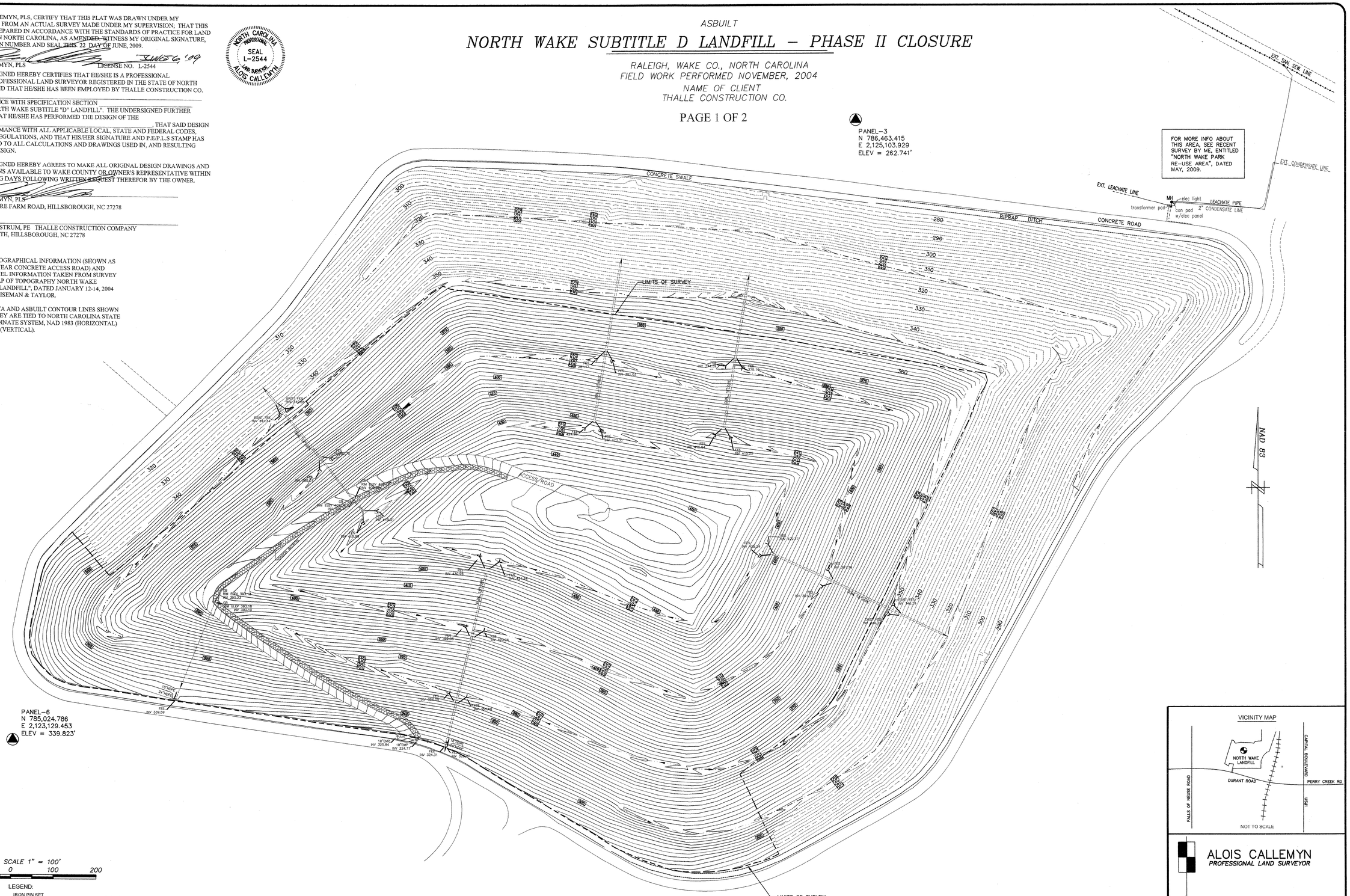
ASBUILT

NORTH WAKE SUBTITLE D LANDFILL – PHASE II CLOSURE

RALEIGH, WAKE CO., NORTH CAROLINA
FIELD WORK PERFORMED NOVEMBER, 2004
NAME OF CLIENT
THALLE CONSTRUCTION CO.



VICINITY MAP

SCALE 1" = 100'
100 0 100 200

LEGEND:
- IRON PIN SET
- EXISTING IRON/NAIL/ROCK
- CONC. MONUMENT SET
- EXISTING CONC. MON.
- MATHEMATICAL POINT

– SWELL ACCESS CROSSING

= LANDFILL CONTROL POINT (DISK SET IN CONCRETE PANEL)

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JUNE, '09

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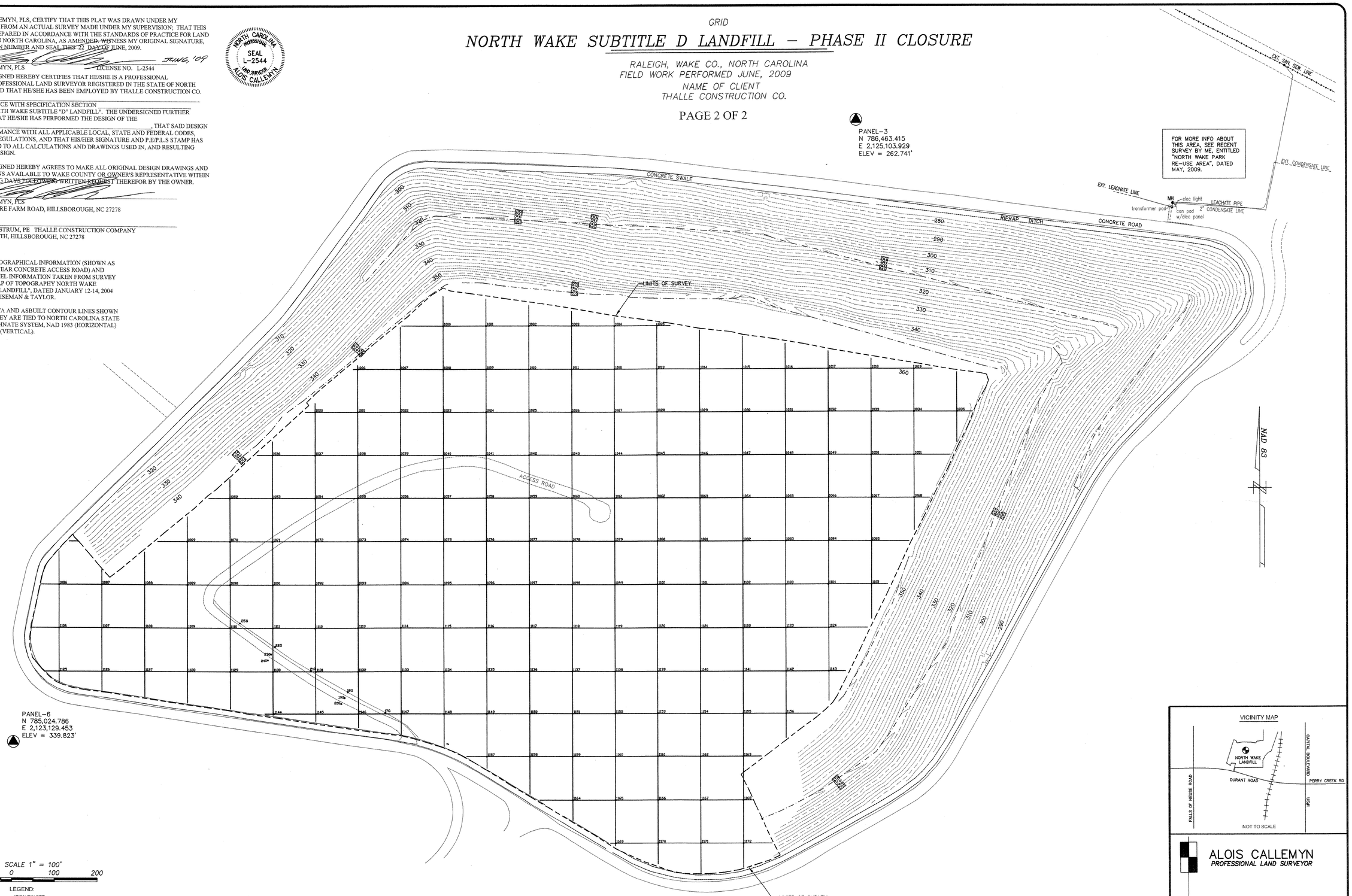
RALEIGH, WAKE CO., NORTH CAROLINA
FIELD WORK PERFORMED JUNE, 2009
NAME OF CLIENT
THALLE CONSTRUCTION CO.



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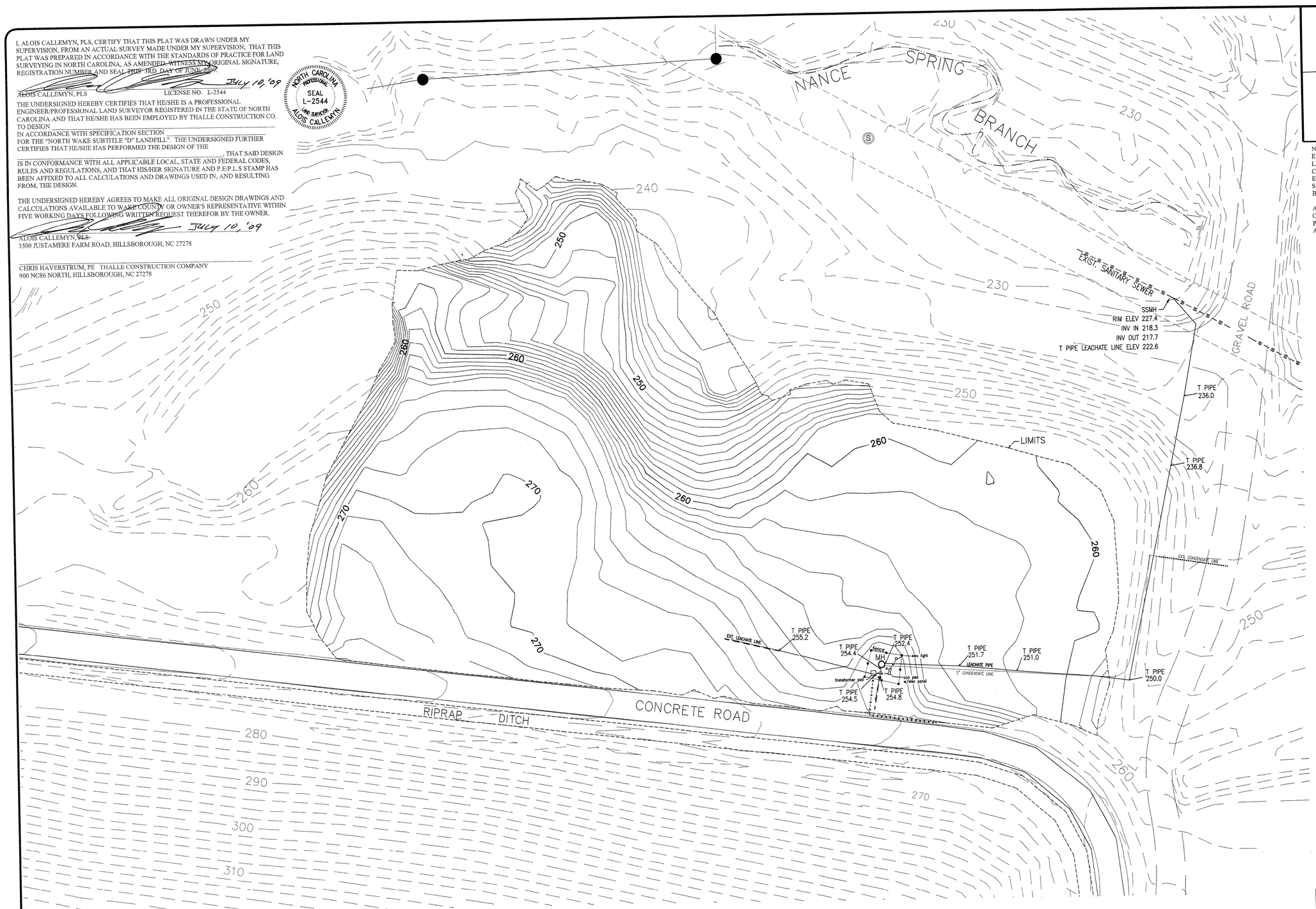
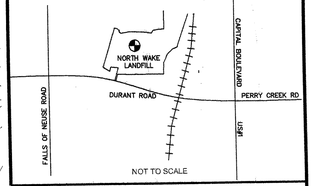


VICINITY MAP



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NAD 83

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100 0 100 200

LEGEND:
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- EXISTING CONC. MON.
- MATHEMATICAL POINT

ASBUILT

NORTH WAKE PARK RE-USE AREA

RALEIGH, WAKE CO., NORTH CAROLINA
FIELD WORK PERFORMED MAY, 2009
NAME OF CLIENT
THALLE CONSTRUCTION CO.

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PROFESSIONAL LAND SURVEYOR

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APPENDIX D-1

Project Record Drawings

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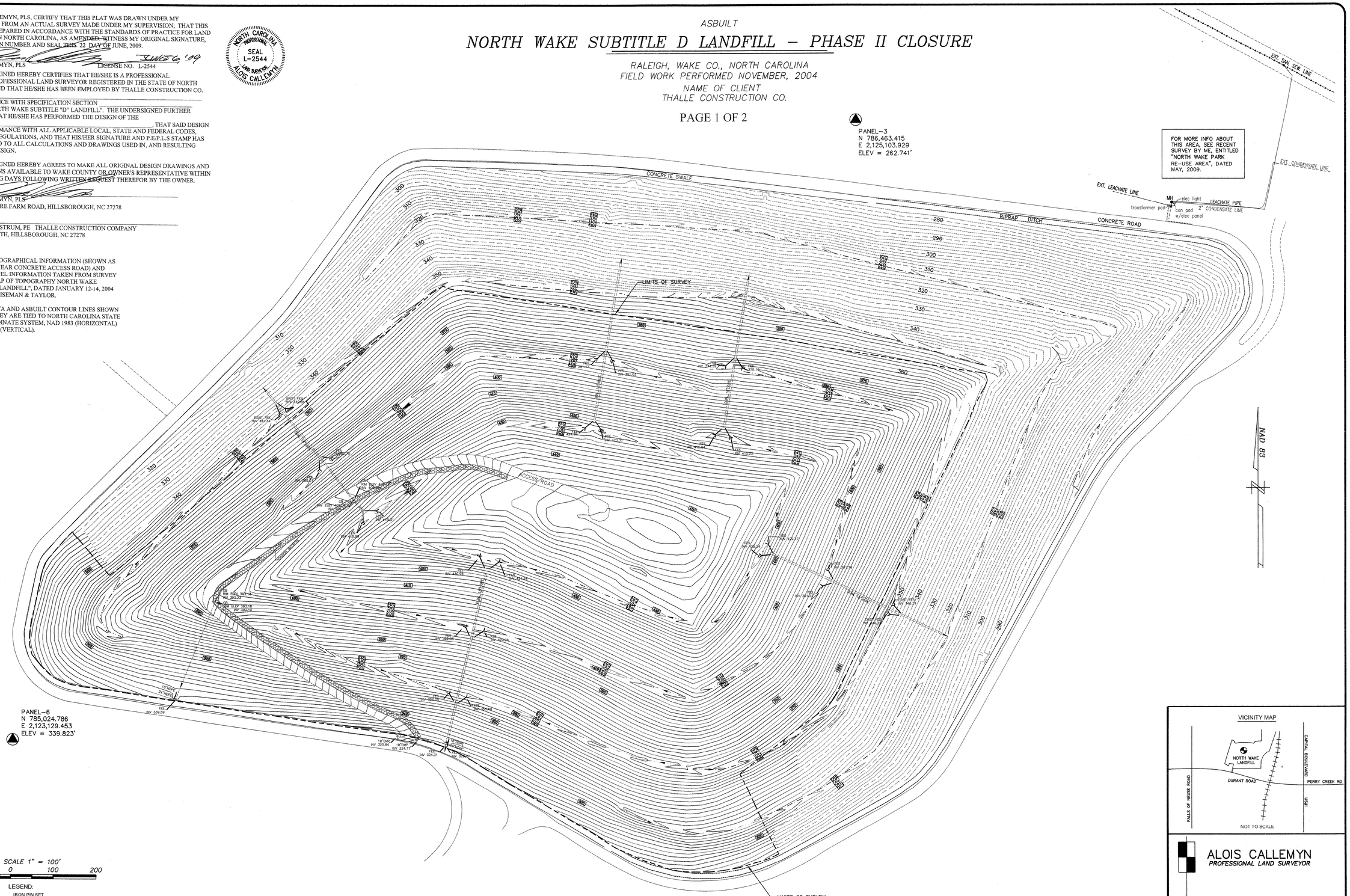

