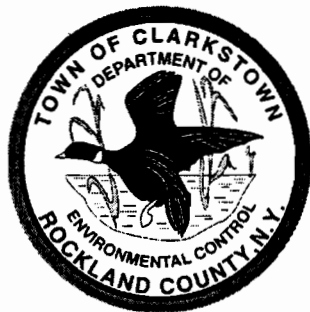




**TOWN OF CLARKSTOWN
DEPARTMENT OF ENVIRONMENTAL CONTROL**

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

CONSTRUCTION CERTIFICATION REPORT

**APPENDIX F: QA/QC DURING GEOSYNTHETICS
INSTALLATION**

April 14, 2000

Prepared for:

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

Submitted to:

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

Prepared by:

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



APPENDIX F: QA/QC DURING GEOSYNTHETICS INSTALLATION

- | | |
|--------------|---|
| Appendix F1: | QA Geosynthetic Inspectors Daily Reports, PVC Liner Panel Inspection Forms and Air-Lance (Non-Destructive) Test Results |
| Appendix F2: | Executed Subbase Acceptance Forms |
| Appendix F3: | Field Seam Destructive Test Results |
| Appendix F4: | Transmissivity Test Results |

APPENDIX F1:

QA Geosynthetic Inspectors Daily Reports, PVC Liner Panel Inspection Forms and Air-
Lance (Non-Destructive) Test Results

visit with the befruth
1/16
with the gangster

APPENDIX F1

PLEASE NOTE:

The numbering system of the Inspectors Daily Reports (IDR) has two observed errors. The dates of July 1 and July 2, 1998 both are identified as 660; and the date of August 10, 1998 should be 700, instead of 699. The latter error was carried through for the remainder of the IDRs.

4 of 4

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/5/97
INSPECTOR: BC
LINER TECHNICIAN: JB

WEATHER

TEMP. DEG F

WIND

HUMIDITY

<u>Clear</u> AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 48			PM 78
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPm; AM / PM
<u>Dry</u> AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH (F) S

Date: JUNE 6, 1997

IDR #: 269

Weather

High

Low

ptly cdy	79	49
----------	----	----

Description of work performed and inspected

[illegible]

Remarks: Observed Environmental Liners lay and stitch Amoco 4506 6.0z geomembrane to that laid on 6-5. Rolls 102009674, 102009437, 102009674, 102009402, 102009570 and 102009298 (4 rolls). Observed EL lay and weld 3 panels of PV 40 textured geomembrane to that laid on 6-5. Panels B-218 (404' x 38'), 215 (408' x 38') and B216 (407' x 38'). All stitching was inspected and found acceptable. Pre day testing of hot welder #007 was passing (Shear 94, 83, Peel 44, 45). No air lance or destructive testing was performed today. It was agreed by John Wondley, EL, REC that all patches would be 4" to 6" larger in all directions than the urea/seam to be replaced.

Equipment & Labor Record

[illegible]

Start/finish time: 0709 / 530

Page 1 of 3 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

6-6-99 cont

553 B-217 (6-5) 638
B-218 (6/6) 638
B-216 437
102009694 (6-6) start 437 (6-5)
102009694
102009402
102009402
102009570
102009570
102009298
102009298

B105

B105

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-6-99
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
49 AM		99 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S (M) T W TH F S

Date: June 9, 1997

IDR #: 272

Weather	High	Low
ptly cldy/clear	87	51

Description of work performed and inspected

[illegible]

Remarks: Observed Environmental Liners Lay and stitch Four rolls Amoco 4506 and 3 pallets of PV 40 liner. Observed coupons D5-1 and D5-2 being cut from liner. Weston received archived samples, rest was sent to lab by Ogden for destructive testing. Collected Amoco 4506 sample #2 for archive from roll 102 009693. Observed air leak testing of seams 218/219, 217/218, 216/215, 105/218, 217/216, 215, 215/212, 212/211. All welded seams OK glue patches need minor work. Observed destructive testing of D5-1, D5-2 both failed shear testing. Samples sent to lab with certifying if welds are good. These Fried tests broke material, not weld.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1545

Page 1 of 4 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/4/97
INSPECTOR: Bob Cunningham
LINER TECHNICIAN: Jack Guzdek

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Drizzle AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/9/99
INSPECTOR: Bob Cunningham
LINER TECHNICIAN: Jake Guszak

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Sleazy AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Drizzle AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

B105 (6-5) B106 (6-9)

4084

B212 (6-9)

8

B-214

B-213 6E450-4

102009570 6

102009298

102009298

102009673 (6-9)

102009673

102009671

102009671

102009926

102009926

102009926

102009926

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: June 10, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 273

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
clear	91	53

Description of work performed and inspected[illegible]

Remarks: Observed Environmental Liners in stall 2 rolls of 6 oz. geotextile, (D2009725, D2009327) and 3 panels of PV40 Liner (B-106, B-211, B-206). Observed Field tests of 3 distinct components - OS-3 (Seam 215/212) passed (Shear 82, 83, peel 50, 46). OS-4 (Seam 213/214) passed (Shear 78, 79, peel 46, 48). OS-5 (Seam 106/214) Failed (Shear 76, 68, peel 42, 41). Daily test for TS-3 machine 00°-70° 650° Failed (Shear 78, 73). Observed a depression at base of west flowing swale which, after discussion and survey, ORSC cut swale to facilitate flow. Observed ORSC place cover soil in NE corner of liner by mistake. It was removed at days end.

Equipment & Labor Record

[illegible]

Start/finish time: 0900 / 1530

Page 1 of 3 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

30x3

B-213 6/9

B-211

B-206



555 6-9

555

726

671

102009725 6/10

102009725

102009327

102009327

B-106
(6-9)

Berlin

B-109
6/10

roll
ends

2

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: June 11, 1994

Consultant: Roy F. Weston of New York, Inc.

IDR #: 274

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Sunny	96	68

Description of work performed and inspected

[illegible]

Remarks: Observed EL place 2 Panels of PU40/ner (B-210-412'x38') and B-207 (407'x38' and 3 rolls of Amoco 602 4506 (rolls 102009655, 102009299, and 102009436. Observed EL air/lance seams 214/213, 213/211, 211/206, 106/213, 106/211, and 106/206 and patches from 6/9 repairs. All were decent with minor defects which must be repaired. Walked in w/ EL measuring distance to patches and repairs from panels B105, B106. Observed EL cut DS-B, and DS-7 from seams 213/211, and 211/206 respectively.

Equipment & Labor Record

[illegible]

Start/finish time: 0900/1530

Page 1 of 4 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/11/99
INSPECTOR: BC
LINER TECHNICIAN:

WEATHER	AM	Slk	PM	Shn
TEMP DEG F	HI	96	LO	68
WIND	AM	—	PM	Slight breeze
PRECIPITATION	AM	—	PM	—

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W **TH** F S

Job No: 03228-018-001-0003-00

Date: June 12, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 275

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
pty cldy	93	67

Description of work performed and inspected

[illegible]

Remarks: Observed El glue seam 201/204, glue patch entire length of 216/215, place
602 and linearize toe of panels 218, 213, 216, 215, 212, glue and seam B-209A, B, C D to toe of
panels 217, 218, 216, 215. Observed destructive tests on BS-2 extensions up and down with on seam 216/215
Observed air lance testing of seams 216/215 (Cap), 206/210, 210/207, 207/204, 206/107, 210/107, 204/107

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 5 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/12/99
INSPECTOR: BE
LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 12, 1997

INSPECTOR: BC

LINER TECHNICIAN: JD

WEATHER

TEMP DEG F

WIND

PRECIPITATION

A

H

A

A

[illegible]

COMMENTS: All seams passed w/ minor imperfections which will be patched by st.

B-213 6/9

B-211 (6-10)

671

726

726

555

B-206 (6-10)

555

649

102009725 6/10

102009725

102009327

102009327

102009653

102009653

102009299

102009299

102009436

102009436

102009436

102009436

102009436

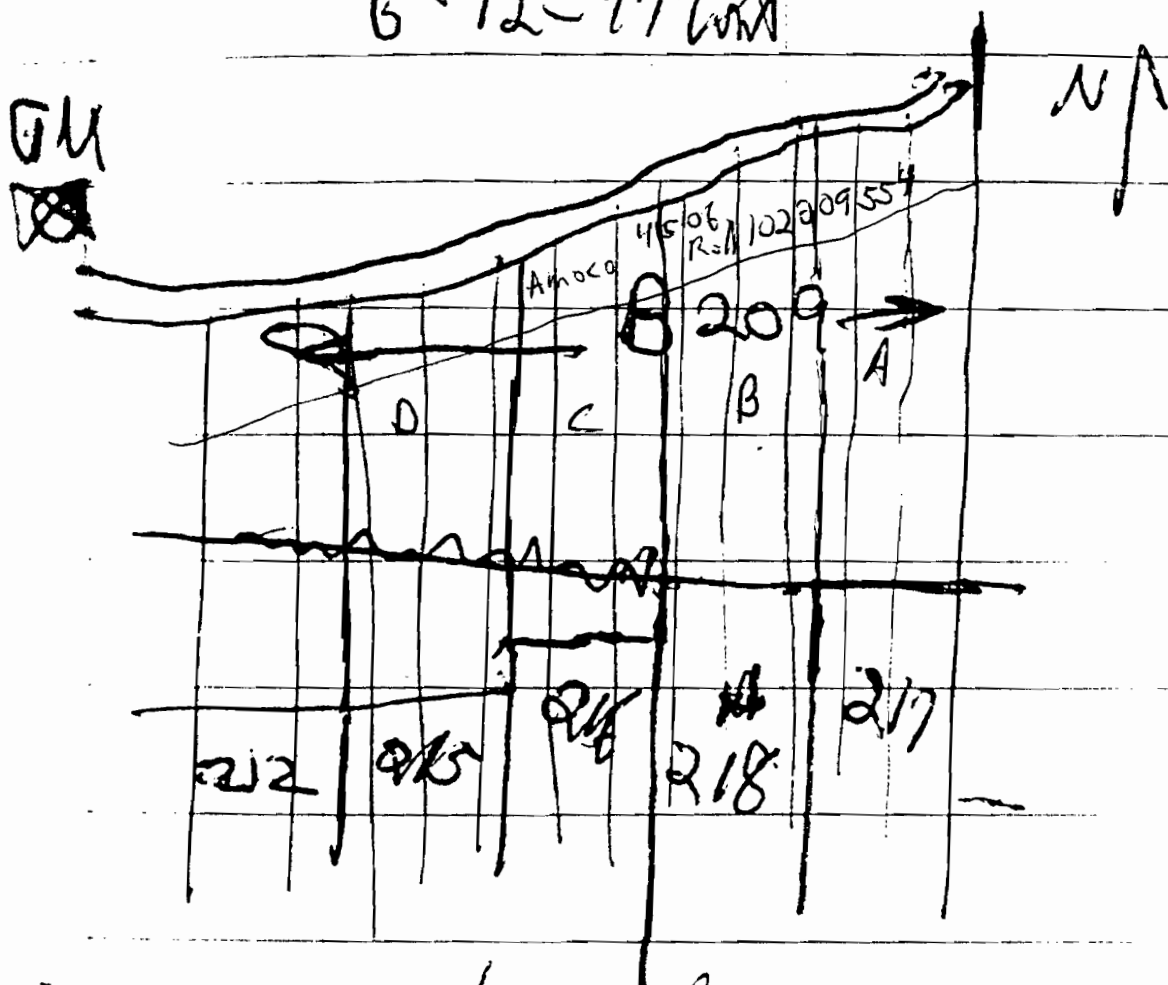
B-106
(6-9)

B-107
(6-10)

rel
en

6-12-97 cont'

5 of 5



1240 preparing to air lance

- Take & capping seal 105/215?