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JUNE, '09

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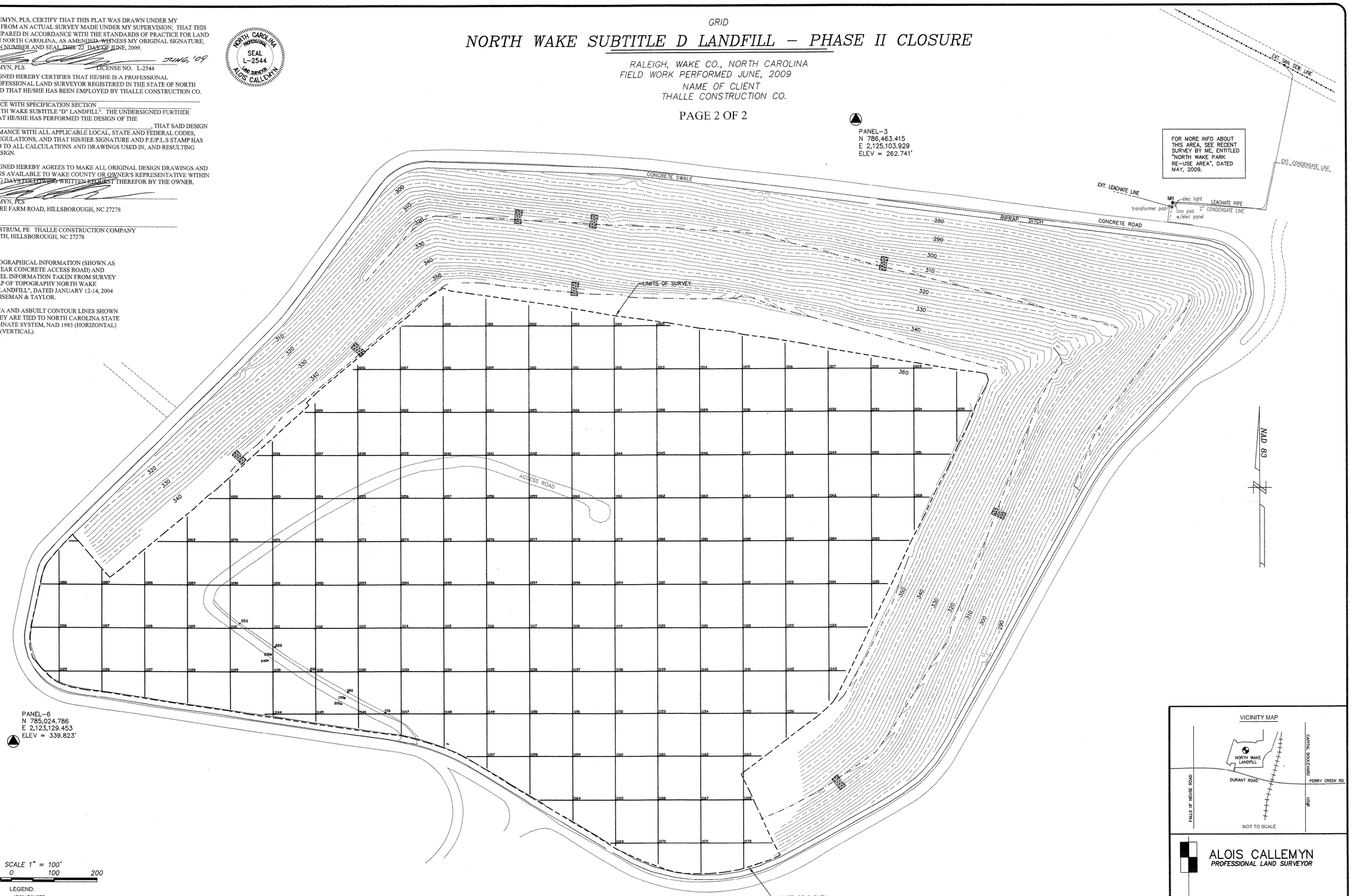

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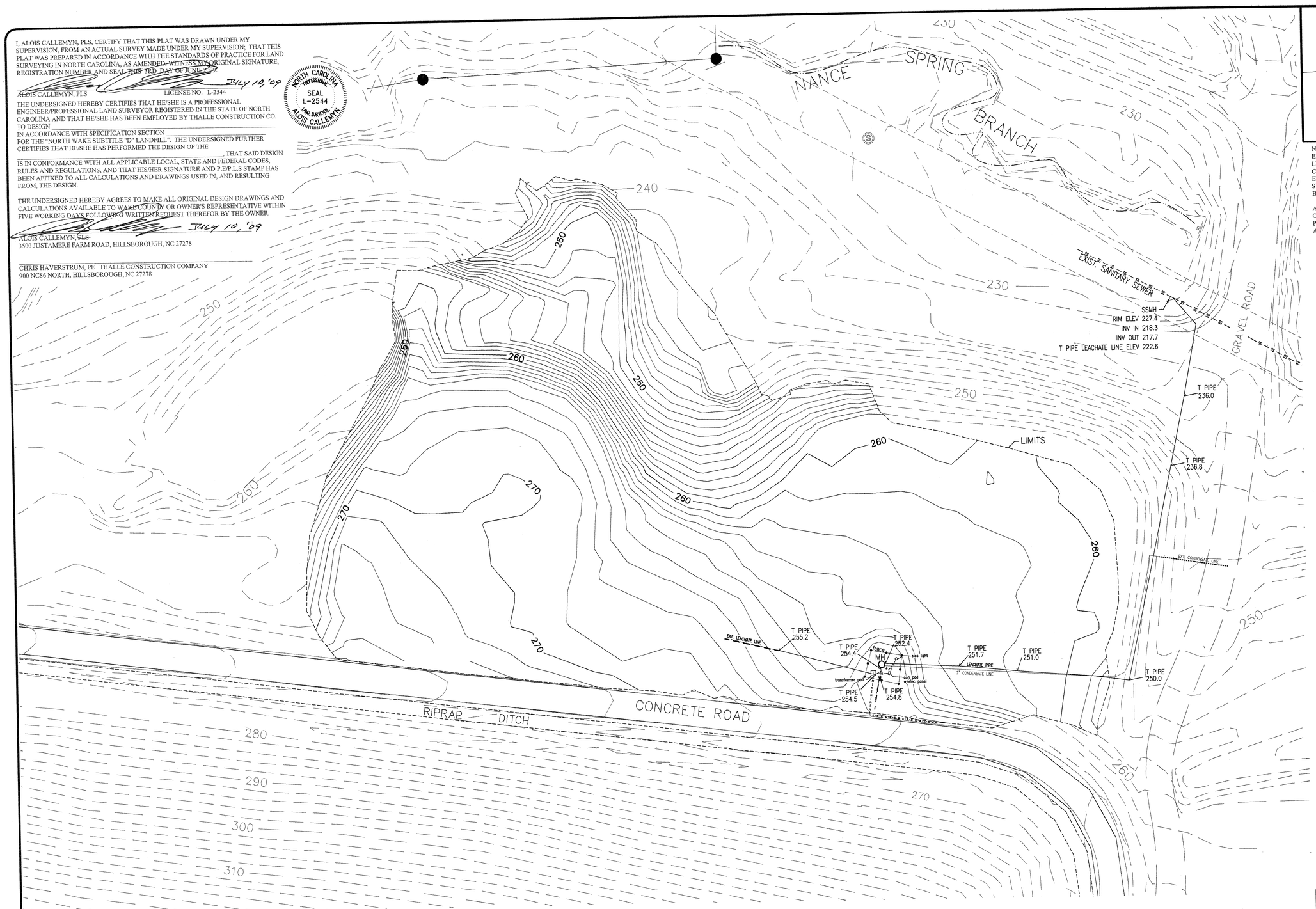
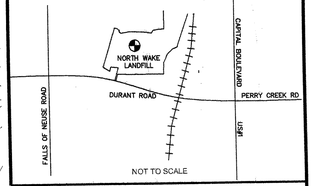


VICINITY MAP



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100 0 100 200

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- EXISTING IRON/NAIL/ROCK
- CONC. MONUMENT SET
- EXISTING CONC. MON.
- MATHEMATICAL POINT

ASBUILT

NORTH WAKE PARK RE-USE AREA

RALEIGH, WAKE CO., NORTH CAROLINA
FIELD WORK PERFORMED MAY, 2009
NAME OF CLIENT
THALLE CONSTRUCTION CO.

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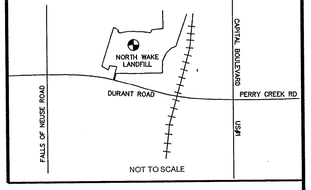
3500 JUSTAMERE FARM ROAD, HILLSBOROUGH, NC 27278

_____
CHRIS HAVERSTRUM, PE THALLE CONSTRUCTION COMPANY
228 SOUTH CHURTON STREET, HILLSBOROUGH, NC 27278

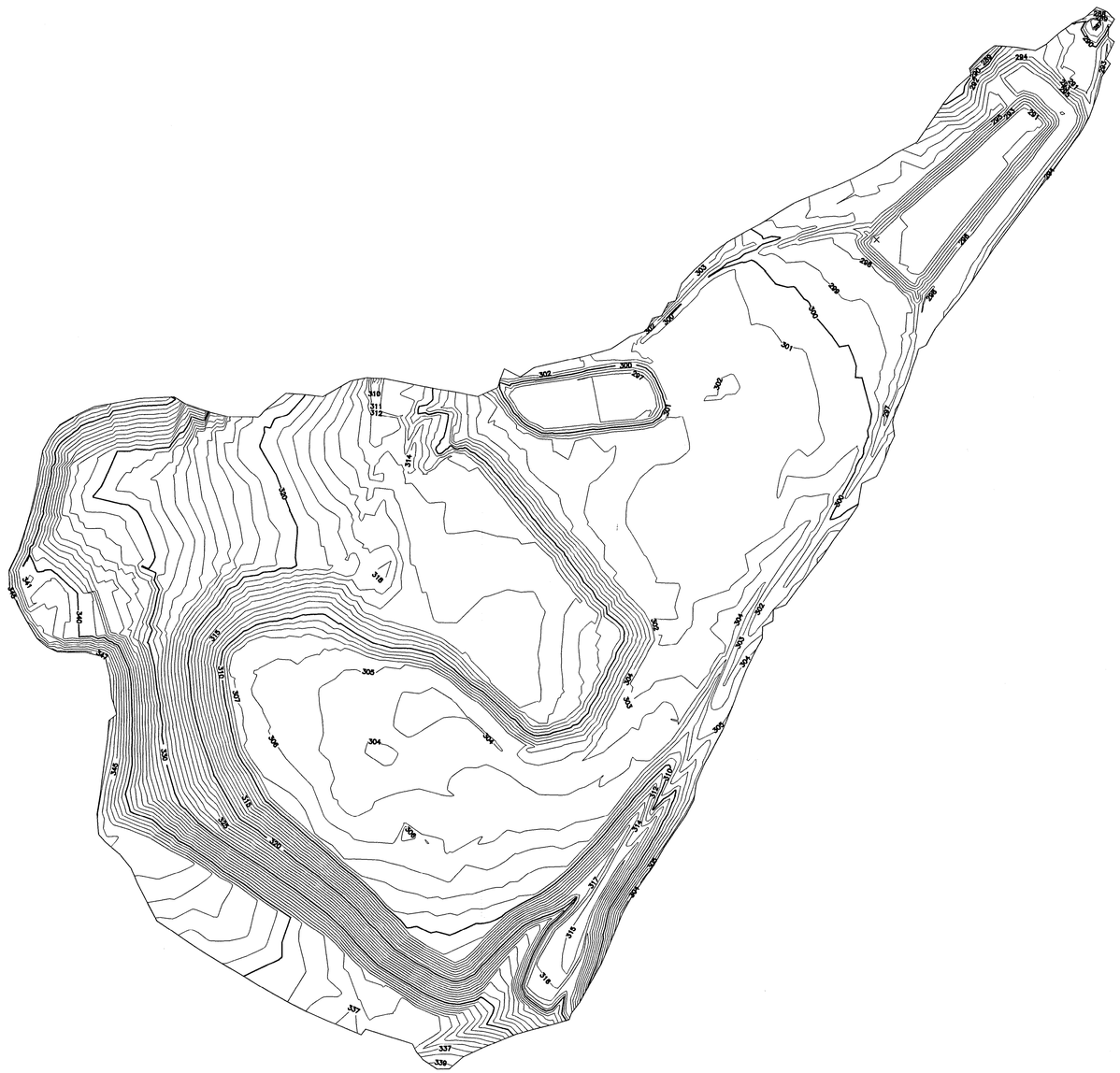
NOTE:
EXISTING TOPOGRAPHICAL INFORMATION (SHOWN AS LIGHT LINES NEAR CONCRETE ACCESS ROAD) AND CONTROL PANEL INFORMATION TAKEN FROM SURVEY ENTITLED "MAP OF TOPOGRAPHY NORTH WAKE SUBTITLE "D" LANDFILL", DATED JANUARY 12-14, 2004 BY TAYLOR WISEMAN & TAYLOR.

ALL NEW DATA AND ASBUILT CONTOUR LINES SHOWN ON THIS SURVEY ARE TIED TO NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 1983 (HORIZONTAL) AND NAVD-29 (VERTICAL).

VICINITY MAP



NAD 83



ASBUILT FOR BORROW AREA

NORTH WAKE SUBTITLE D LANDFILL – PHASE I CLOSURE

RALEIGH, WAKE CO., NORTH CAROLINA
FIELD WORK PERFORMED MAY, 2009
NAME OF CLIENT
THALLE CONSTRUCTION CO.

LEGEND:
- IRON PIN SET
- EXISTING IRON/NAIL/ROCK
- CONC. MONUMENT SET
- EXISTING CONC. MON.
- MATHEMATICAL POINT

ALOIS CALLEMYN
PROFESSIONAL LAND SURVEYOR

3500 JUSTAMERE FARM ROAD
HILLSBOROUGH, NC 27278
919-732-3354
ALOIS@CALLEMYN.COM

APPENDIX D-2

Intermediate Cover, Final Cover and Vegetative Cover Thickness Verification Spreadsheets

ALOIS CALLEMYN, PLS
PROFESSIONAL LAND SURVEYOR #L-2544
3500 JUSTAMERE FARM RD.
HILLSBOROUGH, NC 27278

June 25, 2009

Chris Haverstrum
Thalle Construction Co.
900 Hwy 86 north
Hillsborough, NC 27278

RE: Survey – North Wake Subtitle D Landfill – Phase II Closure

Dear Chris:

Attached to this cover letter is a spreadsheet showing the different elevations at each grid point taken at each stage of this job. The five stages are; existing grade, waste, intermediate cover, protective cover and vegetative (top soil). The exact location of each grid point is shown with the north and east coordinates and is plotted on two plats by me entitled "North Wake Subtitle D Landfill – Phase II Closure".

The columns labeled "PT #" are the point numbers for each grid location measurement. The point numbers (1000-1172) are the same with the exception of adding an additional digit. The last four numbers in each column reflects that the same grid location was measured. The column labeled "SEP." is the separation in feet of each stage. Blank spaces in these or other columns are due to missed measurements taken at that grid point due to construction interference or structures placed in that location.

The intent of this data is to document the true separation of each construction layer at the time field measurements were taken. The elevations shown were actuate at the time of each measurement, but are subject to change due to excessive settlement.

Furthermore:

ALL COORDINATE DATA AND ELEVATIONS SHOWN ON THE ATTACHED SPREADSHEETS ARE TIED TO NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 1983 (HORIZONTAL) AND NAVD-29 (VERTICAL).

AND

I, ALOIS CALLEMYN, PLS, CERTIFY THAT THE ATTACHED INFORMATION WAS COMPUTED UNDER MY SUPERVISION, FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS INFORMATION WAS PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA, AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 25 DAY OF JUNE, 2009.

JUNE 6, '09

NORTH CAROLINA PROFESSIONAL SEAL L-2544 LAND SURVEYOR ALOIS CALLEMYN

RECEIVED
JUL 15 2009
CDM / RAL OFFICE

ALOIS CALLEMYN,
PLS LICENSE NO. L-2544

Grid Comparison
North Wake Subtitle D Landfill
Phase II Closure
Wake County N.C.

Thalle Grid Pt. & Coordinates			Exist. Grade	Top Of Waste			Intermediate Cover			Protective Cover			Vegetative Cover		
PT. #	North	East	Elev	PT. #	Elev	Sep.	Pt. #	Elev	Sep.	Pt. #	Elev.	Sep.	Pt. #	Elev.	Sep.
1000	785991.40	2124137.28	364.95	2000	363.73	1.22	3000	364.75	1.02	4000	366.32	1.57	5000	367.05	0.73
1001	785991.40	2124237.28	370.51	2001	369.00	1.51	3001	370.35	1.35	4001	371.94	1.59	5001	372.62	0.68
1002	785991.40	2124337.28	365.39	2002	364.18	1.21	3002	365.67	1.49	4002	367.18	1.51	5002	367.70	0.52
1003	785991.40	2124437.28	362.00	2003	361.27	0.73	3003	362.32	1.05	4003	363.89	1.57	5003	364.43	0.54
1004	785991.40	2124537.28	358.26	2004	356.90	1.36	3004	358.05	1.15	4004	359.71	1.66	5004	360.46	0.75
1005	785991.40	2124637.28	357.01	2005	355.39	1.62	3005	356.48	1.09	4005	358.02	1.54	5005	358.56	0.54
1006	785891.40	2123937.28	350.19	2006	348.11	2.08	3006	349.36	1.25	4006	350.91	1.55	5006	351.46	0.55
1007	785891.40	2124037.28	365.36	2007	364.27	1.09	3007	365.72	1.45	4007	367.27	1.55	5007	367.80	0.53
1008	785891.40	2124137.28	384.57	2008	383.39	1.18	3008	384.38	1.00	4008	388.73	4.35	5008	389.48	0.75
1009	785891.40	2124237.28	396.50	2009	394.79	1.71	3009	395.89	1.10	4009	397.41	1.52	5009	397.93	0.52
1010	785891.40	2124337.28	392.59	2010	391.39	1.20	3010	393.44	2.05	4010	394.94	1.50	5010	395.44	0.50
1011	785891.40	2124437.28	388.43	2011	387.27	1.16	3011	390.22	2.95	4011	391.75	1.53	5011	392.27	0.52
1012	785891.40	2124537.28	384.79	2012	382.98	1.81	3012	384.52	1.54	4012	386.07	1.55	5012	386.62	0.55
1013	785891.40	2124637.28	379.82	2013	378.18	1.64	3013	379.95	1.77	4013	383.47	3.52	5013	384.16	0.69
1014	785891.40	2124737.28	375.39	2014	374.27	1.12	3014	376.17	1.89	4014	377.69	1.52	5014	378.20	0.51
1015	785891.40	2124837.28	373.68	2015	372.69	0.99	3015	373.98	1.29	4015	375.96	1.98	5015	376.77	0.81
1016	785891.40	2124937.28	370.37	2016	369.17	1.20	3016	370.21	1.04	4016	372.83	2.62	5016	373.47	0.64
1017	785891.40	2125037.28	364.25	2017	362.86	1.39	3017	363.88	1.02	4017	366.08	2.20	5017	366.67	0.59
1018	785891.40	2125137.28	358.96	2018	357.63	1.33	3018	358.75	1.12	4018	360.85	2.10	5018	361.52	0.67
1019	785891.40	2125237.28	354.23	2019	353.21	1.02	3019	354.43	1.22	4019	356.5	2.07	5019	357.18	0.68
1020	785791.40	2123837.28	350.37	2020	349.13	1.24	3020	350.58	1.45	4020	352.12	1.54	5020	352.66	0.54
1021	785791.40	2123937.28	363.90	2021	362.83	1.07	3021	366.27	3.44	4021	367.8	1.53	5021	368.36	0.56
1022	785791.40	2124037.28	383.93	2022	383.40	0.53	3022	385.24	1.84	4022	386.81	1.57	5022	387.42	0.61
1023	785791.40	2124137.28	399.43	2023	398.15	1.28	3023	404.10	5.95	4023	405.89	1.79	5023	406.56	0.67
1024	785791.40	2124237.28	417.79	2024	416.66	1.13	3024	419.72	3.06	4024	421.23	1.51	5024	421.74	0.51
1025	785791.40	2124337.28	416.19	2025	415.13	1.06	3025	419.49	4.36	4025	421.09	1.60	5025	421.65	0.56
1026	785791.40	2124437.28	413.99	2026	412.85	1.14	3026	415.23	2.38	4026	416.81	1.58	5026	417.39	0.58
1027	785791.40	2124537.28	408.77	2027	407.75	1.02	3027	410.37	2.62	4027	412.32	1.95	5027	412.94	0.62
1028	785791.40	2124637.28	404.79	2028	403.52	1.27	3028	406.04	2.52	4028	407.56	1.52	5028	408.11	0.55
1029	785791.40	2124737.28	400.91	2029	399.78	1.13	3029	401.93	2.15	4029	403.49	1.56	5029	404.20	0.71
1030	785791.40	2124837.28	396.10	2030	395.44	0.66	3030	398.23	2.79	4030	399.83	1.60	5030	400.46	0.63
Note 1	Existing ground shot not taken due to temporary haul road at this location														
Note 2	PTS 17G 18G, 21G, 25G & 1055 fall in stone ditch and does not have veg cover. Requires 1.0ft of stone and 1.0 ft of Pro Cover														
Note 3	PTS 19G, 23G, 1110 and 1071 fall in stone road and does not have veg cover. Requires 1.0 ft of stone and 1.5 ft of Pro Cover.														

Grid Comparison
North Wake Subtitle D Landfill
Phase II Closure
Wake County N.C.

Thalle Grid Pt. & Coordinates			Exist. Grade	Top Of Waste			Intermediate Cover			Protective Cover			Vegetative Cover		
PT. #	North	East	Elev	PT. #	Elev	Sep.	Pt. #	Elev	Sep.	Pt. #	Elev.	Sep.	Pt. #	Elev.	Sep.
1031	785791.40	2124937.28	393.69	2031	392.69	1.00	3031	395.14	2.45	4031	396.67	1.53	5031	397.20	0.53
1032	785791.40	2125037.28	389.59	2032	388.53	1.07	3032	390.53	2.00	4032	392.09	1.56	5032	392.70	0.61
1033	785791.40	2125137.28	386.08	2033	385.06	1.02	3033	386.15	1.09	4033	387.71	1.56	5033	388.26	0.55
1034	785791.40	2125237.28	380.99	2034	379.97	1.02	3034	381.35	1.38	4034	383.74	2.39	5034	384.43	0.69
1035	785791.40	2125337.28	361.14	2035	359.84	1.30	3035	360.87	1.03	4035	362.38	1.51	5035	362.91	0.53
1036	785691.40	2123737.28	354.99	2036	353.50	1.49	3036	354.62	1.12	4036	356.24	1.62	5036	356.87	0.63
1037	785691.40	2123837.28	367.91	2037	366.71	1.20	3037	369.34	2.63	4037	374.14	4.80	5037	374.83	0.69
1038	785691.40	2123937.28	384.53	2038	383.47	1.05	3038	392.16	8.68	4038	393.83	1.67	5038	394.38	0.55
1039	785691.40	2124037.28	412.72	2039	411.64	1.08	3039	412.80	1.16	4039	414.35	1.55	5039	414.88	0.53
1040	785691.40	2124137.28	421.59	2040	421.05	0.55	3040	429.03	7.98	4040	430.54	1.51	5040	431.15	0.61
1041	785691.40	2124237.28	437.61	2041	436.37	1.24	3041	440.93	4.56	4041	442.49	1.56	5041	443.02	0.53
1042	785691.40	2124337.28	442.17	2042	440.13	2.04	3042	441.16	1.03	4042	442.81	1.65	5042	443.37	0.56
1043	785691.40	2124437.28	439.26	2043	435.71	3.55	3043	436.91	1.20	4043	438.51	1.60	5043	439.07	0.56
1044	785691.40	2124537.28	436.06	2044	435.12	0.94	3044	436.49	1.37	4044	438.07	1.58	5044	438.74	0.67
1045	785691.40	2124637.28	431.89	2045	430.73	1.16	3045	432.04	1.31	4045	433.64	1.60	5045	434.29	0.65
1046	785691.40	2124737.28	427.75	2046	425.82	1.93	3046	426.88	1.06	4046	428.43	1.55	5046	428.97	0.54
1047	785691.40	2124837.28	422.86	2047	421.85	1.01	3047	424.06	2.21	4047	425.64	1.58	5047	426.21	0.57
1048	785691.40	2124937.28	418.94	2048	418.00	0.94	3048	420.12	2.12	4048	421.98	1.86	5048	422.66	0.68
1049	785691.40	2125037.28	412.66	2049	411.52	1.14	3049	416.59	5.07	4049	418.13	1.54	5049	418.80	0.67
1050	785691.40	2125137.28	398.42	2050	397.23	1.19	3050	398.51	1.27	4050	400.01	1.50	5050	400.54	0.53
1051	785691.40	2125237.28	375.00	2051	373.48	1.52	3051	374.56	1.08	4051	376.34	1.78	5051	376.98	0.64
1052	785591.40	2123637.28	358.08	2052	357.06	1.02	3052	358.40	1.34	4052	359.92	1.52	5052	360.43	0.51
1053	785591.40	2123737.28	372.69	2053	371.74	0.95	3053	376.07	4.33	4053	378.13	2.06	5053	378.80	0.67
1054	785591.40	2123837.28	394.33	2054	393.13	1.20	3054	397.88	4.75	4054	399.41	1.53	5054	399.94	0.53
1055	785591.40	2123937.28	402.95	2055	402.12	0.83	3055	407.44	5.32	4055	408.46	1.02	5055	409.62	1.16
1056	785591.40	2124037.28	420.86	2056	419.90	0.96	3056	422.05	2.15	4056	423.58	1.53	5056	424.18	0.60
1057	785591.40	2124137.28	437.70	2057	436.60	1.10	3057	437.88	1.28	4057	439.45	1.57	5057	439.98	0.53
1058	785591.40	2124237.28	450.62	2058	446.36	4.26	3058	447.38	1.02	4058	448.98	1.60	5058	449.50	0.52
1059	785591.40	2124337.28	450.77	2059	447.58	3.19	3059	448.73	1.15	4059	450.27	1.54	5059	450.88	0.61
1060	785591.40	2124437.28	449.05	2060	448.02	1.03	3060	451.21	3.19	4060	452.77	1.56	5060	453.31	0.54
1061	785591.40	2124537.28	448.35	2061	447.31	1.04	3061	451.68	4.37	4061	454.43	2.75	5061	454.96	0.53
Note 1	Existing ground shot not taken due to temporary haul road at this location														
Note 2	PTS 17G 18G, 21G, 25G & 1055 fall in stone ditch and does not have veg cover. Requires 1.0ft of stone and 1.0 ft of Pro Cover														
Note 3	PTS 19G, 23G, 1110 and 1071 fall in stone road and does not have veg cover. Requires 1.0 ft of stone and 1.5 ft of Pro Cover.														

Grid Comparison
North Wake Subtitle D Landfill
Phase II Closure
Wake County N.C.