Air-lanced cap on 216/215, 206/210,

210/207, 207/204 numerous imperfections

in Seal 207/204 to patch by GR 44

checked patches retested before to the
print

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH (F) S

Date: June 13, 1997

IDR #: 276

Weather	High	Low
cldy, breezy	84	64

Description of work performed and inspected

[illegible]

Remarks: Observed EL place 15 rolls of Tensar TG600 geocomposite and glue in 2 pp. of liner (B209 E, F). Walked entire liner placed to date checking repairs. All are done. Observed truck deliver 16 pallets of liner. ORSC back filled lower anchor trench with part cover soil and part SF. Airline testing of panels B209 E, F, AB, C, D

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 5 pages
s:\clarktown\fidforms\ldr.xls

Robert Cunningham
Inspector's signature

Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 13, 1999
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 13, 1997
INSPECTOR: BC
LINER TECHNICIAN: JD

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

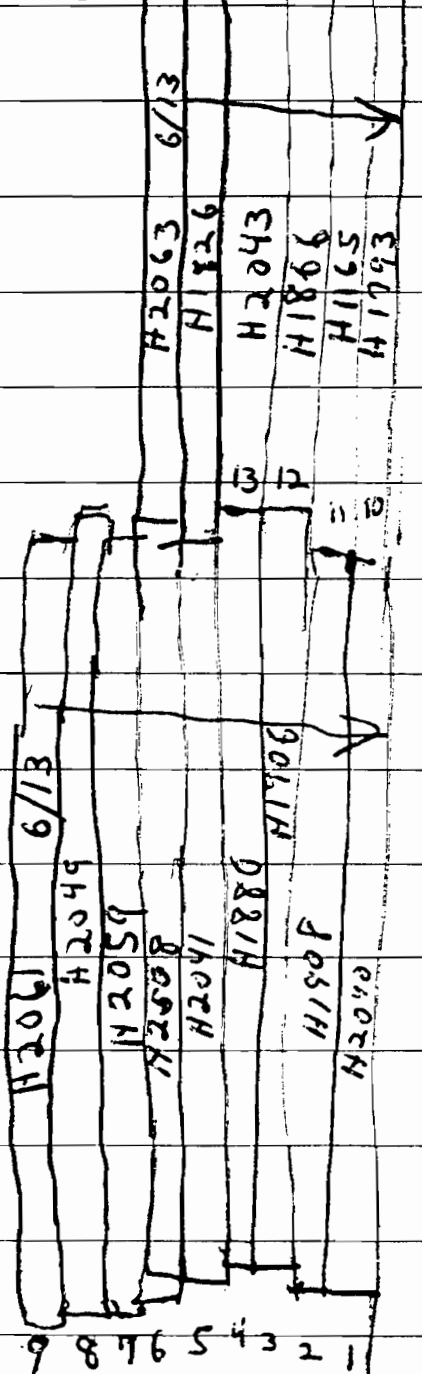
6-13-91 cont

used 6 panel widths for daily

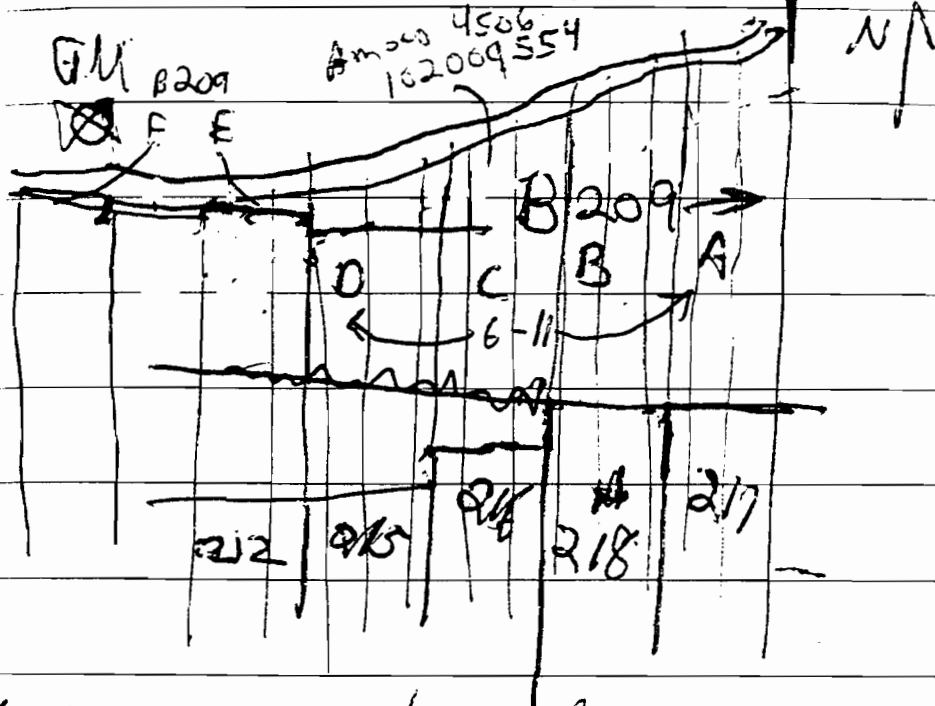
1 x 80 6/13

N
↑

limit of measurement 6/13 11 10



6-12-97 cont



1240 preparing to air lance

- Take & capping near 105/215?

Air-lanced caps on 216/215, 206/210,
 210/207, 207/204 numerous imperfections
 in seam 207/204 patch by GR 44
 checked patches retested before to the
 event

445 Finish air lance.

- For 30 min EL has been extending
 toes of blankets 217, 218, 216, 215, 212

Robert Lynch

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/16/99
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER	AM	<u>ptly cly</u>	PM	
TEMP DEG F	HI	<u>86</u>	LO	<u>64</u>
WIND	AM	<u>breeze</u>	PM	<u>high</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

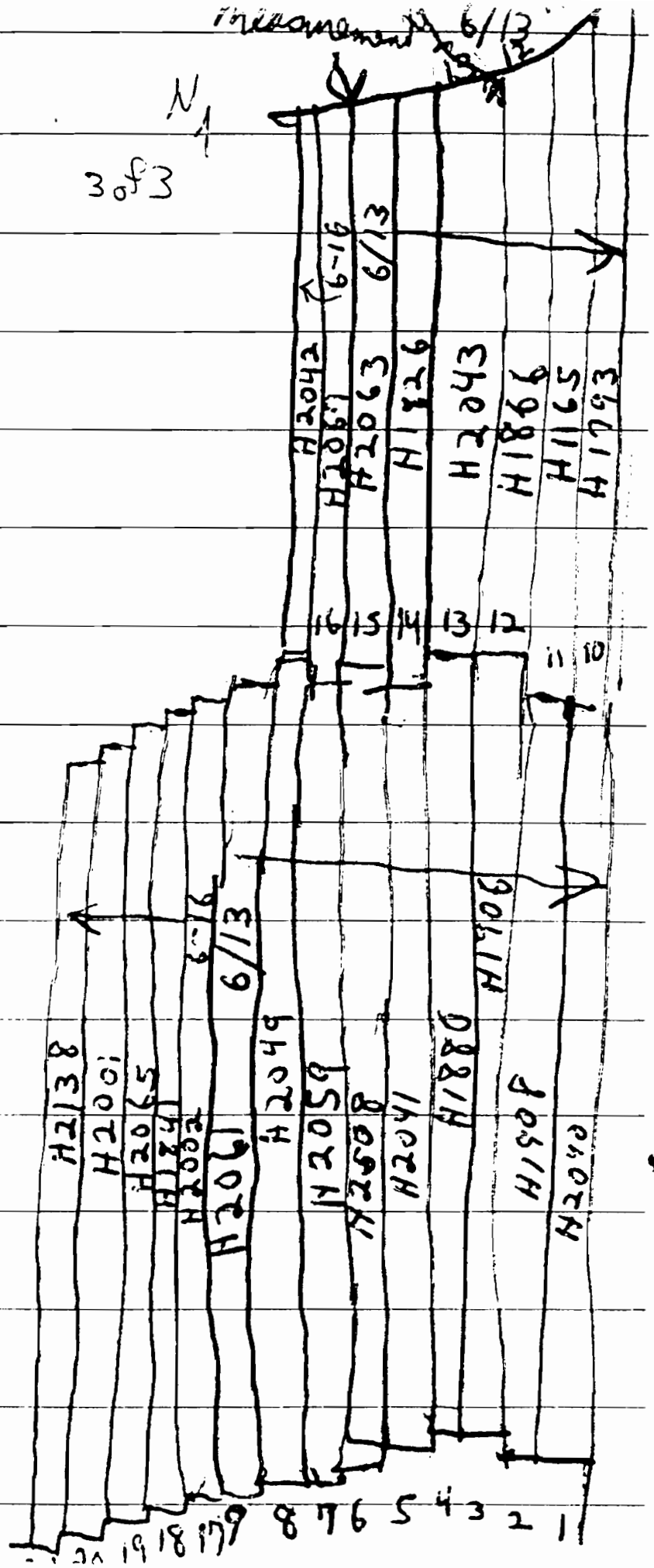
[illegible]

COMMENTS:

30°3

N

Measurement 6/13



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: June 17, 1999 ☾

IDR #: 280

Weather	High	Low
overcast	78	55

Description of work performed and inspected

[illegible]

Remarks: Observed EL pick sharp objects off subgrade prior to J. Woodley approval of area between GE 44 and GE 42. Observed ORJC back blade and roll areas not acceptable. Observed ORJC unearth 2" pipe leading into DL-11 which was buried 2' below grade. Observed BET extend pipe 8' observed EL place 12 rolls of TG 600 geocomposite and patch 3 horizontal seams in B204 cut to repair subgrade yesterday. Also observed JO air lance OS & R Patch.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1600

Inspector's signature
Robert Cunningham
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 19, 1999
INSPECTOR: BL
LINER TECHNICIAN: _____

WEATHER	AM	<u>overcast</u>	PM	
TEMP DEG F	HI	<u>78</u>	LO	<u>55</u>
WIND	AM	<u>breeze</u>	PM	<u>→</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS:

3 of 4

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

1x411 x 80 6/13

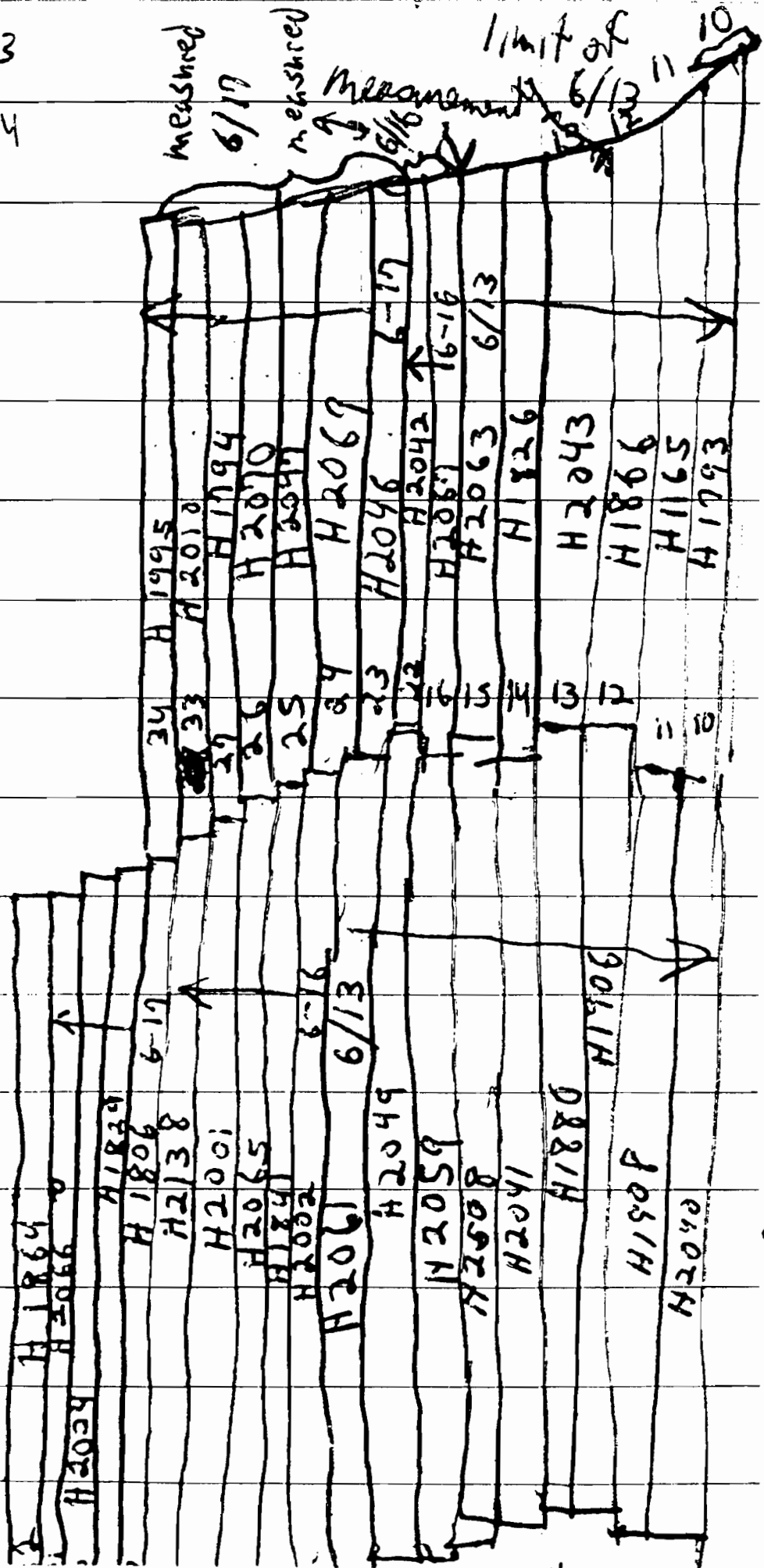
4 of 4

6/19
measured

meshred

Mean
9/16

1 unit of
6/11
13.1



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: June 18, 1997

IDR #: 281

Weather	High	Low
overcast/rain	74	63

Description of work performed and inspected

[illegible]

Remarks: Observed EL place 3 Panels of PU40 (B-109, B-201, B-203) and 4 rolls of Amoco 4506 (102009401, 102009360, 102009654, and 102009329). Welding of seams was incomplete due to rain so nothing was measured. Observed EL weld B201 to B109, B201, 203 to B109, B109 to B109, and B201 to B204. EL patched hole in boot around GE46 and extended boots to 2' at GE46 and 45. They began boots around CC #3 + Valve pit, but didn't com.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1345

Page 1 of 2 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Robert Cunningham
Inspector's name

20th 2

B-213 6/9

✓

B-211 (6-10)

6/11

726

726

555

B-206 (6-10)

555

6-9

✓

B-210 (6-11)

102009725 6/10

102009725

102009327

102009327

102009653

102009655

102009299

102009436

102009401

102009360

102009654

102009329

102009329

B-201 (6/18)

B-203

B-209

B-207

B-106 (6-9)

B-109 6-10

roll ends

6/18

B-109



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: June 19, 1999

IDR #: 282

Weather	High	Low
<u>pty sunny</u>	<u>86</u>	<u>63</u>

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
<u>24B</u>	<u>LFP 6, 3 E-8, E-9</u>	<u>7,755.2 sy</u>	<u>26 panels (13x2)</u>

Remarks: Observed EL place 25 rolls of TG 600 geo composite - tied + stretched
observed EL cap DS-10, DS10A 1,2,3 DS10B 1,2,3
They also placed a flap and drainage net from Panel 105 to 106 across top of composite
Discussed remedial storm damage work w/ EL, ORSC w/ John Woodley
Measured TG 600 placed today and yesterday - 26 panels - 20 panels 130' x 416', 6 panels 39' x 403'

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700/1530

Page 1 of 4 pages

s:\clarktown\ldforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 19, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
66 AM		63	PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6/19/99
INSPECTOR: BC
LINER TECHNICIAN:

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	63	86	PM
Still AM / PM	E. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

46/41 x 80 6/13

measured
6/19

measured
6/17

measured
6/16

measured
6/16

limit of
6/13

10

55	H2034	59	H1859	
54	H2032	58	H1838	
53	H2027	57	H1879	
52	H1845	56	H1812	
51	H2044	55	H1809	
50	H1795	54	H1891	
49	H1808	53	H1809	
48	H1848	52	H1842	
47	H1832	51	H1864	
46	H1907	50	H1796	
45	H1864	49	H1792	
44	H2066	48	H1876	
43	H2034	47	H1857	
42	H1839	46	H1863	6/13
41	H1806	45	H1995	
40	H2138	44	H2010	
39	H2001	43	H1794	
38	H2065	42	H2070	
37	H1841	41	H2041	
36	H2032	40	H2069	
35	H2061	39	H2046	
34	H2049	38	H2042	6-17
33	H2059	37	H2067	6-16
32	H2008	36	H2063	6/13
31	H2041	35	H1826	
30	H1880	34	H2043	
29	H1906	33	H1866	
28	H1906	32	H1165	
27	H1906	31	H1793	
26	H1906	30		
25	H1906	29		
24	H1906	28		
23	H1906	27		
22	H1906	26		
21	H1906	25		
20	H1906	24		
19	H1906	23		
18	H1906	22		
17	H1906	21		
16	H1906	20		
15	H1906	19		
14	H1906	18		
13	H1906	17		
12	H1906	16		
11	H1906	15		
10	H1906	14		
9	H1906	13		
8	H1906	12		
7	H1906	11		
6	H1906	10		
5	H1906	9		
4	H1906	8		
3	H1906	7		
2	H1906	6		
1	H1906	5		

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 20, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 80		91	PM
Sun AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 20, 1997
INSPECTOR: BC
LINER TECHNICIAN: JC

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 66		91	PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: JUNE 23, 1991
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 25, 1997
INSPECTOR: 288
LINER TECHNICIAN: _____

WEATHER

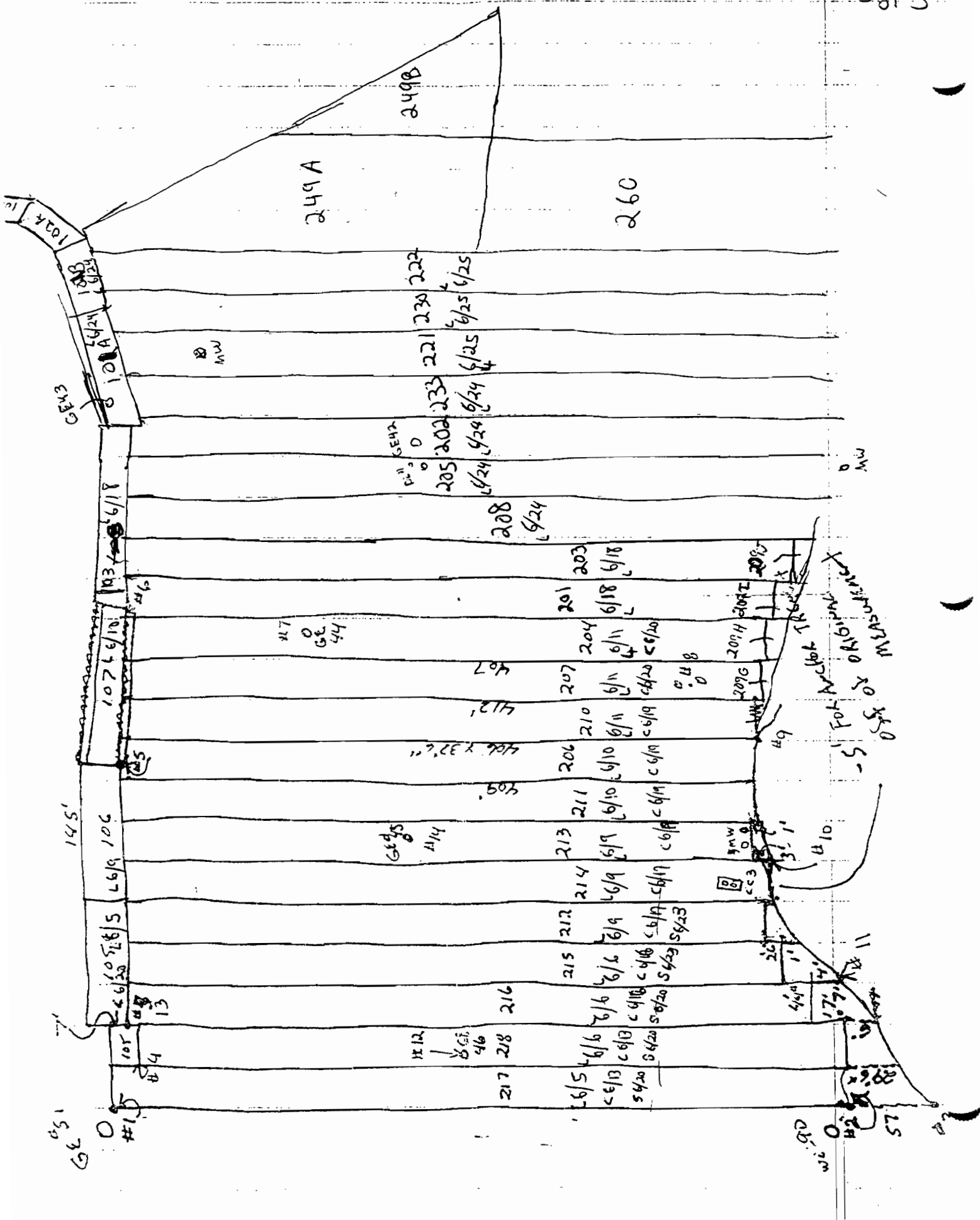
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 56		89 PM	
Sun AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 24, 1990
INSPECTOR: B.C.
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 56		PM 79	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 25, 1997
INSPECTOR: BC
LINER TECHNICIAN: JG, JD, JC