Thalle Grid Pt. & Coordinates			Exist. Grade	Top Of Waste			Intermediate Cover			Protective Cover			Vegetative Cover		
PT. #	North	East	Elev	PT. #	Elev	Sep.	Pt. #	Elev	Sep.	Pt. #	Elev.	Sep.	Pt. #	Elev.	Sep.
1062	785591.40	2124637.28	447.89	2062	446.71	1.18	3062	449.21	2.50	4062	450.75	1.54	5062	451.32	0.57
1063	785591.40	2124737.28	447.46	2063	443.29	4.17	3063	444.32	1.03	4063	445.97	1.65	5063	446.51	0.54
1064	785591.40	2124837.28	445.77	2064	444.66	1.11	3064	445.98	1.32	4064	447.72	1.74	5064	448.33	0.61
1065	785591.40	2124937.28	432.17	2065	431.03	1.14	3065	433.27	2.23	4065	436.7	3.43	5065	437.41	0.71
1066	785591.40	2125037.28	406.92	2066	405.70	1.22	3066	408.33	2.63	4066	409.9	1.57	5066	410.42	0.52
1067	785591.40	2125137.28	385.49	2067	384.40	1.09	3067	386.48	2.08	4067	388.05	1.57	5067	388.63	0.58
1068	785591.40	2125237.28	363.92	2068	362.57	1.35	3068	363.67	1.10	4068	365.17	1.50	5068	365.71	0.54
1069	785491.40	2123537.28	361.14	2069	360.13	1.01	3069	361.34	1.21	4069	362.88	1.54	5069	363.44	0.56
1070	785491.40	2123637.28	382.59	2070	381.43	1.17	3070	382.64	1.21	4070	384.18	1.54	5070	384.88	0.70
1071	785491.40	2123737.28	394.40	2071	393.25	1.15	3071	396.59	3.34	4071	398.15	1.56	5071	399.22	1.07
1072	785491.40	2123837.28	406.56	2072	404.90	1.66	3072	406.05	1.15	4072	407.73	1.68	5072	408.26	0.53
1073	785491.40	2123937.28	426.43	2073	422.93	3.50	3073	423.98	1.05	4073	425.55	1.57	5073	426.07	0.52
1074	785491.40	2124037.28	435.11	2074	434.14	0.97	3074	435.30	1.16	4074	436.92	1.62	5074	437.53	0.61
1075	785491.40	2124137.28	436.01	2075	433.23	2.78	3075	434.38	1.15	4075	436.00	1.62	5075	436.51	0.51
1076	785491.40	2124237.28	439.98	2076	435.69	4.29	3076	436.78	1.09	4076	438.46	1.68	5076	439.08	0.62
1077	785491.40	2124337.28	444.55	2077	440.50	4.05	3077	441.64	1.14	4077	443.22	1.58	5077	443.79	0.57
1078	785491.40	2124437.28	448.50	2078	447.42	1.08	3078	448.55	1.13	4078	450.10	1.55	5078	450.60	0.50
1079	785491.40	2124537.28	449.93	2079	448.78	1.15	3079	452.10	3.31	4079	455.36	3.26	5079	456.08	0.72
1080	785491.40	2124637.28	449.85	2080	448.73	1.13	3080	454.75	6.02	4080	459.43	4.68	5080	460.07	0.64
1081	785491.40	2124737.28	448.31	2081	447.11	1.20	3081	454.93	7.82	4081	456.44	1.51	5081	456.96	0.52
1082	785491.40	2124837.28	443.13	2082	441.89	1.24	3082	443.45	1.56	4082	445.01	1.56	5082	445.62	0.61
1083	785491.40	2124937.28	420.49	2083	419.35	1.14	3083	421.01	1.66	4083	422.52	1.51	5083	423.06	0.54
1084	785491.40	2125037.28	395.57	2084	394.39	1.18	3084	398.02	3.63	4084	399.53	1.51	5084	400.03	0.50
1085	785491.40	2125137.28	374.86	2085	374.11	0.75	3085	377.01	2.90	4085	378.58	1.57	5085	379.11	0.53
1086	785391.40	2123237.28	327.63	2086	327.53	0.10	3086	329.20	1.66	4086	330.85	1.65	5086	331.56	0.71
1087	785391.40	2123337.28	347.10	2087	346.05	1.05	3087	348.36	2.31	4087	350.43	2.07	5087	351.10	0.67
1088	785391.40	2123437.28	364.05	2088	362.91	1.14	3088	364.12	1.21	4088	365.63	1.51	5088	366.14	0.51
1089	785391.40	2123537.28	389.26	2089	384.24	5.02	3089	385.38	1.14	4089	387.15	1.77	5089	387.82	0.67
1090	785391.40	2123637.28	392.29	2090	391.67	0.62	3090	392.69	1.02	4090	394.36	1.67	5090	394.93	0.57
1091	785391.40	2123737.28	403.62	2091	401.14	2.48	3091	402.30	1.16	4091	403.91	1.61	5091	404.47	0.56
1092	785391.40	2123837.28	405.16	2092	402.97	2.19	3092	404.03	1.06	4092	405.68	1.65	5092	406.27	0.59
Note 1	Existing ground shot not taken due to temporary haul road at this location														
Note 2	PTS 17G 18G, 21G, 25G & 1055 fall in stone ditch and does not have veg cover. Requires 1.0ft of stone and 1.0 ft of Pro Cover														
Note 3	PTS 19G, 23G, 1110 and 1071 fall in stone road and does not have veg cover. Requires 1.0 ft of stone and 1.5 ft of Pro Cover.														

Grid Comparison
North Wake Subtitle D Landfill
Phase II Closure
Wake County N.C.

Thalle Grid Pt. & Coordinates			Exist. Grade	Top Of Waste			Intermediate Cover			Protective Cover			Vegetative Cover		
PT. #	North	East	Elev	PT. #	Elev	Sep.	Pt. #	Elev	Sep.	Pt. #	Elev.	Sep.	Pt. #	Elev.	Sep.
1093	785391.40	2123937.28	407.47	2093	406.15	1.32	3093	407.15	1.00	4093	408.66	1.51	5093	409.26	0.60
1094	785391.40	2124037.28	409.40	2094	407.51	1.89	3094	408.53	1.02	4094	410.06	1.53	5094	410.57	0.51
1095	785391.40	2124137.28	410.91	2095	408.69	2.22	3095	409.75	1.06	4095	411.30	1.55	5095	411.87	0.57
1096	785391.40	2124237.28	415.18	2096	412.67	2.51	3096	413.80	1.13	4096	415.35	1.55	5096	415.87	0.52
1097	785391.40	2124337.28	422.59	2097	420.97	1.62	3097	422.15	1.18	4097	423.80	1.65	5097	424.34	0.54
1098	785391.40	2124437.28	432.96	2098	431.94	1.01	3098	433.27	1.32	4098	435.37	2.10	5098	436.05	0.68
1099	785391.40	2124537.28	443.78	2099	438.83	4.95	3099	439.84	1.01	4099	441.38	1.54	5099	441.89	0.51
1100	785391.40	2124637.28	446.84	2100	444.07	2.77	3100	445.26	1.19	4100	446.79	1.53	5100	447.32	0.53
1101	785391.40	2124737.28	447.12	2101	444.69	2.43	3101	445.90	1.21	4101	447.48	1.58	5101	448.04	0.56
1102	785391.40	2124837.28	431.86	2102	430.69	1.17	3102	432.48	1.79	4102	434.74	2.26	5102	435.43	0.69
1103	785391.40	2124937.28	410.00	2103	408.76	1.25	3103	410.47	1.72	4103	411.99	1.52	5103	412.51	0.52
1104	785391.40	2125037.28	386.28	2104	385.05	1.23	3104	388.17	3.12	4104	393.33	5.16	5104	393.84	0.51
1105	785391.40	2125137.28	364.33	2105	363.30	1.03	3105	365.11	1.80	4105	366.61	1.50	5105	367.11	0.50
1106	785291.40	2123237.28	335.45	2106	334.38	1.07	3106	336.89	2.52	4106	338.49	1.60	5106	339.03	0.54
1107	785291.40	2123337.28	358.65	2107	357.59	1.07	3107	359.11	1.53	4107	360.71	1.60	5107	361.23	0.52
1108	785291.40	2123437.28	368.11	2108	367.03	1.07	3108	368.83	1.79	4108	371.02	2.19	5108	371.77	0.75
1109	785291.40	2123537.28	374.26	2109	373.20	1.06	3109	375.07	1.87	4109	376.75	1.68	5109	377.34	0.59
1110	785291.40	2123637.28	381.43	2110	380.04	1.39	3110	381.71	1.67	4110	384.45	2.74	5110	385.51	1.06
1111	785291.40	2123737.28	375.00	2111	373.64	1.35	3111	377.40	3.75	4111	381.67	4.27	5111	382.34	0.67
1112	785291.40	2123837.28	380.64	2112	379.50	1.13	3112	380.52	1.02	4112	382.38	1.86	5112	383.14	0.76
1113	785291.40	2123937.28	382.94	2113	381.51	1.43	3113	383.57	2.06	4113	385.38	1.81	5113	385.95	0.57
1114	785291.40	2124037.28	386.60	2114	385.48	1.12	3114	386.77	1.28	4114	388.45	1.68	5114	389.07	0.62
1115	785291.40	2124137.28	388.46	2115	387.51	0.95	3115	389.13	1.62	4115	394.04	4.91	5115	394.67	0.63
1116	785291.40	2124237.28	392.86	2116	391.43	1.43	3116	392.45	1.02	4116	394.08	1.63	5116	394.59	0.51
1117	785291.40	2124337.28	401.32	2117	399.16	2.16	3117	400.31	1.15	4117	401.87	1.56	5117	402.40	0.53
1118	785291.40	2124437.28	411.15	2118	408.26	2.89	3118	409.46	1.20	4118	411.09	1.63	5118	411.70	0.61
1119	785291.40	2124537.28	421.15	2119	418.81	2.34	3119	419.97	1.16	4119	421.64	1.67	5119	422.18	0.54
1120	785291.40	2124637.28	431.71	2120	430.74	0.97	3120	431.87	1.13	4120	433.46	1.59	5120	434.00	0.54
1121	785291.40	2124737.28	Note 1	2121	435.32	---	3121	436.47	1.15	4121	438.09	1.62	5121	438.63	0.54
1122	785291.40	2124837.28	419.58	2122	416.39	3.19	3122	417.52	1.13	4122	419.14	1.62	5122	419.68	0.54
1123	785291.40	2124937.28	399.30	2123	398.19	1.11	3123	399.79	1.60	4123	401.34	1.55	5123	401.94	0.60
1124	785291.40	2125037.28	377.39	2124	375.88	1.51	3124	377.66	1.78	4124	379.21	1.55	5124	379.74	0.53

Note 1	Existing ground shot not taken due to temporary haul road at this location
Note 2	PTS 17G 18G, 21G, 25G & 1055 fall in stone ditch and does not have veg cover. Requires 1.0ft of stone and 1.0 ft of Pro Cover
Note 3	PTS 19G, 23G, 1110 and 1071 fall in stone road and does not have veg cover. Requires 1.0 ft of stone and 1.5 ft of Pro Cover.

Grid Comparison
North Wake Subtitle D Landfill
Phase II Closure
Wake County N.C.

Thalle Grid Pt. & Coordinates			Exist. Grade	Top Of Waste			Intermediate Cover			Protective Cover			Vegetative Cover		
PT. #	North	East	Elev	PT. #	Elev	Sep.	Pt. #	Elev	Sep.	Pt. #	Elev.	Sep.	Pt. #	Elev.	Sep.
1125	785191.40	2123237.28	329.17	2125	328.15	1.03	3125	330.49	2.35	4125	332.29	1.80	5125	332.96	0.67
1126	785191.40	2123337.28	339.15	2126	338.03	1.13	3126	340.88	2.85	4126	342.41	1.53	5126	342.92	0.51
1127	785191.40	2123437.28	344.51	2127	343.79	0.72	3127	345.30	1.51	4127	347.18	1.88	5127	347.91	0.73
1128	785191.40	2123537.28	348.38	2128	347.22	1.16	3128	348.99	1.77	4128	350.89	1.90	5128	351.61	0.72
1129	785191.40	2123637.28	351.38	2129	350.27	1.11	3129	353.40	3.12	4129	355.44	2.05	5129	356.13	0.69
1130	785191.40	2123737.28	358.55	2130	357.37	1.18	3130	359.39	2.02	4130	361.86	2.47	5130	362.43	0.57
1131	785191.40	2123837.28	357.06	2131	355.78	1.27	3131	357.20	1.42	4131	358.76	1.56	5131	359.30	0.54
1132	785191.40	2123937.28	359.58	2132	358.27	1.31	3132	359.67	1.40	4132	365.04	5.37	5132	365.83	0.79
1133	785191.40	2124037.28	361.89	2133	360.83	1.06	3133	362.09	1.26	4133	363.60	1.51	5133	364.10	0.50
1134	785191.40	2124137.28	365.21	2134	364.69	0.52	3134	365.71	1.02	4134	367.31	1.60	5134	367.99	0.68
1135	785191.40	2124237.28	371.06	2135	369.89	1.17	3135	370.90	1.01	4135	372.49	1.59	5135	373.05	0.56
1136	785191.40	2124337.28	379.27	2136	378.14	1.13	3136	380.13	1.99	4136	381.68	1.55	5136	382.21	0.53
1137	785191.40	2124437.28	389.47	2137	388.45	1.02	3137	389.65	1.20	4137	391.90	2.25	5137	392.66	0.76
1138	785191.40	2124537.28	399.46	2138	397.91	1.55	3138	398.96	1.05	4138	400.53	1.57	5138	401.10	0.57
1139	785191.40	2124637.28	409.95	2139	408.10	1.85	3139	409.23	1.13	4139	410.81	1.58	5139	411.37	0.56
1140	785191.40	2124737.28	Note 1	2140	415.56	---	3140	416.74	1.18	4140	418.39	1.65	5140	418.93	0.54
1141	785191.40	2124837.28	403.07	2141	401.27	1.80	3141	402.36	1.09	4141	403.96	1.60	5141	404.54	0.58
1142	785191.40	2124937.28	389.23	2142	386.20	3.03	3142	387.32	1.12	4142	388.94	1.62	5142	389.53	0.59
1143	785191.40	2125037.28	364.29	2143	363.14	1.15	3143	364.82	1.68	4143	366.89	2.07	5143	367.41	0.52
1144	785091.40	2123737.28	337.08	2144	no waste		3144	333.65	Pt at liner tie-in	4144	336.71	3.06	5144	337.36	0.65
1145	785091.40	2123837.28	334.47	2145	333.19	1.28	3145	335.54	2.35	4145	337.31	1.77	5145	338.03	0.72
1146	785091.40	2123937.28	340.55	2146	337.54	3.01	3146	338.77	1.23	4146	342.01	3.24	5146	342.57	0.56
1147	785091.40	2124037.28	337.62	2147	336.53	1.08	3147	338.25	1.72	4147	339.76	1.51	5147	340.26	0.50
1148	785091.40	2124137.28	341.84	2148	340.72	1.12	3148	342.72	2.00	4148	344.22	1.50	5148	344.73	0.51
1149	785091.40	2124237.28	349.13	2149	347.99	1.13	3149	349.30	1.31	4149	353.40	4.10	5149	354.03	0.63
1150	785091.40	2124337.28	358.61	2150	356.98	1.63	3150	358.08	1.10	4150	359.69	1.61	5150	360.23	0.54
1151	785091.40	2124437.28	370.54	2151	368.02	2.52	3151	369.10	1.08	4151	370.73	1.63	5151	371.29	0.56
1152	785091.40	2124537.28	380.74	2152	380.13	0.61	3152	381.13	1.00	4152	382.86	1.73	5152	383.54	0.68
1153	785091.40	2124637.28	391.05	2153	390.03	1.03	3153	391.51	1.48	4153	393.08	1.57	5153	393.67	0.59
1154	785091.40	2124737.28	Note 1	2154	394.63	---	3154	395.92	1.29	4154	397.43	1.51	5154	397.96	0.53
1155	785091.40	2124837.28	384.67	2155	382.46	2.21	3155	383.61	1.15	4155	385.17	1.56	5155	385.78	0.61
1156	785091.40	2124937.28	369.29	2156	368.01	1.28	3156	369.11	1.10	4156	370.61	1.50	5156	371.12	0.51

Note 1	Existing ground shot not taken due to temporary haul road at this location
Note 2	PTS 17G 18G, 21G, 25G & 1055 fall in stone ditch and does not have veg cover. Requires 1.0ft of stone and 1.0 ft of Pro Cover
Note 3	PTS 19G, 23G, 1110 and 1071 fall in stone road and does not have veg cover. Requires 1.0 ft of stone and 1.5 ft of Pro Cover.