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
63 AM			63 PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

May 3, 1854

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 25, 1997
INSPECTOR: BC, DC
LINER TECHNICIAN: JD

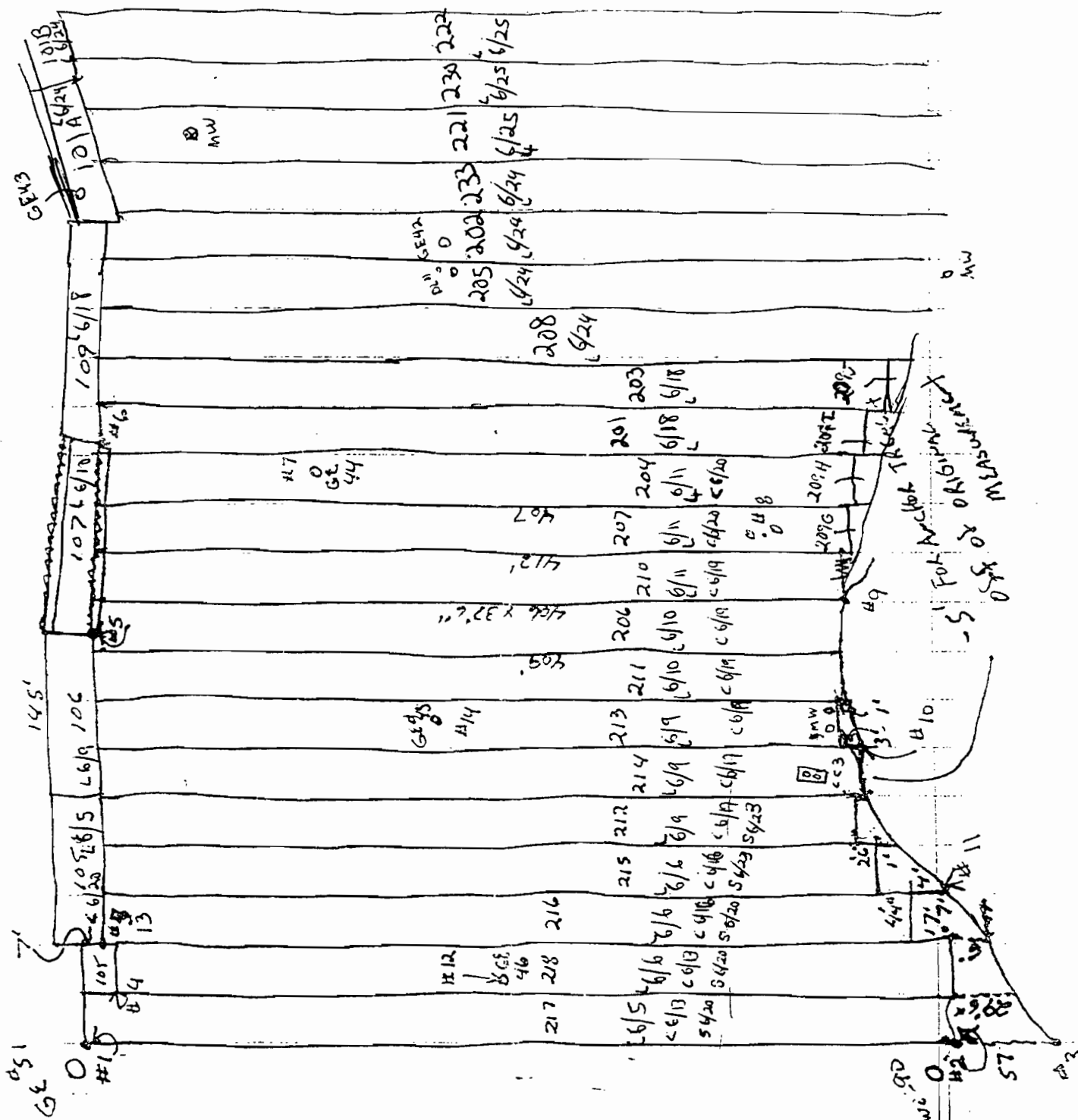
WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
63 AM	63 PM	93	PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: JUN 26, 1999
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
9 AM		96 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 27, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 6G			PM 8G
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 27, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	8:00	8:00 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

35 page access

measured
6/25

geo composite placed 6/27/99

72	H1839	75	H2022	72
71	H1843	74	H2029	71
70	H1825	73	H2028	70
69	H1846	69	H1810	69
68	H1849	68	H1825	68
67	H1830	67	H1822	67
66	H2035	66	H1827	66
65	H3054	65	H1814	65
64	6/19	64	6/20	64
63	6/19	63	6/20	63
62	6/19	62	6/20	62

4584
25

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: June 30, 1997

INSPECTOR: BZ

LINER TECHNICIAN:

WEATHER

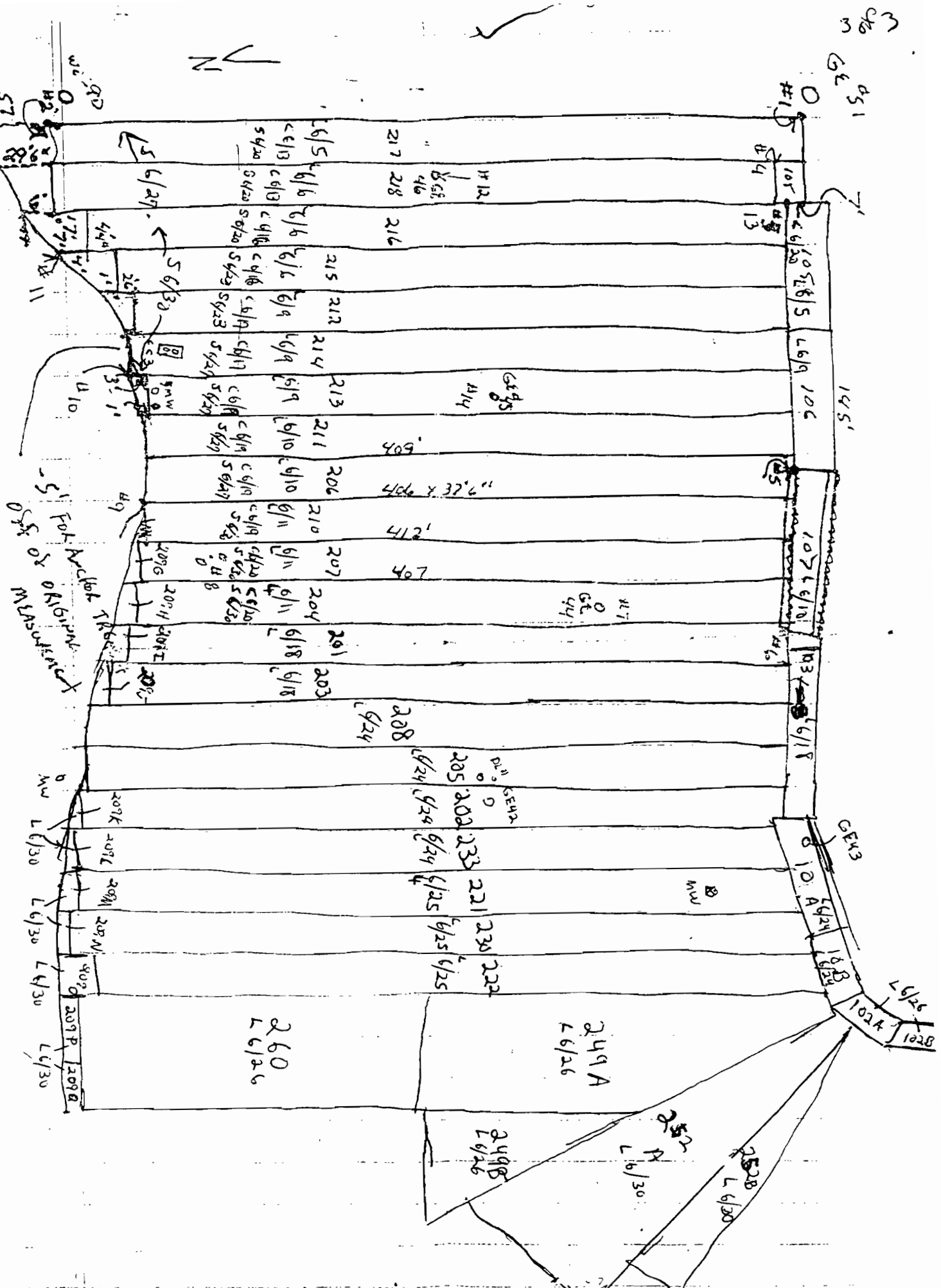
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	PM	PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 1, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 1, 1997
INSPECTOR: BC
LINER TECHNICIAN: RJ

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T (W) TH F S

Date: July 2, 1995

IDR #: 295

Weather	High	Low
cldy / showers	82	65

Description of work performed and inspected[illegible]

Remarks: Observed EL plate, tie + stitch 22 rolls of TG 600 geocomposite
Airplane tested seams 249/222, 260/222, 249A/102, 249A/252A, 252A/252B, 249A/249B,
249B/252A, 249B/250, 249A/260, 260/209Q, 260/209P, 209P/209Q
Measured 2 rolls of TG 600 w/ M. Diana. Observed ORS + EL work on emergency flap detail at Twp
Measured panel B 249 a, b