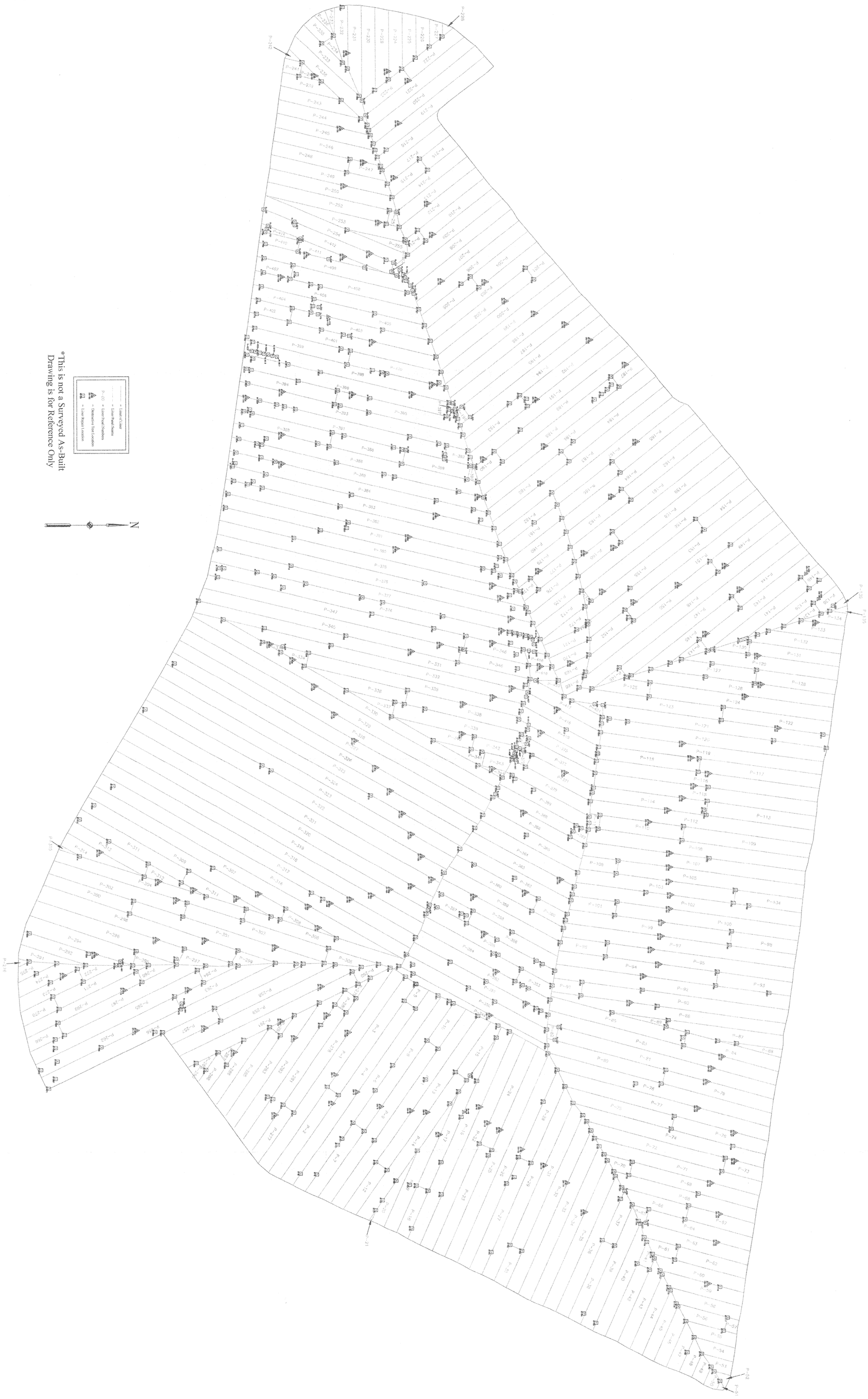
Grid Comparison
North Wake Subtitle D Landfill
Phase II Closure
Wake County N.C.

Thalle Grid Pt. & Coordinates			Exist. Grade	Top Of Waste			Intermediate Cover			Protective Cover			Vegetative Cover		
PT. #	North	East	Elev	PT. #	Elev	Sep.	Pt. #	Elev	Sep.	Pt. #	Elev.	Sep.	Pt. #	Elev.	Sep.
1157	784991.40	2124237.28	326.30	2157	325.09	1.21	3157	326.57	1.48	4157	329.21	2.64	5157	329.96	0.75
1158	784991.40	2124337.28	336.87	2158	335.75	1.11	3158	336.91	1.16	4158	338.66	1.75	5158	339.33	0.67
1159	784991.40	2124437.28	348.28	2159	347.01	1.27	3159	348.50	1.48	4159	350.66	2.16	5159	351.38	0.72
1160	784991.40	2124537.28	358.44	2160	357.37	1.07	3160	359.05	1.68	4160	363.71	4.66	5160	364.27	0.56
1161	784991.40	2124637.28	367.85	2161	367.03	0.82	3161	368.05	1.02	4161	369.59	1.54	5161	370.13	0.54
1162	784991.40	2124737.28	Note 1	2162	369.76	---	3162	370.78	1.02	4162	372.43	1.65	5162	372.99	0.56
1163	784991.40	2124837.28	361.63	2163	360.37	1.26	3163	361.93	1.55	4163	363.43	1.50	5163	364.04	0.61
1164	784891.40	2124437.28	326.36	2164	325.52	0.84	3164	326.75	1.23	4164	328.32	1.57	5164	328.88	0.56
1165	784891.40	2124537.28	338.17	2165	337.00	1.17	3165	338.12	1.12	4165	339.63	1.51	5165	340.16	0.53
1166	784891.40	2124637.28	344.67	2166	343.55	1.12	3166	345.37	1.82	4166	347.15	1.78	5166	347.76	0.61
1167	784891.40	2124737.28	Note 1	2167	345.67	---	3167	347.13	1.46	4167	348.65	1.52	5167	349.17	0.52
1168	784891.40	2124837.28	340.60	2168	339.55	1.05	3168	340.57	1.02	4168	342.07	1.50	5168	342.57	0.50
1169	784791.40	2124537.28	315.91	2169	no waste		3169	314.41	Pt at liner tie-in	4169	316.02	1.61	5169	316.57	0.55
1170	784791.40	2124637.28	321.51	2170	320.49	1.02	3170	321.94	1.45	4170	323.48	1.54	5170	324.01	0.53
1171	784791.40	2124737.28	323.83	2171	322.75	1.08	3171	324.16	1.41	4171	326.76	2.60	5171	327.43	0.67
1172	784791.40	2124837.28	318.12	2172	316.97	1.15	3172	318.26	1.29	4172	319.85	1.59	5172	320.47	0.62
17G	785093.90	2124000.35	334.06	17GW	332.71	1.35	17GIC	337.13	4.42	17GPC	338.17	1.04	17GFG	339.22	1.05
18G	785143.07	2123912.645	343.89	18GW	343.45	0.44	18GIC	345.97	2.52	18GPC	347.71	1.74	18GFG	348.74	1.03
19G	785129.08	2123904.784	346.76	19GW	344.13	2.63	19GIC	345.20	1.07	19GPC	346.74	1.54	19GFG	347.87	1.13
20G	785115.30	2123896.79	346.57	20GW	343.94	2.63	20GIC	344.96	1.02	20GPC	347.83	2.87	20GFG	348.41	0.58
21G	785193.53	2123825.68	355.32	21GW	354.98	0.34	21GIC	356.64	1.66	21GPC	358.30	1.66	21GFG	359.32	1.02
22G	785248.42	2123742.066	363.62	22GW	362.59	1.03	22GIC	367.10	4.51	22GPC	368.50	1.40	22GFG	369.52	1.02
23G	785232.13	2123732.792	367.17	23GW	366.01	1.16	23GIC	367.24	1.23	23GPC	368.89	1.65	23GFG	369.93	1.04
24G	785218.20	2123725.175	367.34	24GW	364.99	2.35	24GIC	366.14	1.15	24GPC	368.81	2.67	24GFG	369.34	0.53
25G	785302.92	2123659.668	380.33	25GW	378.96	1.37	25GIC	380.00	1.04	25GPC	381.05	1.05	25GFG	382.11	1.06

Note 1	Existing ground shot not taken due to temporary haul road at this location
Note 2	PTS 17G 18G, 21G, 25G & 1055 fall in stone ditch and does not have veg cover. Requires 1.0ft of stone and 1.0 ft of Pro Cover
Note 3	PTS 19G, 23G, 1110 and 1071 fall in stone road and does not have veg cover. Requires 1.0 ft of stone and 1.5 ft of Pro Cover.

APPENDIX D-3

LLDPE Geomembrane Liner Record Drawing



*This is not a Surveyed As-Built Drawing is for Reference Only

Hallaton, Inc.
Containment Linings

1206 Sparks Road - Sparks, MD 21152
(410) 583-7700 - (410) 583-7720 Fax

NORTH WAKE LANDFILL
SUBTITLE D, PHASE 2 CLOSURE
RALEIGH, NC

Geomembrane As-Built Drawing

REVISIONS			
NO.	Date.	By.	Description.

Drawn by: KHG
Date: 4/28/09
Scale: 1" = 60'
Job Number: 0826-6008
Drawing Number: 002

APPENDIX E-1

Leachate Collection System Jet Cleaning Report

CDM

Memorandum

To: *John Roberson, Wake County Facilities Design & Construction*

From: *Bob Brossoie, CDM*
Dan Forbes, CDM

Date: *February 4, 2010*

Subject: *North Wake Subtitle D Landfill Leachate Collection System – Jet Cleaning and Video Inspection Summary*
CDM Project No. 6172-74540

As stated in the Post-Closure Permit Modification, the leachate collection system (LCS) piping at the North Wake Subtitle D Landfill will be pressure cleaned on or before January 2010 and every year thereafter for a minimum of five years, at which time the cleaning frequency may be re-evaluated by the County and the North Carolina Department of Environment and Natural Resources, Solid Waste Section. A camera inspection of all collection lines will be performed during the initial cleaning and every three years thereafter, but more often if obstructions within the collection lines are detected. In addition, the protruding portion of each cleanout shall be inspected for damage on a quarterly basis.

On October 26-28, 2009 the leachate collection piping was pressured cleaned and video inspected by Jet Clean America. In addition, the protruding portions of the cleanouts were inspected. On November 17, 2009 a report summarizing the jet cleaning and video inspection was submitted to you on behalf of Jetclean America. A summary of CDM's review of Jet Clean America's report and video of the LCS piping is provided below.

Jet Cleaning

The leachate collection piping was flushed utilizing a high pressure water-jetting nozzle to remove the build-up of sediment and any biological growth. Each of the exposed cleanouts around the perimeter of the Subtitle D landfill were used to access the collection pipes and headers, with the exception of location 6A, where a bootless penetration is installed instead of a cleanout.

The manhole for the cleanout piping from 6A, located on the north side of the concrete perimeter road, could not be accessed with jet cleaning equipment given the depth of the manhole, confined space within the manhole and the small diameter of the manhole resulting in limited access for the water-jetting equipment. The locations of the cleanouts are provided on **Figure 1**. The downgradient cleanouts are identified with an "A", upgradient cleanouts are identified with a "B", and the header cleanouts are identified with an "H". In addition, leachate cleanout LCO was added as a main header cleanout during construction of the leachate collection system.

The jet cleaning was completed without any obstructions prohibiting the water-jetting nozzle from advancing, with the exception of the main header where silt partially obstructed the main header adjacent to the bootless penetration at location 6A. Because of limited access to the main header at 6A from either cleanout location LCO or 4H, not all of the silt could be removed. An inspection of the downstream manhole on the north side of the concrete perimeter road, opposite location 6A, revealed that leachate flow was not being restricted by the remaining silt. A total of 18,890 feet of piping was jet cleaned. A summary of the leachate collection system jet cleaning is provided in **Table 1**.

Cleanout Inspection

The exposed portion of each of the cleanouts were inspected for damage and found to be in good condition. In reviewing the video for leachate collection line 7A, a small circular hole approximately 3 to 4 inches in diameter was observed on the left side of the pipe at about a foot down from the top of the cleanout, with liquid flowing into the pipe through the opening. DTE Biomass was contacted to inquire about this opening in the side of the leachate pipe. CDM was informed that this opening represents the connection of a condensate drip leg from DTE Biomass' main vacuum header. As a result, no further action is needed.

Video Inspection

A video inspection of the leachate collection and header lines was completed on October 28, 2009. All of the lines had small amounts of residual silt left from jet cleaning that will not likely affect the collection of leachate or vacuum extraction of landfill gas. Several defects and obstructions were identified in a few of the collection lines as noted in the Jet Clean America report. Additional defects and obstructions were also observed based on CDM's review of the video. A summary of all defects and obstructions is provided below with each cleanout location accessed to initiate the video inspection highlighted in bold.

- **11B** – A piece of PVC pipe approximately 3 feet in length and 1.5 inches in diameter was encountered at 55 feet in from the end of cleanout 11B that prevented further video inspection of the collection line.

- **2A** – The video inspection was terminated at 53.5 feet due to a broken weld resulting in a sheared joint or offset in the collection pipe.

- **7A** – The top of the leachate collection pipe is bowed downward at 719 feet in from the end of leachate cleanout 7A. The bow in the pipe extends downward approximately 4 inches into the throat of the pipe. This prevented the video camera from progressing any further beyond this point. In addition, as noted in the previous section, a hole was identified on the left side of the pipe approximately one foot down from the top of the cleanout.

- **5A** - The top of the leachate collection pipe is bowed downward at 451 feet in from the end of cleanout 5A. The bow in the pipe extends downward approximately 3 inches and is not as pronounced as the bow in the pipe in cleanout 7A. However, the bow in the pipe prevented the video camera from progressing any further beyond this point.

- **LCO (Main Header)** – There is a large rock in the main header at approximately 91 feet in from the end of cleanout LCO that prevented further video inspection of the main header line. Additional obstructions can be seen downgradient of the video termination point that appear to also be oversize material.

- **6B** – The video inspection identified debris that appears to be a small piece of metal at 178 feet in from the end of cleanout 6B. The debris was pushed down the pipe by the video camera to approximately 484 feet, where the video inspection was terminated.

All other cleanouts were accessed for either jet cleaning or video inspection without noting any defects or obstructions. A summary of the video inspection is provided in **Table 2**. A total of 13,600 feet of piping was video inspected compared to 18,890 linear feet of piping that was jet cleaned. Although not all of the leachate cleanout piping could be accessed for video inspection, all piping with the exception of the main header at location 6A could be accessed for jet cleaning.

The fact that the high-pressure water-jetting nozzle was not restricted due to the defects or obstructions identified in the videos suggests that the collection of leachate or vacuum extraction of landfill gas will not be affected. In addition, the defects and obstructions identified during the October 2009 video inspection should be compared to the next video inspection to determine if conditions have deteriorated. The next video inspection should be conducted in January 2013 or sooner should the system's performance decline. It should be noted that the North Wake Subtitle D Landfill is now closed and that leachate flow will be reduced over time.

TABLE 1
JET CLEANING SUMMARY OF LEACHATE COLLECTION SYSTEM
NORTH WAKE SUBTITLE D LANDFILL

Clean-Out I.D.	Date Jetcleaned	Pipe Diameter	Distance Cleaned (feet)	Clean-Out I.D.	Date Jetcleaned	Distance Cleaned (feet)	Pipe Diameter (inch)
LC-1A	10/28/2009	10	450	LC-1B	10/26/2009	650	8
LC-2A	10/28/2009	10	625	LC-2B	10/26/2009	910	8
LC-3A	10/28/2009	10	650	LC-3B	10/26/2009	880	8
LC-4A	10/28/2009	10	850	LC-4B	10/26/2009	825	8
LC-5A	10/27/2009	10	725	LC-5B	10/26/2009	1,000	8
LC-7A	10/27/2009	10	820	LC-6B	10/26/2009	945	8
LC-8A	10/28/2009	10	900	LC-7B	10/26/2009	1,000	8
LC-9A	10/28/2009	10	700	LC-8B	10/27/2009	1,000	8
LC-10A	10/28/2009	10	720	LC-9B	10/27/2009	1,000	8
LC-11A	10/26/2009	10	675	LC-10B	10/27/2009	945	8
3H	10/26/2009	10	450	LC-11B	10/27/2009	750	8
4H	10/26/2009	10	870				
LCO (Main Header)	10/26/2009	10	550				

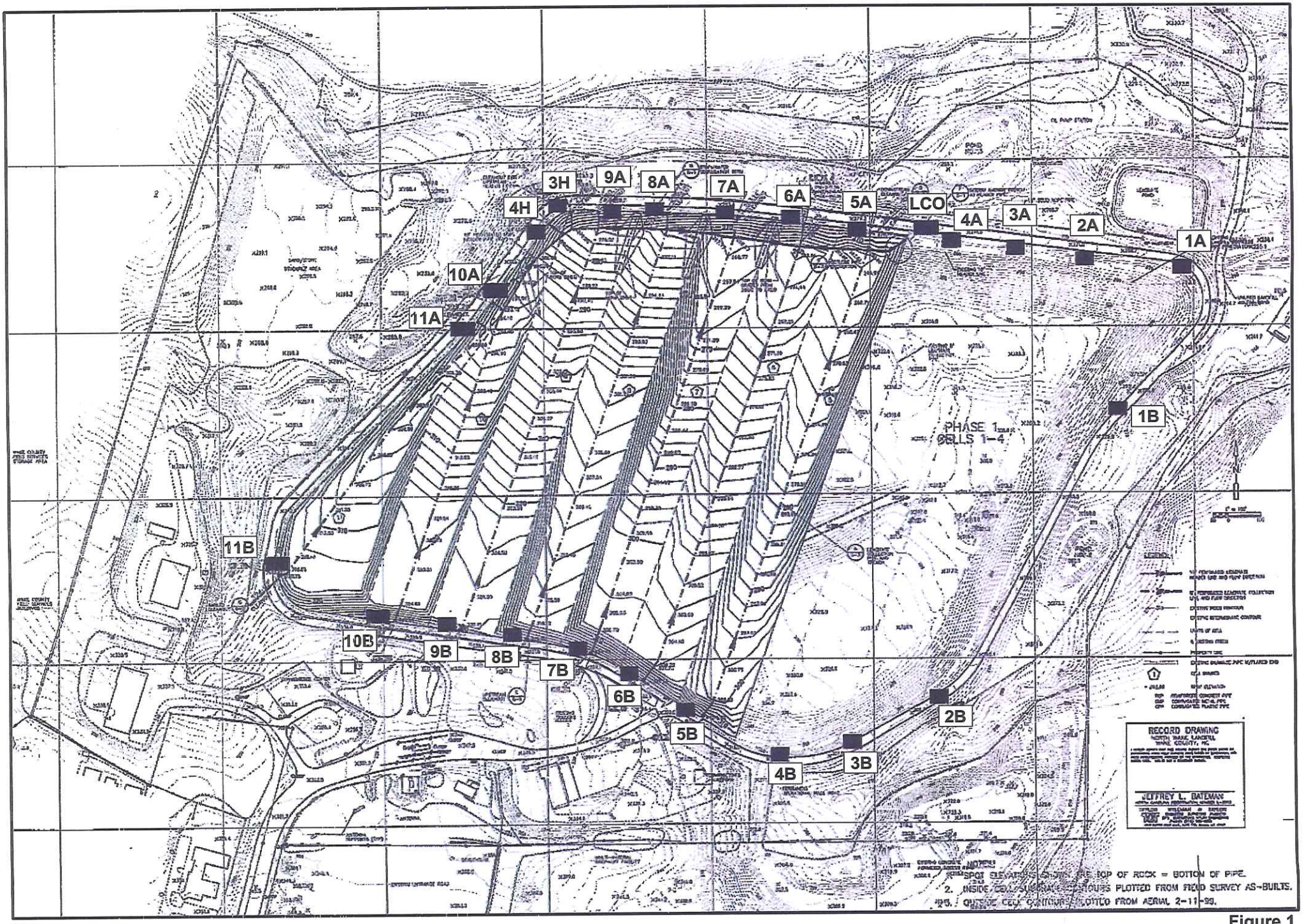
Total Cleaned: **18,890 feet**

NOTES:
1. "A" Upgradient clean-out
2. "B" Downgradient clean-out
3. "H" Header clean-out

TABLE 2
VIDEO INSPECTION SUMMARY OF LEACHATE COLLECTION SYSTEM
NORTH WAKE SUBTITLE D LANDFILL

Clean-Out I.D.	Inspection Date	Pipe Diameter	Distance Surveyed (feet)	Comments
LC-1A	10/28/2009	10	310.1	
LC-2A	10/28/2009	10	53.5	The video inspection was terminated at 53.5 feet due to a broken weld resulting in a sheared joint or offset in the collection pipe.
LC-3A	10/28/2009	10	520.1	
LC-4A	10/28/2009	10	754.1	
LC-5A	10/28/2009	10	448.2	The top of the leachate collection pipe is bowed downward at 451 feet in from the end of cleanout 5A. The bow in the pipe extends downward approximately 3 inches and is not as pronounced as the bow in the pipe in cleanout 7A. The bow in the pipe prevented the video camera from progressing any further beyond this point.
LC-7A	10/28/2009	10	713.6	The top of the leachate collection pipe is bowed downward at 719 feet in from the end of leachate cleanout 7A. The bow in the pipe extends downward approximately 4 inches into the throat of the pipe. This prevented the video camera from progressing any further beyond this point. In addition, as noted in the previous section, a hole was identified on the left side of the pipe approximately one foot down from the top of the cleanout.
LC-8A	10/28/2009	10	700.7	
LC-9A	10/28/2009	10	594.4	
LC-10A	10/28/2009	10	257	
LC-11A	10/28/2009	10	497.3	
3H	10/28/2009	10	346.5	
4H	10/28/2009	10	301.7	
LCO (Main Header)	10/28/2009	10	90.8	There is a large rock in the main header at approximately 91 feet in from the end of cleanout LCO that prevented further video inspection of the main header line. Additional obstructions can be seen downgradient of the video termination point that appear to be oversized material.
LC-1B	10/28/2009	8	518.4	
LC-2B	10/28/2009	8	888.8	
LC-3B	10/28/2009	8	348	
LC-4B	10/28/2009	8	347	
LC-5B	10/28/2009	8	946.9	
LC-6B	10/28/2009	8	484.1	The video inspection identified debris that appears to be a small piece of metal at 178 feet in from the end of cleanout 6B. The debris was pushed down the pipe by the video camera to approximately 484 feet, where the video inspection was terminated.
LC-7B	10/28/2009	8	989.6	
LC-8B	10/28/2009	8	1,168.8	
LC-9B	10/28/2009	8	1,177.4	
LC-10B	10/28/2009	8	1,087.6	
LC-11B	10/28/2009	8	55.5	A piece of PVC pipe approximately 3 feet in length and 1.5 inches in diameter was encountered at 55 feet in from the end of cleanout 11B that prevented further video inspection of the collection line.
		Total Surveyed	**13,600.1 feet**	

NOTES:
1. "A" Upgradient clean-out
2. "B" Downgradient clean-out
3. "H" Header clean-out



CDM

Figure 1
Leachate Collection System
North Wake Subtitle D Landfill

NORTH WAKE COUNTY LANDFILL
2009 LEACHATE COLLECTION SYSTEM
MAINTENANCE

JETCLEAN AMERICA

HIGH PRESSURE WATER JETTING
EXPLOSION-PROOF VIDEO-INSPECTION
NO DIG POINT REPAIRS
VACUUM TRUCK SERVICES

OFFICES IN FLORIDA & CAROLINAS
TEL: 800-226-8013
FAX 813-926-4616

NORTH WAKE COUNTY LANDFILL
2009 LEACHATE COLLECTION SYSTEM MAINTENANCE

Work Conducted:

October 2009

By Jetclean America

800-226-8013

JETCLEAN AMERICA

HIGH PRESSURE WATER JETTING
VIDEO PIPELINE INSPECTION
NO DIG POINT REPAIRS
VACUUM TRUCK SERVICES

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FAX 813-926-4616

REPORT

DATE : 11/17/2009
TO : John Roberson – North Wake County Landfill
FROM : Ralph Calistri (jetcleanamerica@tampabay.rr.com)
SUBJECT : North Wake County Landfill – 2009 LCS Jetcleaning and Inspection

Jetclean America completed the leachate collection system high-pressure jetcleaning and explosion-proof video inspection work at the North Wake County Landfill on 10/30/2009. Also included with this report is the jetting log, CCTV survey list, pipe graphic report, and the DVD inspection videos for further reference.

HIGH PRESSURE JETCLEANING:

As the below jetting log documents, all leachate collection pipes, with the exception of Cleanout 6A, were jetcleaned end-to-end via high-pressure water-jetting nozzle through overlapping efforts from both sides where required. There was no resistance encountered, or any indication of mechanical problems. Cleanout 6A, now a manhole, was not accessible since the manhole cover could not be removed. Achieved jetting distances are documented in the jetting log below:

LC1B	650'	LC10A	720'
LC2B	910'	LC9A	700'
LC3B	880'	LC8A	900'
LC4B	825'	LC7A	820'
LC5B	1,000'	LC5A	725'
LC6B	945'	LC4A	850'
LC7B	1,000'	LC3A	650'
LC8B	1,000'	LC2A	625'
LC9B	1,000'	LC1A	450'
LC10B	945'	4H	870'
LC11B	750'	3H	450'
LC11A	675'	Header	550'

EXPLOSION-PROOF VIDEO-INSPECTION:

After high-pressure jetting activities were completed, all pipes were video inspected as far as possible from all available access points (see included CCTV survey list, pipe graphic reports, and DVD videos). A larger tractor mounted camera (maximum range of 1,000'+) was used where access was suitable and was able to progress through the pipes until forward progress was eventually stopped by fusion weld protrusions, lack of wheel traction, noted defects, or the end of the pipe. A smaller push-rod mounted camera (range of 450') was used in all other areas and was pushed through the pipes until cable resistance or some other obstruction prevented further forward progress. In any areas where the camera was submerged under leachate and the video picture was obscured (evidenced by orange or black video picture), or in any areas of piping that could not be reached with the inspection camera, the fact that the large high-pressure water-

jetting nozzle was not restricted in any way would support the contention that those areas of the leachate collection system are in good working order. The setup listed as LC6A on the reports and inspection footage was incorrectly identified and should have been labeled as LC7A.

Specific defects identified through the video-inspection process are listed below:

Cleanout LC11B - A PVC pipe was identified 55' into the HDPE collection pipe (approximately 3' long X 1.5" id) that prevented forward camera progress. The camera operator did not want to push this obstruction further down the system toward the collection header. It did not prevent the jetcleaning nozzle from progressing forward and does not materially affect leachate flow.

Cleanout LC2A - There appears to be a broken weld and resulting pipe offset at 53.5'. It does not appear that this offset would materially obstruct flow leachate flow.

Main Header – There is a large rock visible at 90.8'. The camera could not proceed further but there appears to be an accumulation of large obstructions further down the pipe that would prevent further camera advancement. These rocks / obstructions can not be removed from the system without additional access at a point closer to the obstructions (closest point under current design is LC6A that was no accessible). These obstructions did not prevent the jetting nozzle from advancing through, indicating that there is no complete blockage, but.there is no way to assess how much flow is obstructed. With access into manhole 6A it may be possible to collect additional information regarding flows or the effect of these obstructions on system performance.

Please call us with questions or concerns.

Regards,

Ralph Calistri – Jetclean America

CCTV Surveys List for North Wake County

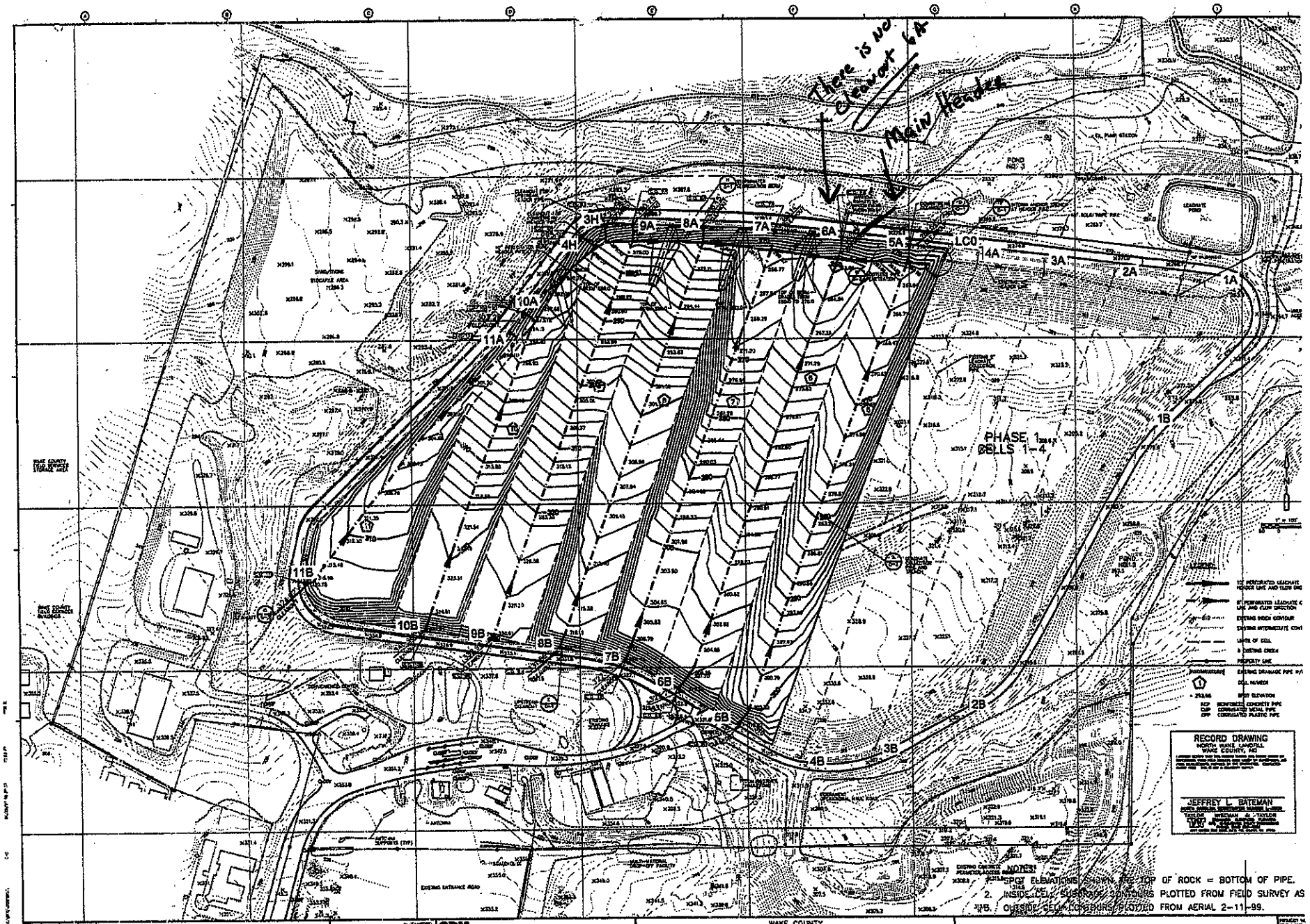
Number of surveys in this list is 24 as of Thursday, November 05, 2009 Unit of measure: ft