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1310

Page 1 of 4 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 2, 1999
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
65 AM		82 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

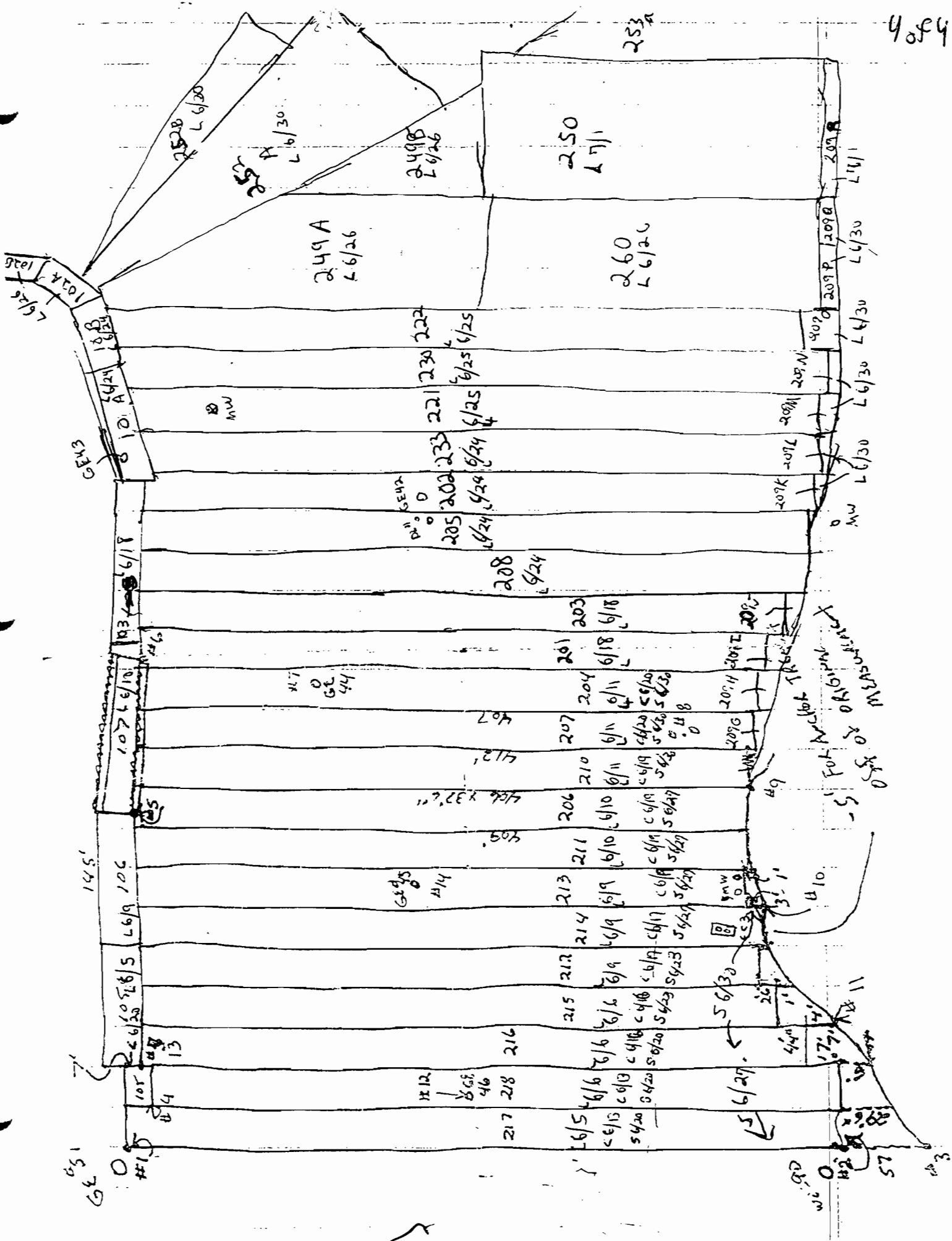
DATE: July 2, 1997
INSPECTOR: BE
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	65		PM 82
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

4084



1 of 3

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 3, 1999
INSPECTOR: BC
LINER TECHNICIAN: _____

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6) AM		FS	PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

WIND

HUMIDITY

[illegible]

50.1
Lalasa

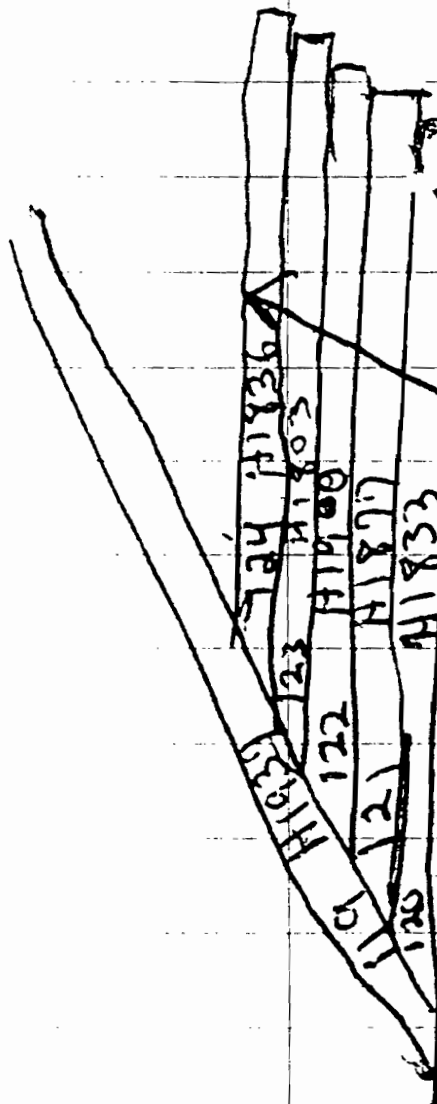
3 of 3

3/208
entry

4+

to
17.00
trying
in

B
two
to



H2004
H1998

H2014
H1932
H1881
H2013

H1801
H1850
H1996
H2015
H2008
H2009
H2028
H2279

H2000
H2025
H1888
H2011
H2018

H1936
H2019

H1929
H1835
H2030
H1818
H2292
H2278
H2325
H2262

H1940
H2022
H1844
H2016
H2080
H1885
H1828
H1842

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

H1836
H1803
H1908
H1897
H1833

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 9, 1999
INSPECTOR: BC
LINER TECHNICIAN: JD

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
63 AM		85 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 7, 1997
INSPECTOR: RC
LINER TECHNICIAN: RP

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
63 AM		85 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Unit of corals 11/2/99 Paul B201

Ref measured 7/2

measured 7/3

measured 7/2

H1933 123 H1836
122 H1900
121 H1877
120 H1833

H8 7/7 H1936 7/7
H2019

109 H1929
108 H1835
107 H2030
106 H1818
105 H2292
98 H2278
97 H2325
96 H2262

93 H2031
92 H2020
91 H1844
90 H2016
89 H2080
88 H1885
87 H1828
86 H1847
85 H3003
84 H1831

126 H2004
125 7/7 H1998
117 missing
116 H2014
115 H1881
114 H2013
113 H1809
112 H1850
111 H1996
110 H2015
103 H2008
102 H2009
101 H2008
99 H2008
98 H2008
97 H2008
96 H2008
95 H2008
94 H2008
93 H2008
92 H2008
91 H2008
90 H2008
89 H2008
88 H2008
87 H2008
86 H2008
85 H2008
84 H2008

89 H1888
88 H2011
87 H2018
86 H2135
85 H2023
84 7/2 H1905

S.F.S

depression

102090624
102090624
102090624

102009677
102009677
102009677

102063446
102063446
102063446

B220

B234

B2539

B2526

B250

B2529

B2496

B2499

B280

B1029

B701B

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 8, 1997
INSPECTOR: BC
LINER TECHNICIAN: JP

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
59 AM		9 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B260		JK	231.6	82.2		19,037.5sf 2/15/3y
B252g			222	92		11,061.2sf 1,229sy
						7.6584.35 17.5
B250		✓	238	90.45		238 B258 90.45 21,345.1sf 2,371.7sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

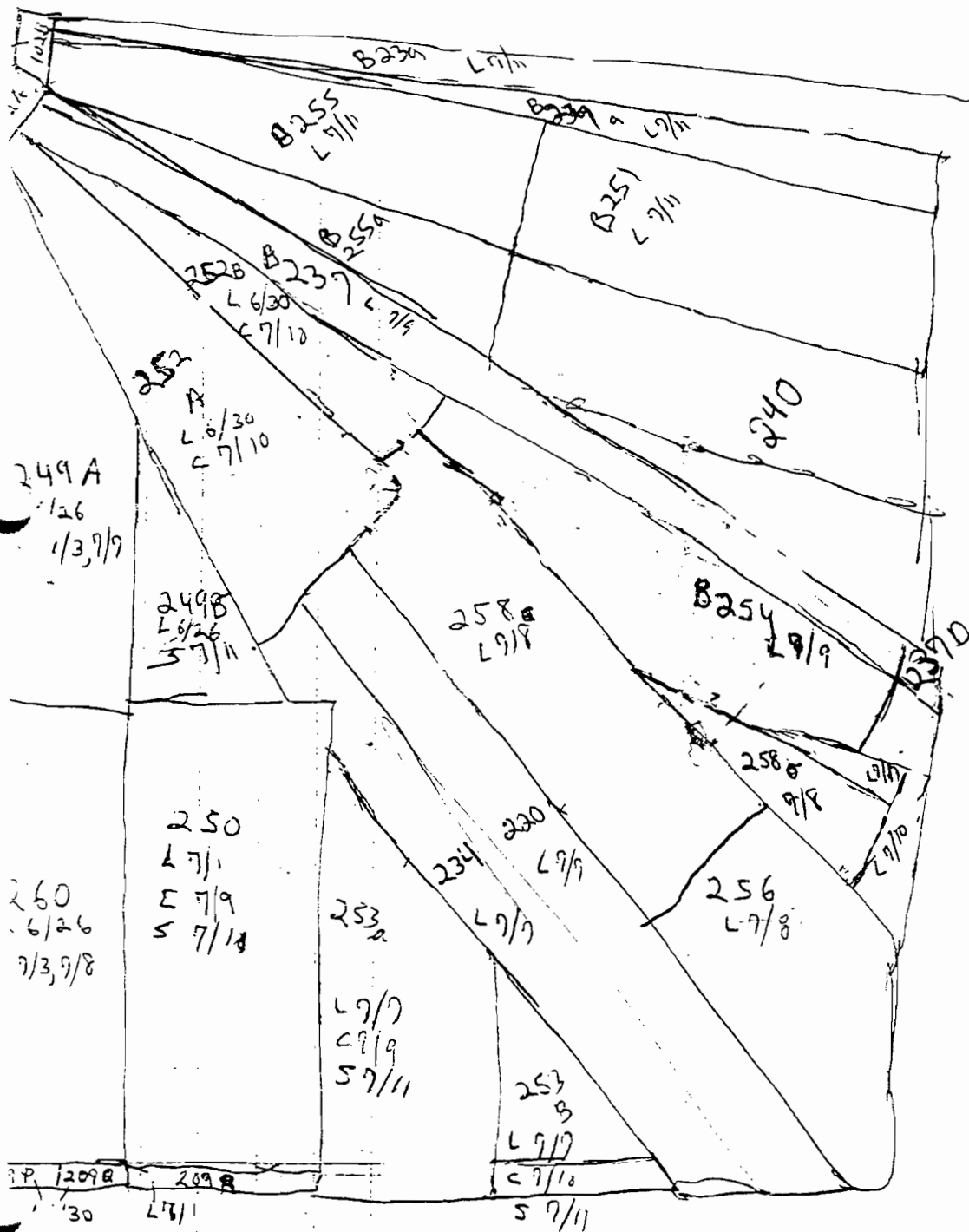
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 8, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast: AM / PM	Rain AM / PM
59 AM		91 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



2 of 3

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 9, 1999

INSPECTOR: BC

LINER TECHNICIAN: _____

WEATHER

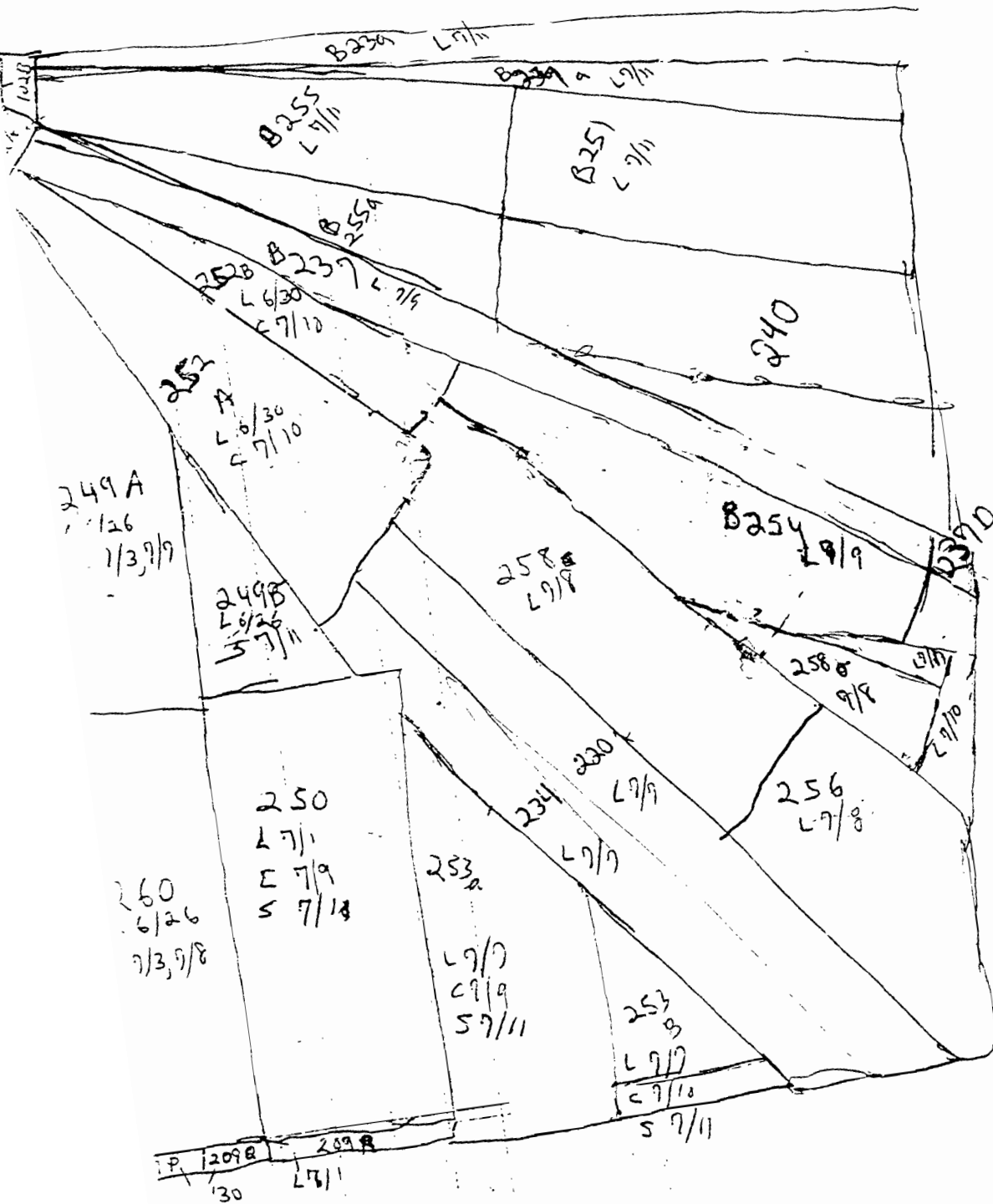
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
69 AM	91 PM		
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS/162.1
B253, B253a			216	162.1		17,506.1 sf a 91 19,455.2 sy 253 216
B234						12,325.1 sf
B220						1,367.5 sy
B258, 258a						12,965.4 sf
						1,440.6 sy
						16.7' 23.8'
						15.6' 35'
						45.45' 72'
B252a			218.1	82.6		13,942.2 sf 1,549.8 sy
						24' 252a
						82.6
TG600	13 panels and sagona					9,007.5 sf 1,000.8 sy
						MP
						324.8
						174'
						56,515.2 sf
						6,279.5 sy



1
2

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W (TH) F S

Job No: 03228-018-001-0003-00

Date: July 10, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 303

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
ptly cldy	82	61

Description of work performed and inspected

[illegible]

Remarks: Observed damage from storm of 7/9. Much coversoil damage. Little liner damage.
Area of CL il gullies 3' wide down to liner for entire length. Observed ORSC prepave subgrade for 4th tier
Observed EL cut destructs for DS 21-28. Airplane tested seams B252a/239, 239/254, 254/258, and destructs
Measured TG 600 9 panels forming triangle at NW corner

Equipment & Labor Record

[illegible]

Start/finish time: 0900, 1530

Page 1 of 4 pages

s:\clarktwn\fidforms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 10, 1997
INSPECTOR: BC
LINER TECHNICIAN: JC

WEATHER

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6:1 AM		12 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

TEMP. DEG F

WIND

HUMIDITY

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

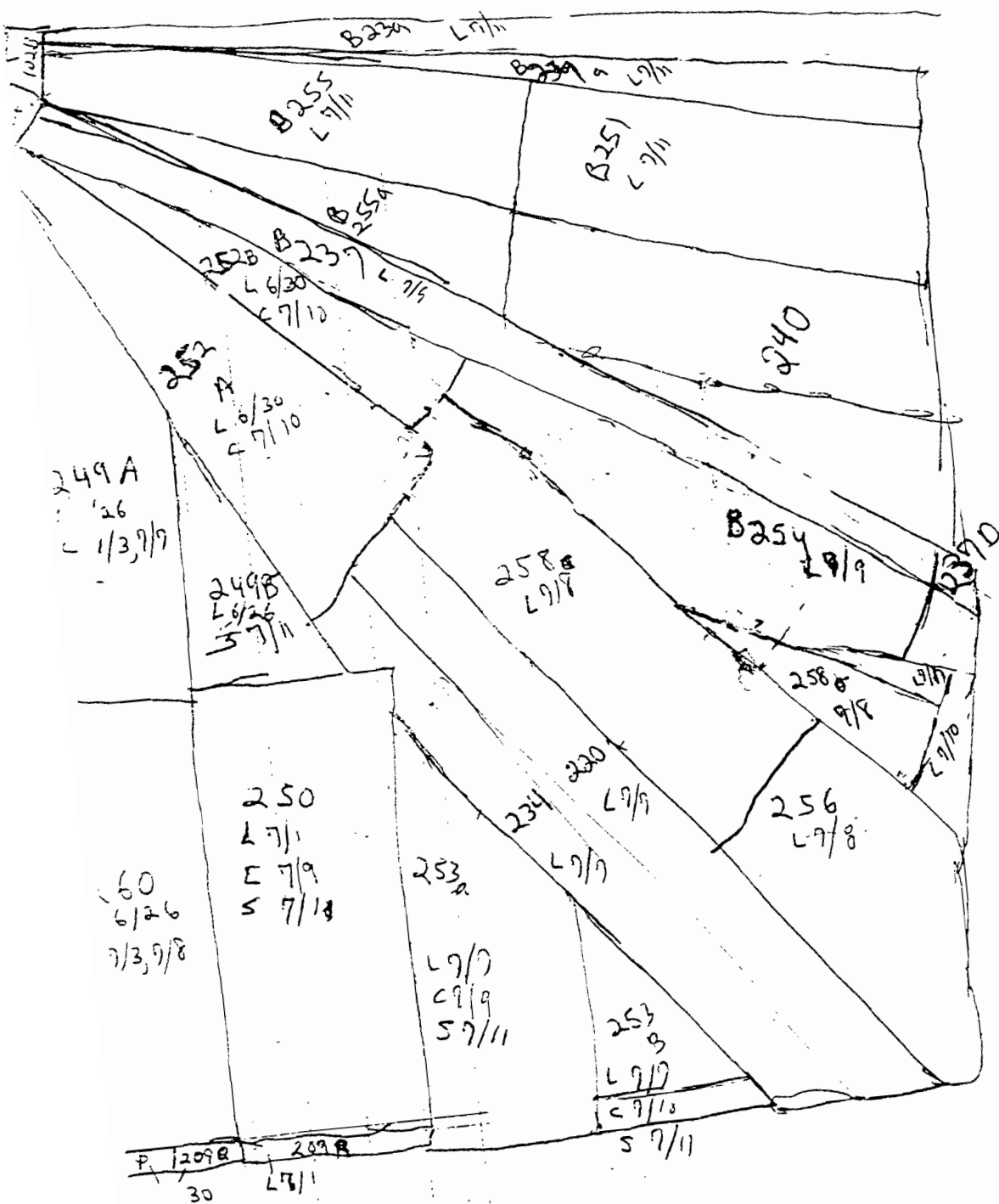
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 10, 1997
INSPECTOR: BE
LINER TECHNICIAN: SD

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6) AM		82 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



LN

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH (F) S

Job No: 03228-018-001-0003-00

Date: July 11, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 304

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
pty cldy	91	69

Description of work performed and inspected

[illegible]