Setup	Date	Street	Start MH	Finish MH	Dir	Size inch	Pre Clean	Vid Cassette	Scheduled Length	Surveyed Length
1	10/28/2009	North Wake County Landfill	LC1B	LC1BA	D	8	Y	1		518.4
2	10/28/2009	North Wake County Landfill	LC2B	LC2BA	D	8	Y	1		888.8
3	10/28/2009	North Wake County Landfill	LC5B	LC5BA	D	8	Y	1		946.9
4	10/28/2009	North Wake County Landfill	LC7B	LC7BA	D	8	Y	1		989.6
5	10/28/2009	North Wake County Landfill	LC8B	LC8BA	D	8	Y	1		1168.8
6	10/28/2009	North Wake County Landfill	LC9B	LC9BA	D	8	Y	2		1177.4
7	10/28/2009	North Wake County Landfill	LC10B	LC10BA	D	8	Y	2		1087.6
8	10/28/2009	North Wake County Landfill	LC11B	LC11BA	D	8	Y	2		55.5
9	10/28/2009	North Wake County Landfill	LC6A	LC6AA	U	10	Y	2		713.6
10	10/28/2009	North Wake County Landfill	LC5A	LC5AA	U	10	Y	2		448.2
11	10/28/2009	North Wake County Landfill	LC4A	LC4AA	U	10	Y	2		754.1
12	10/28/2009	North Wake County Landfill	LC3A	LC3AA	U	10	Y	3		520.1
13	10/28/2009	North Wake County Landfill	LC2A	LC2AA	U	10	Y	3		53.5
14	10/28/2009	North Wake County Landfill	LC1A	LC1AA	U	10	Y	3		310.1
15	10/28/2009	North Wake County Landfill	LC9A	LC9AA	U	10	Y	3		594.4
16	10/28/2009	North Wake County Landfill	LC3B	LC3BA	D	8	Y	3		348.0
17	10/28/2009	North Wake County Landfill	LC4B	LC4BA	D	8	Y	3		347.0
18	10/28/2009	North Wake County Landfill	LC6B	LC6BA	D	8	Y	3		484.1
19	10/28/2009	North Wake County Landfill	LC11A	LC11AA	D	10	Y	3		497.3
20	10/28/2009	North Wake County Landfill	4H	4HA	D	10	Y	3		301.7
21	10/28/2009	North Wake County Landfill	3H	3HA	D	10	Y	3		346.5
22	10/28/2009	North Wake County Landfill	MAIN HEADER	MAIN HEADERA	U	10	Y	3		90.8
23	10/28/2009	North Wake County Landfill	LC8A	LC8AA	U	10	Y	3		700.7
24	10/28/2009	North Wake County Landfill	LC10	LC10A	D	10	Y	3		257.0

Total Scheduled Length 0.0

Total Length Surveyed 13,600.1

JETCLEAN AMERICA Phone: 18002268013 Fax: 8139263616



REV. NO.	DATE	DRWN	CHKD	
3	3/99	JMD	JLB	REVISED DRAWING BY TRT
2	4/97	MEV	MEV	CONTOURED DRAWING
1				ISSUED

CDM Camp Dresser & McKee

WAKE COUNTY
NORTH CAROLINA

CONSTRUCTION PLAN
NORTH WAKE LANDFILL CELLS 5-11

LEACHATE COLLECTION SYSTEM

Pipe Graphic Report of PLR LC1B X **for** North Wake County

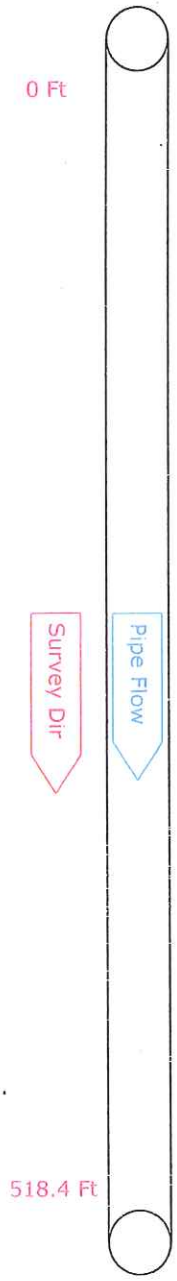
Work Order		***Contract***		***Video***	1	***Setup***	1
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC1B	***Depth***	Ft
Shape	Circular	***Size*** 8	***by*** ins	***To***	LC1BA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC1B]
Water level 0

518.4 Ft Survey abandoned [MAIN HEADER]

Pipe Graphic Report of PLR LC2B X **for** North Wake County

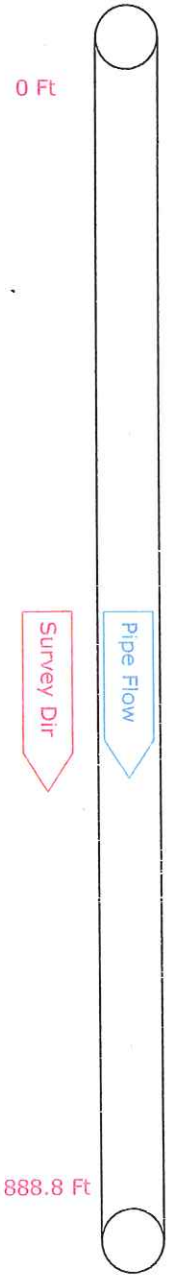
Work Order	***Contract***	***Video*** 1	***Setup*** 2
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** LC2B	***Depth*** Ft
Shape	Circular	***Size*** 8 ***by***	ins	***To*** LC2BA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Downstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned*** 10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC2B]
Water level 0

888.8 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC5B X **for** North Wake County

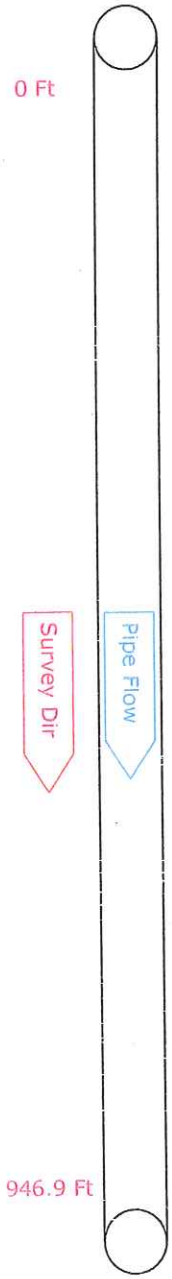
Work Order	***Contract***	***Video*** 1	***Setup*** 3
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** LC5B	***Depth*** Ft
Shape	Circular	***Size*** 8 ***by***	ins	***To*** LC5BA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Downstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned***

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC5B]
Water level 0

946.9 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC7B X **for** North Wake County

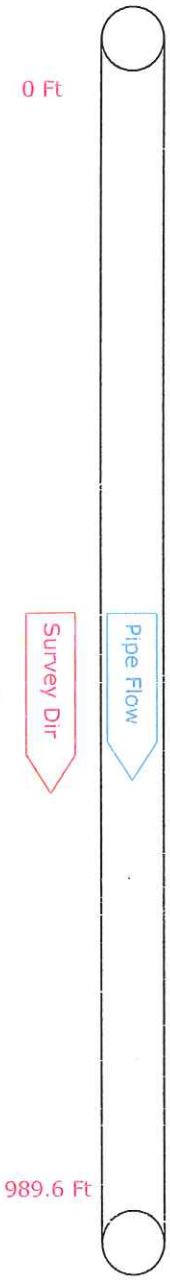
Work Order		***Contract***		***Video***	1	***Setup***	4
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC7B	***Depth***	Ft
Shape	Circular	***Size*** 8	***by*** ins	***To***	LC7BA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC7B]
Water level 0

989.6 Ft Survey abandoned [EGG SHAPED PIPE]

Pipe Graphic Report of PLR LC8B X **for** North Wake County

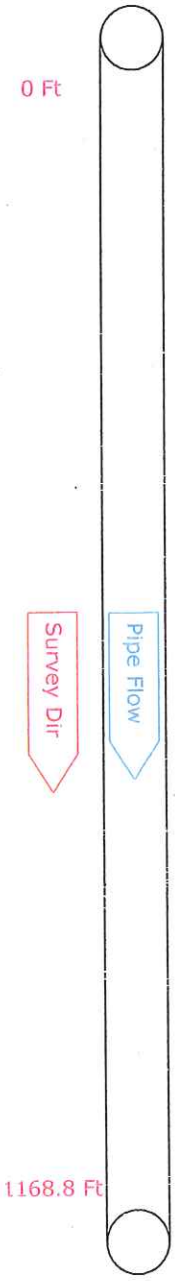
Work Order	***Contract***	***Video*** 1	***Setup*** 5
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** LC8B	***Depth*** Ft
Shape	Circular	***Size*** 8 ***by***	ins	***To*** LC8BA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Downstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned*** 10/27/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC8B]
Water level 0

1,168.8 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC9B X **for** North Wake County

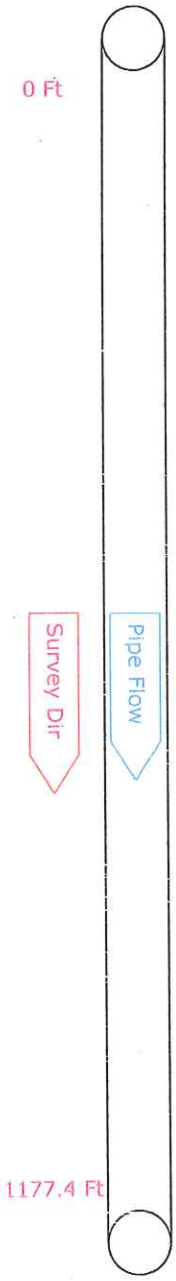
Work Order	***Contract***	***Video*** 2	***Setup*** 6
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** LC9B	***Depth*** Ft
Shape	Circular	***Size*** 8 ***by***	ins	***To*** LC9BA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Downstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned***

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC9B]
Water level 0

1,177.4 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC10B X **for** North Wake County

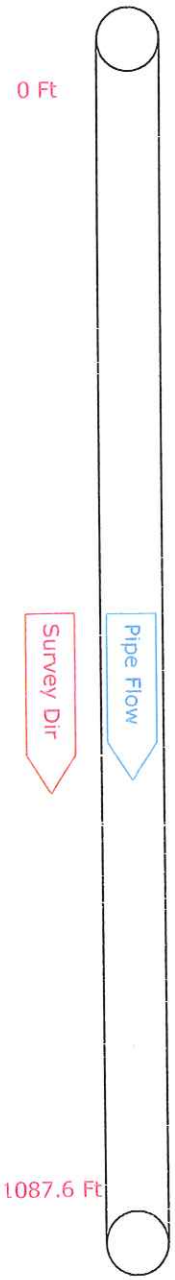
Work Order		***Contract***		***Video***	2	***Setup***	7
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC10B	***Depth***	Ft
Shape	Circular	***Size*** 8	***by*** ins	***To***	LC10BA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC10B]
Water level 0

1,087.6 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC11B X **for** North Wake County

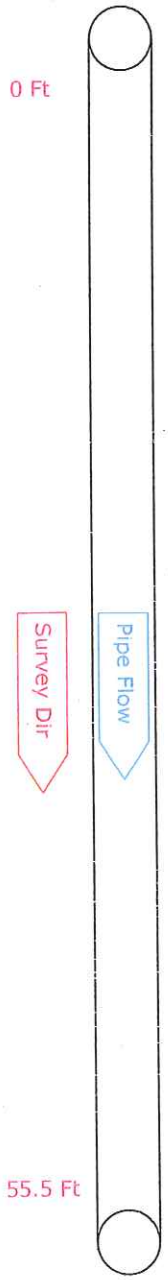
Work Order		***Contract***		***Video***	2	***Setup***	8
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC11B	***Depth***	Ft
Shape	Circular	***Size*** 8	***by*** ins	***To***	LC11BA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/27/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC11B]
Water level 0

55.5 Ft Survey abandoned [PIPE IN THE WAY]

Pipe Graphic Report of PLR LC6AA X **for** North Wake County

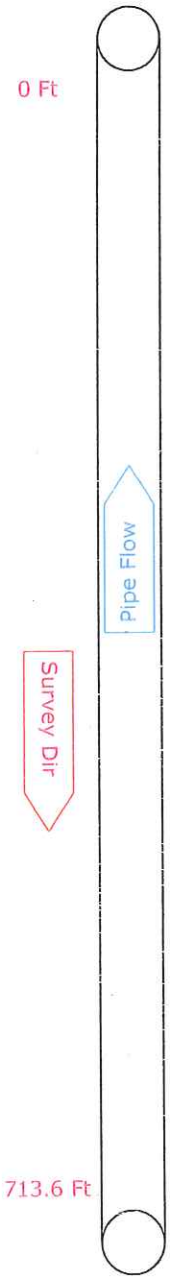
Work Order		***Contract***		***Video***	2	***Setup***	9
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Light rainfall

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC6A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC6AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/27/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC6A]
Water level 0

713.6 Ft Survey abandoned [EGG SHAPED STOPPED]

Pipe Graphic Report of PLR LC5AA X **for** North Wake County

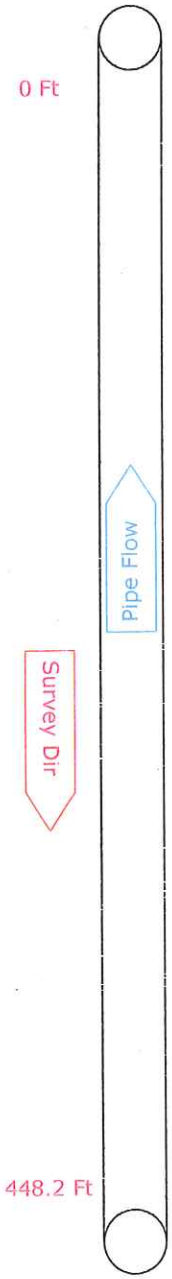
Work Order		***Contract***		***Video***	2	***Setup***	10
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC5A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC5AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/28/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC5A]
Water level 0

448.2 Ft Survey abandoned [PIPE DEFORMED]

Pipe Graphic Report of PLR LC4AA X **for** North Wake County

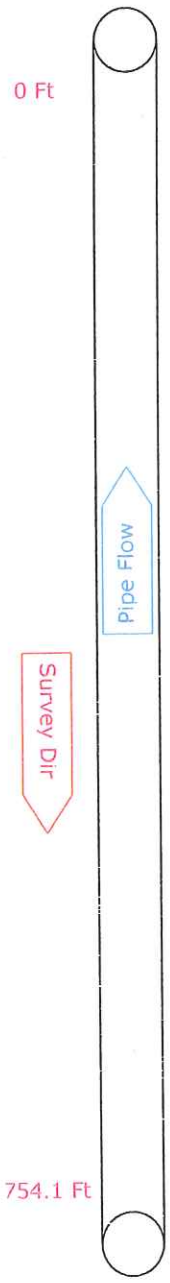
Work Order		***Contract***		***Video***	2	***Setup***	11
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC4A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC4AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/28/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC4A]
Water level 0

754.1 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC3AA X **for** North Wake County

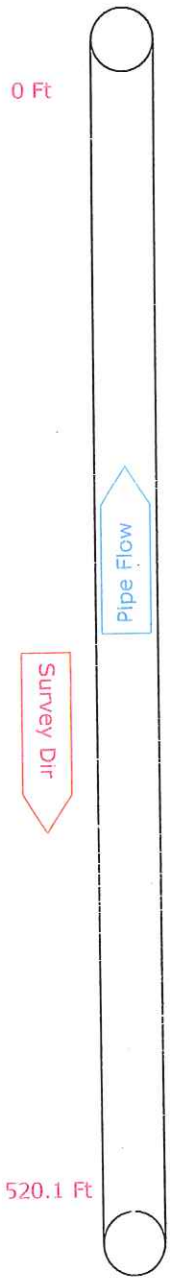
Work Order		***Contract***		***Video***	3	***Setup***	12
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC3A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC3AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/28/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC3A]
Water level 0