Remarks: Observed EL place PVC panels B255, B251, B239, and part of B240 at Joe
intP-3. Observed EL roll out Amoco 450C (4 rolls) All fabric sewn, all PVC glued
Observed ORSC build stone & WMX terrace around C-4 and valve pit after field discussion.
Measured panels B256, B258a w/ M. Oland
Observed ORSC prepared 200' (2 acres) across slope for liner

Equipment & Labor Record

[illegible]

Start/finish time: 0700/1530

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 11, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

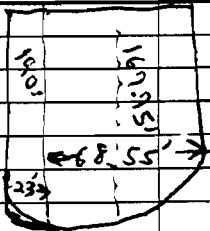
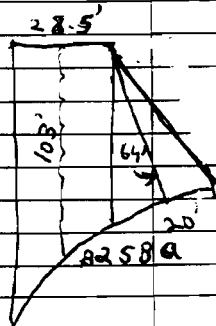
WEATHER

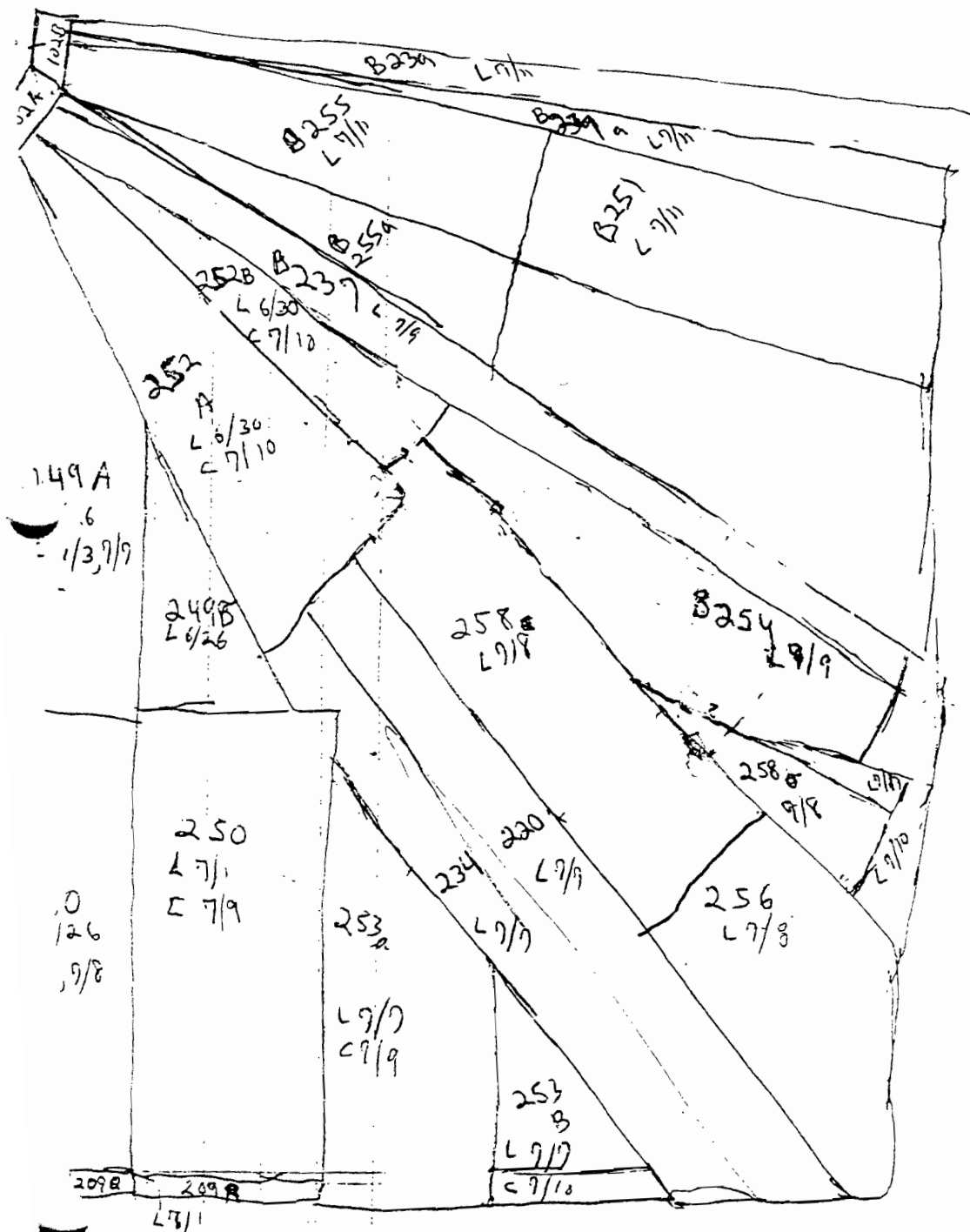
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B256		OK				15,869.3 sf 1,763.3 sf Land 7/8/99
B258a		OK				3,575.5 sf 397.3 sf Land 7/8/99
Amgeo 4506	102092920					Not measured today ↓
	102092454					
	102063424					
	102092698					



11

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 14, 1999

INSPECTOR: BC

LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
66 AM	94 PM		
SE AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B254		OK	231	81		18,911 SF. 2,079 sy
TG600	13 panels					parallelogram on NW slope
						N ← 179'
						257.5
						46,092 SF 5, 11.4 sy
TG600	9 panels		221.5	120		North slope to corner parallelogram
						120'
						221.5'
						N ←
						26,580 SF 2,953.3 sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

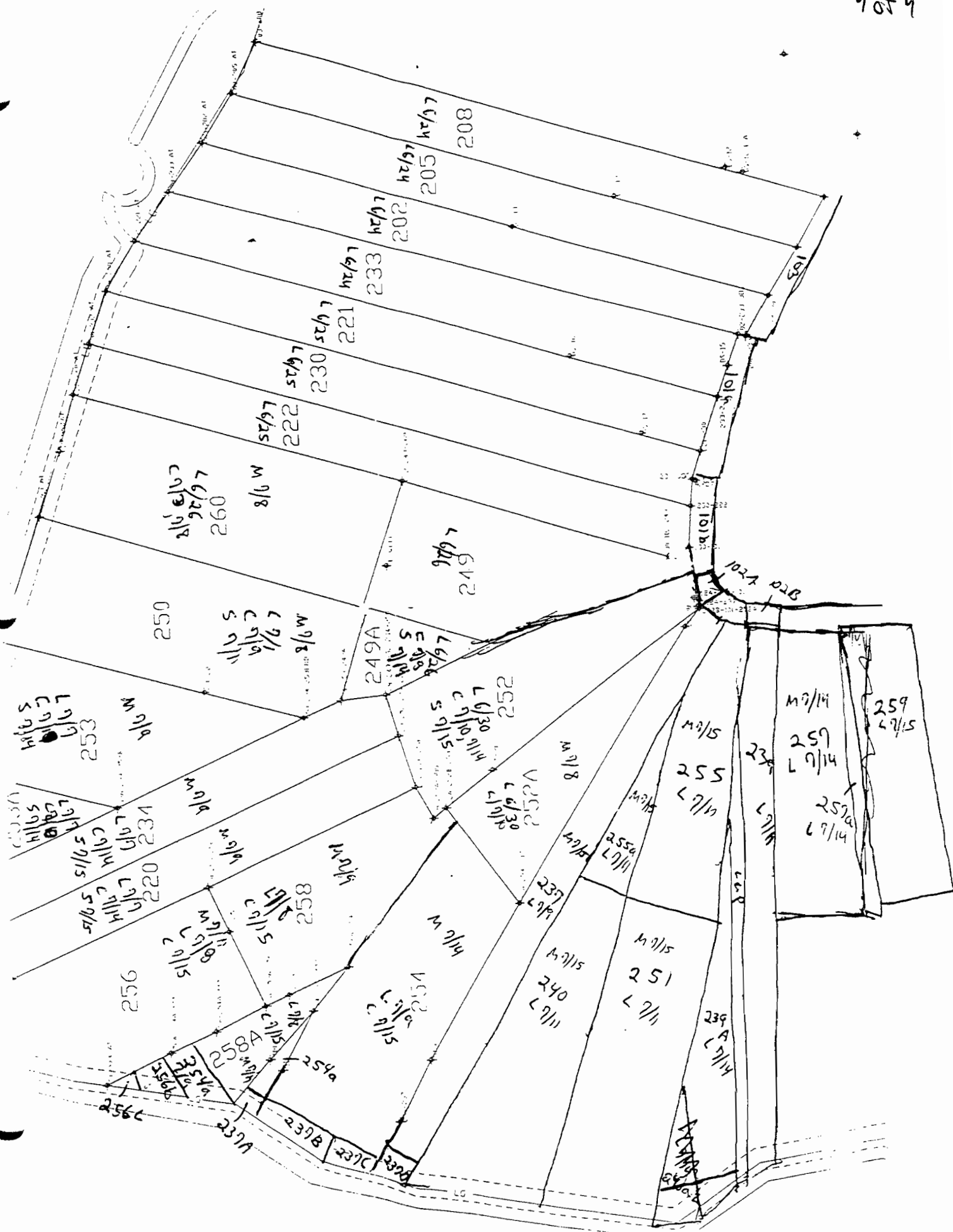
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 14, 1999
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
Still AM / PM	Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

↳ No: 03228-018-001-0003-00

Date: 7/14/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 307

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
PTLY CLOUDY	94	

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF COMPOSITE (DRAINAGE) ON LFP-3
SECTIONS B-10 & B-9

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1600

Page 1 of 3 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/14/97
INSPECTOR: Joseph L. FALCONE
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

MONITORED INSTALLATION OF DRAINAGE COMPOSITE

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: July 15, 1999

Consultant: Roy F. Weston of New York, Inc.