520.1 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC2AA X **for** North Wake County

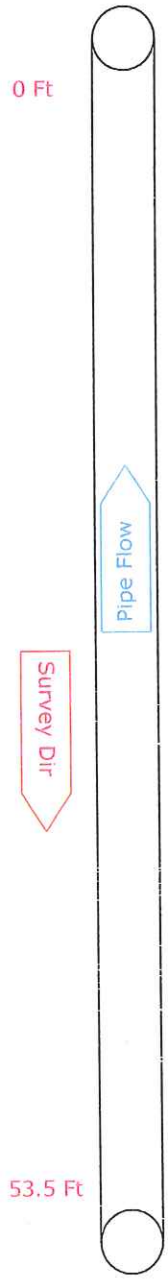
Work Order		***Contract***		***Video***	3	***Setup***	13
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC2A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC2AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC2A]
Water level 0

53.5 Ft Survey abandoned [COULD BE BROKEN JOINT]

Pipe Graphic Report of PLR LC1AA X **for** North Wake County

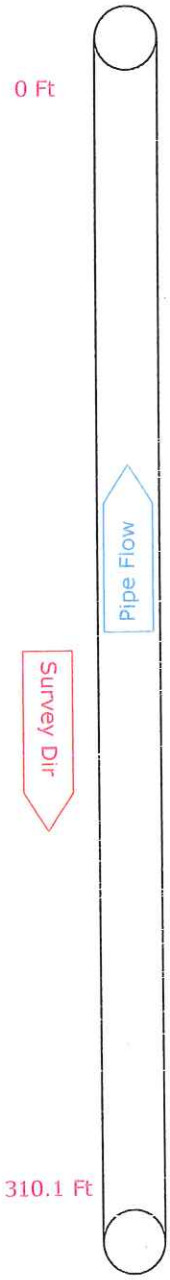
Work Order		***Contract***		***Video***	3	***Setup***	14
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC1A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC1AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC1A]
Water level 0

310.1 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC9AA X **for** North Wake County

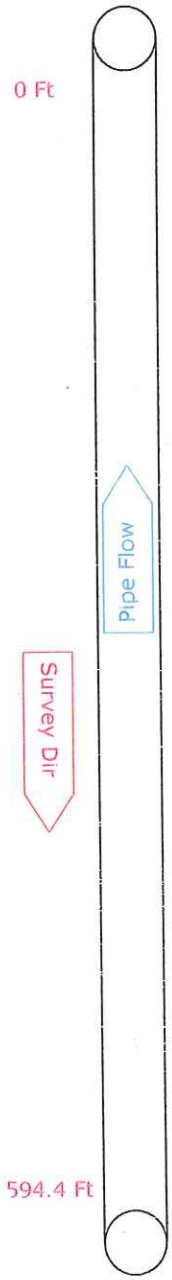
Work Order		***Contract***		***Video***	3	***Setup***	15
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC9A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC9AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC9A]
Water level 0

594.4 Ft Survey abandoned [CABLERESISTANCE]

Pipe Graphic Report of PLR LC3B A **for** North Wake County

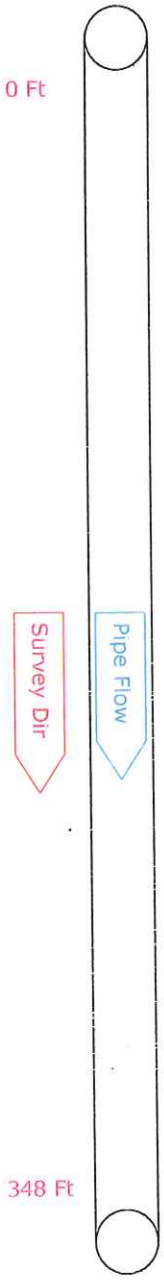
Work Order	***Contract***	***Video*** 3	***Setup*** 16
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** LC3B	***Depth*** Ft
Shape	Circular	***Size*** 8 ***by***	ins	***To*** LC3BA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Downstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned*** 10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC3B]
Water level 0

348.0 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC4B A **for** North Wake County

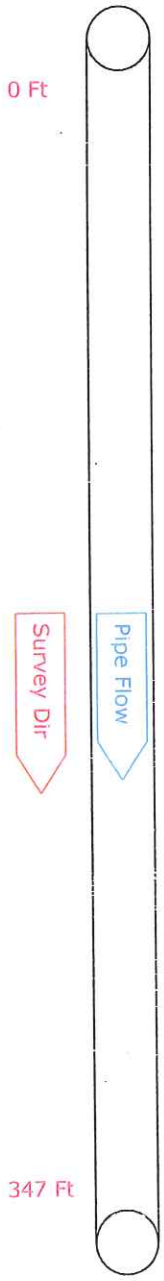
Work Order		***Contract***		***Video***	3	***Setup***	17
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC4B	***Depth***	Ft
Shape	Circular	***Size*** 8	***by*** ins	***To***	LC4BA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC4B]
Water level 0

347.0 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC6B A **for** North Wake County

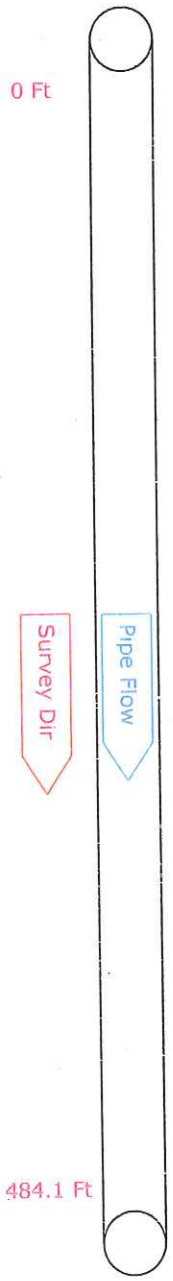
Work Order		***Contract***		***Video***	3	***Setup***	18
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC6B	***Depth***	Ft
Shape	Circular	***Size*** 8	***by*** ins	***To***	LC6BA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC6B]
Water level 0

484.1 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC11A A **for** North Wake County

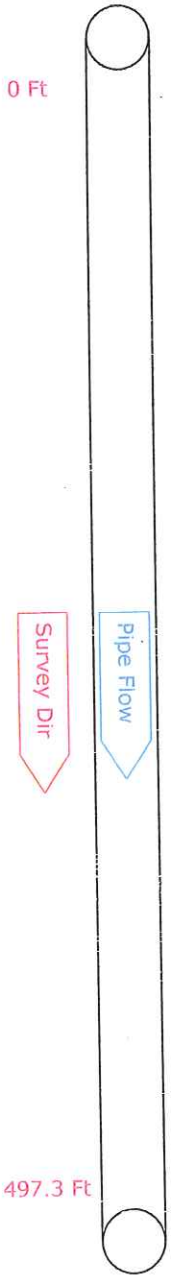
Work Order		***Contract***		***Video***	3	***Setup***	19
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC11A	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC11AA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC11A]
Water level 0

497.3 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR 4H A **for** North Wake County

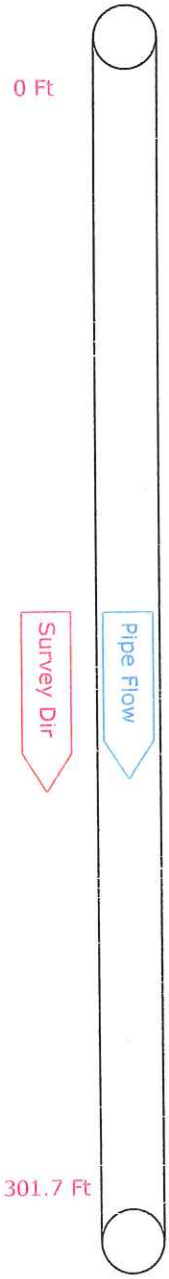
Work Order		***Contract***		***Video***	3	***Setup***	20
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	4H	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	4HA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [4H]
Water level 0

301.7 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR 3H A **for** North Wake County

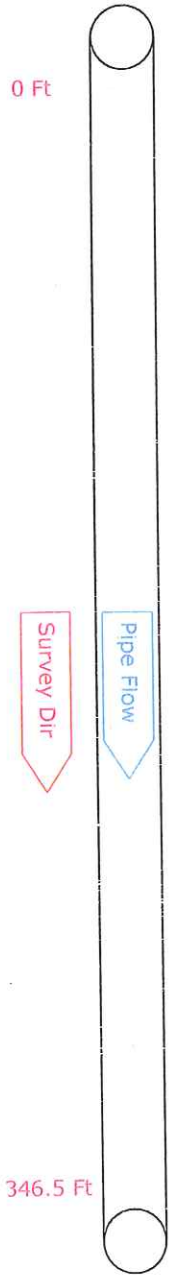
Work Order	***Contract***	***Video*** 3	***Setup*** 21
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** 3H	***Depth*** Ft
Shape	Circular	***Size*** 10 ***by***	ins	***To*** 3HA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Downstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned*** 10/26/2009

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [3H]
Water level 0

346.5 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR MAIN HEADERA A **for** North Wake County

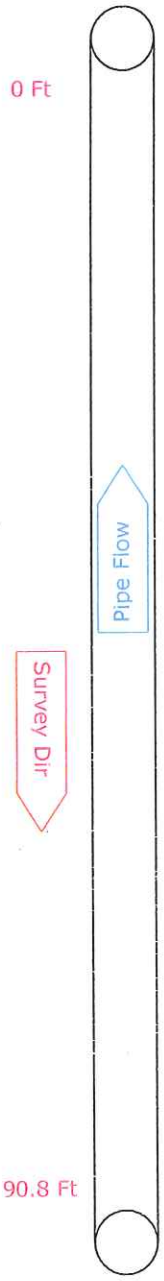
Work Order		***Contract***		***Video***	3	***Setup***	22
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	MAIN HEADER	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	MAIN HEADERA	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Upstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	10/26/2009

General note

Location note



0.0 Ft Manhole/Node [MAIN HEADER]
Water level 0

90.8 Ft Survey abandoned [DEBRIS]

Pipe Graphic Report of PLR LC8AA A **for** North Wake County

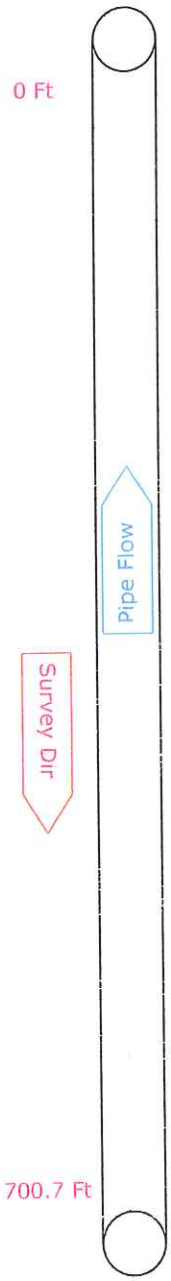
Work Order	***Contract***	***Video*** 3	***Setup*** 23
Facility	***Operator*** David	***Van Ref*** NC-1	***Surveyed On*** 10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From*** LC8A	***Depth*** Ft
Shape	Circular	***Size*** 10 ***by***	ins	***To*** LC8AA	***Depth*** Ft
Material	hdpe	***Joint spacing***	Ft	***Direction*** Upstream	
Lining		***Year laid***		***Pre-clean*** Y	***Last cleaned***

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC8A]
Water level 0

700.7 Ft Survey abandoned [CABLE RESISTANCE]

Pipe Graphic Report of PLR LC10 A **for** North Wake County

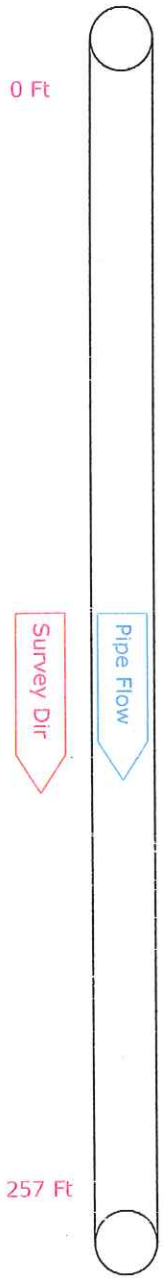
Work Order		***Contract***		***Video***	3	***Setup***	24
Facility		***Operator***	David	***Van Ref***	NC-1	***Surveyed On***	10/28/2009

Street Name	North Wake County Landfill	***City***	
Location type	LANDFILL		
Surface			
Survey purpose	Assessment of complete remedial or renovation works	***Weather***	Dry

Pipe Use	LEACHATE	***Schedule length***	Ft	***From***	LC10	***Depth***	Ft
Shape	Circular	***Size*** 10	***by*** ins	***To***	LC10A	***Depth***	Ft
Material	hdpe	***Joint spacing***	Ft	***Direction***	Downstream		
Lining		***Year laid***		***Pre-clean***	Y	***Last cleaned***	

General note

Location note



0.0 Ft Start of Survey
Manhole/Node [LC10]
Water level 0

257.0 Ft Survey abandoned [CABLE RESISTANCE]

North Wake Landfill Phase 2 Closure Project Photo Album

CDM Project No. 55752

Installation of Erosion Control Devices (Porous baffles in Sediment Trap)

Maintenance of Erosion Control

Removal of Leaves From the Landfill Prior to Placement of Intermediate Cover

Excavation of Downdrain Pipe Trenches

Test Pits in the Borrow Area to Locate Good Dirt for the Cap

Screening and Loading in the Borrow Area

Intermediate Cover Dirt Hauled to the Placement Area

Gas Well Being Reconnected to Temporary Gas During Construction

Intermediate Cover Layer on the East Slope

Compaction of the Intermediate Cover Layer Using a Smooth Roller

Compaction and Moisture Check Using Nuclear Gage

Intermediate Cover Thickness Check by Engineer's Field Representative

Delivery of LLDPE Liner Rolls

LLDPE Geomembrane Trial Weld Testing by Hallaton

Installed LLDPE Geomembrane Panels

Installed LLDPE Geomembrane Panels

Installed LLDPE Geomembrane Panels

LLDPE Geomembrane Double Wedge Seam

Liner Seam Destructive Test Samples

Air Test on LLDPE Seams

Installation of Composite Drainage Net on Top and Protective Cover

Boot on Gas Well

Liner Boot on Vent Pipe

Extrusion Weld of the Phase1 & 2 Tie-in

Placement of Protective Cover Soil Using Low Ground Pressure Dozer

Installation of Drainage Flaps

8-inch Pipes Installed at Grid Points to Allow Protective Cover Thickness Verification by RPR and Surveyor

Installation of Gabion for the Permanent Access Road

Installation of Downdrain Pipes

Installation of Permanent Gas Collection System (by AEG)

Installation of Permanent Gas Collection System (by AEG)

Seeding on the South Slope

Erosion Control Matting

Completed Closure Cap

Completed Closure Cap

Installation of Temporary Leachate By-pass Pipeline

Installation of Temporary Leachate By-pass Pipeline

Decommission of the Leachate Pond (Sludge Removal)

Decommission of the Leachate Pond

Soil Samples Being Collected from the Leachate Pond for Testing

Leachate Pond Backfill

Leachate Pond Discharge Pipe Being Removed

Leachate Sampling Station Manhole

Leachate Sampling Station Manhole

Leachate Sampling Station Manhole