IDR #: 308

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
sunny, humid	99	69

Description of work performed and inspected

[illegible]

Remarks:

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 13 1999
INSPECTOR: BE
LINER TECHNICIAN: RP

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
69 AM		99 PM	
SEV AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B254a		OK				 749.35sf 83.3sy
B251 B240			187.5'	90.8'		 17,025.5sf 1,891.7sy
B237/2370			437.25	36.45		 5,440.5sf 604.5sy
B255/255a						 15,930.8sf 1,770.9sy
TG600						 39.868.5 18,659.9sf 2,073.3sy
						 26,559.75sf 2,951.1sy

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W T H F S

Date: 7/15/97

IDR #: 308

Weather

High

Low

Singh/Humad	98	69
-------------	----	----

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF DRAINAGE COMPOSITE ON LFP-3
SECTIONS B-10 & B-9

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1830

Page 1 of 3 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

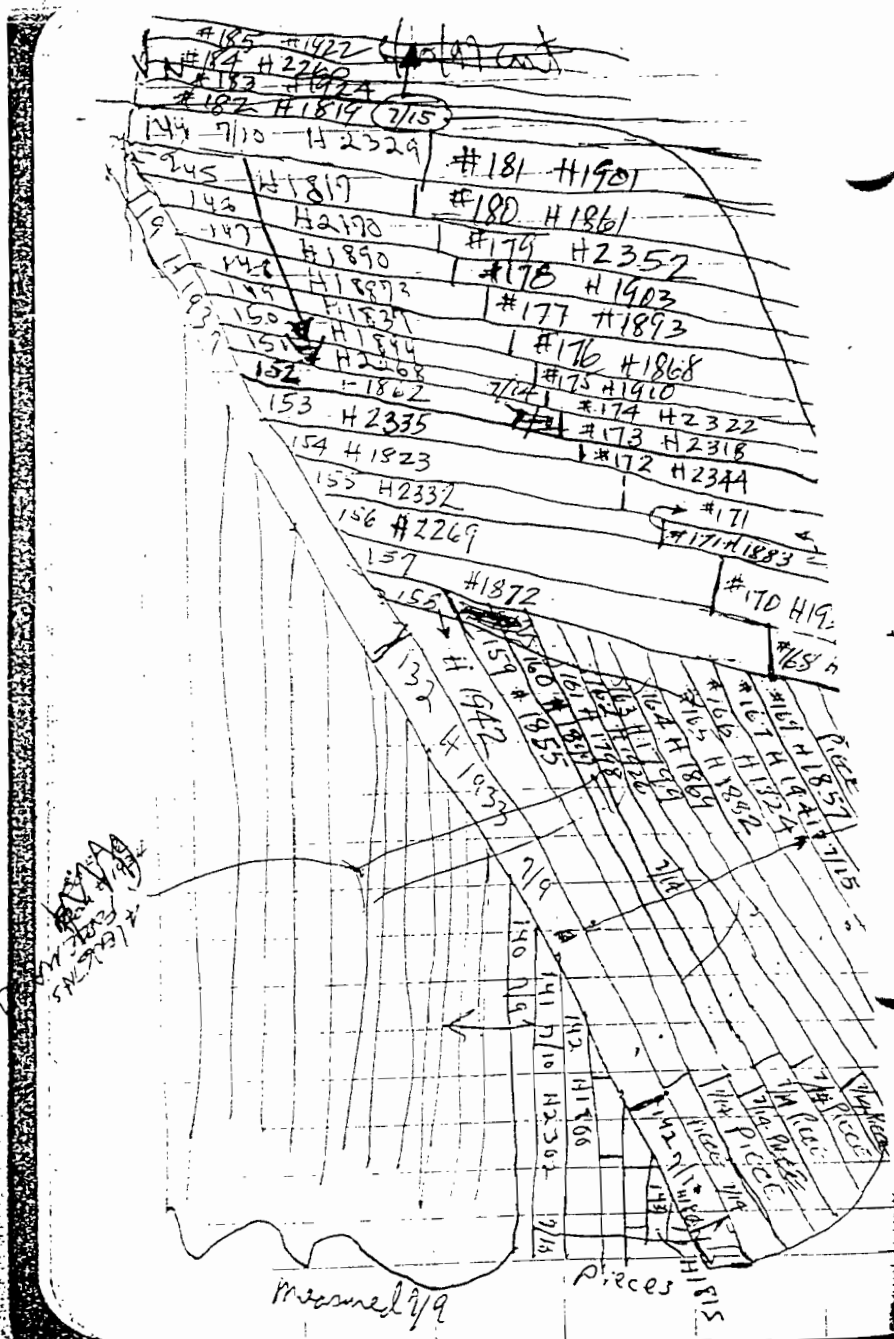
DATE: 7/15/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	<u>Sunny</u>	PM	<u>9</u>
TEMP DEG F	HI	<u>99</u>	LO	<u>69</u>
WIND	AM		PM	
PRECIPITATION	AM		PM	

[illegible]

COMMENTS: MONITORED INSTALLATION OF DRAINAGE COMPOSITE
LFP-3 - SECTIONS B10 & B-9

7/14/97
JOE FALCONE



PAGE 3 OF 3

WESTON
STUDIO CITY, CALIF. 91605

S M T (W) TH F S

Date: July 16, 1999

IDR #: 309

Weather	High	Low
ptly cldy	91	72

[illegible]

Remarks: Observed EL place PVC panels B267, B267A, B270, B270A, B261, B259, B266
Observed EL place 2 rolls of mso 4506 - stretched
Discussed + walked subgrade Area II w/ M. Diana, approved for John W. at his request
As balanced all seams from 7/15, 7/16 except 259/109

[illegible]

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 16, 1999
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

TEMP. DEG F

WIND

HUMIDITY

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 16, 1999
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
22 AM		9 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T (W) TH F S

No: 03228-018-001-0003-00

Date: 7/16/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 309

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Partly Cloudy	91	72

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF DRAINAGE COMPOSITE ON LFP-3 (17 ROLLS)
SECTIONS B-9 & B-8
~~B-12~~

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Inspector's signature
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: July 17, 91

IDR #: 310

Weather	High	Low
Fog/Clear	49	69

Description of work performed and inspected

[illegible]

Remarks: Measured panels w/ ORSC. Performed Troxler testing at 4 locations on 1st lift of Cover soil observed EL constructing drainage Flaps on north slope + west slope including PVC Flap, drainage net, and bio fabric.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 4 pages
s:\clarktw\nfidforms\idr.xls

Inspector's signature
Robert Cunningham
Inspector's name

2 of 4

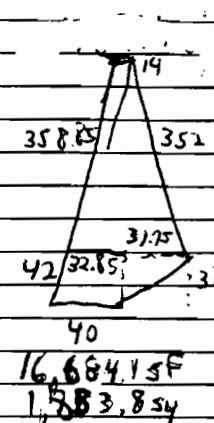
ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

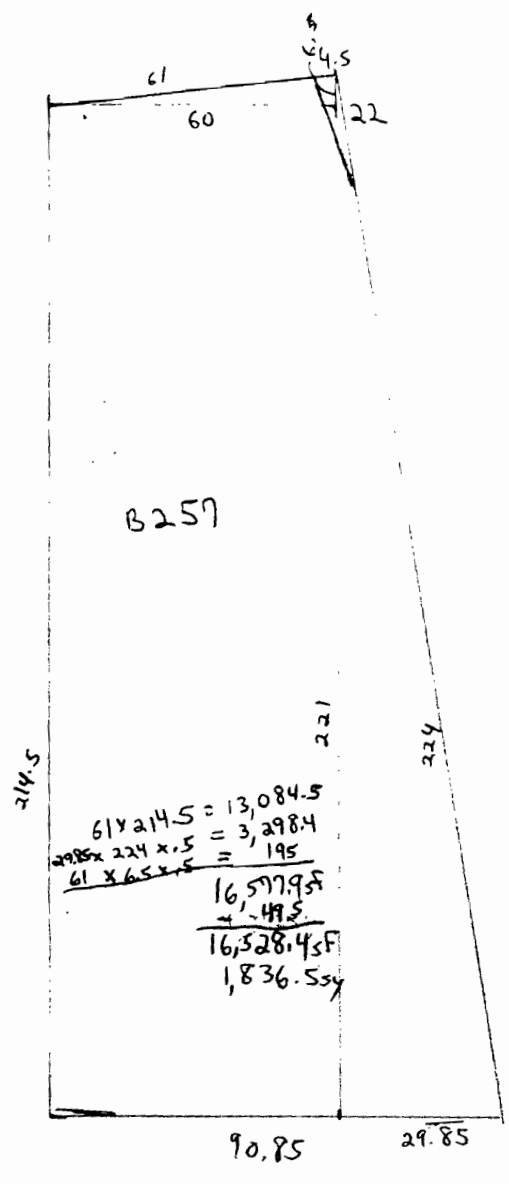
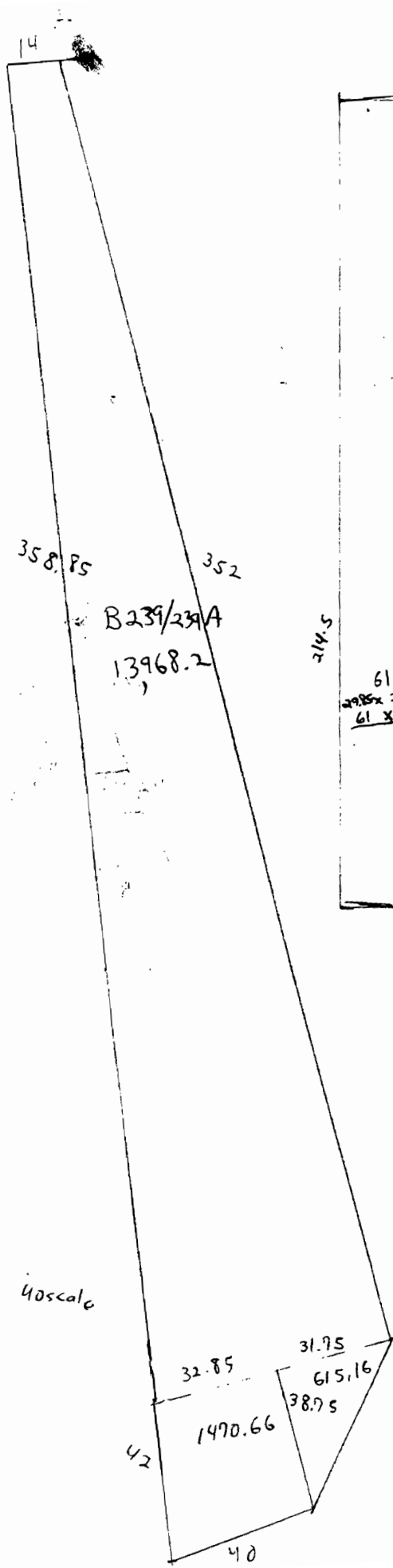
CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 17, 1997
INSPECTOR: BC
LINER TECHNICIAN: RP

WEATHER	Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
TEMP. DEG F	AM 69		99 PM	
WIND	SEMI AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
HUMIDITY	Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B239/239A						see back 
B257			267'	52.5'		16,313.95 SF see back 1,812.7 y
B257a			200	25.9		2,590.5 SF B259A 287.85 y 200 25.9
B267a			105.75	51.9		5,488.45 SF B267a 609.85 y 105.75
B270						6,252.75 SF B270 694.75 y 125.75
B259			217.5	90.1		19,596.85 SF 2,177.45 y 49.6
			144.35	53.5		7,560.75 SF B270A 840.15 y 144.35 B267B 53.5



39.3

40.375
36.425

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 7/17/97
INSPECTOR: BL
LINER TECHNICIAN:

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	69		PM 99
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

WESTON

S M T W TH F S

Date: 7/17/97

IDR #: 310

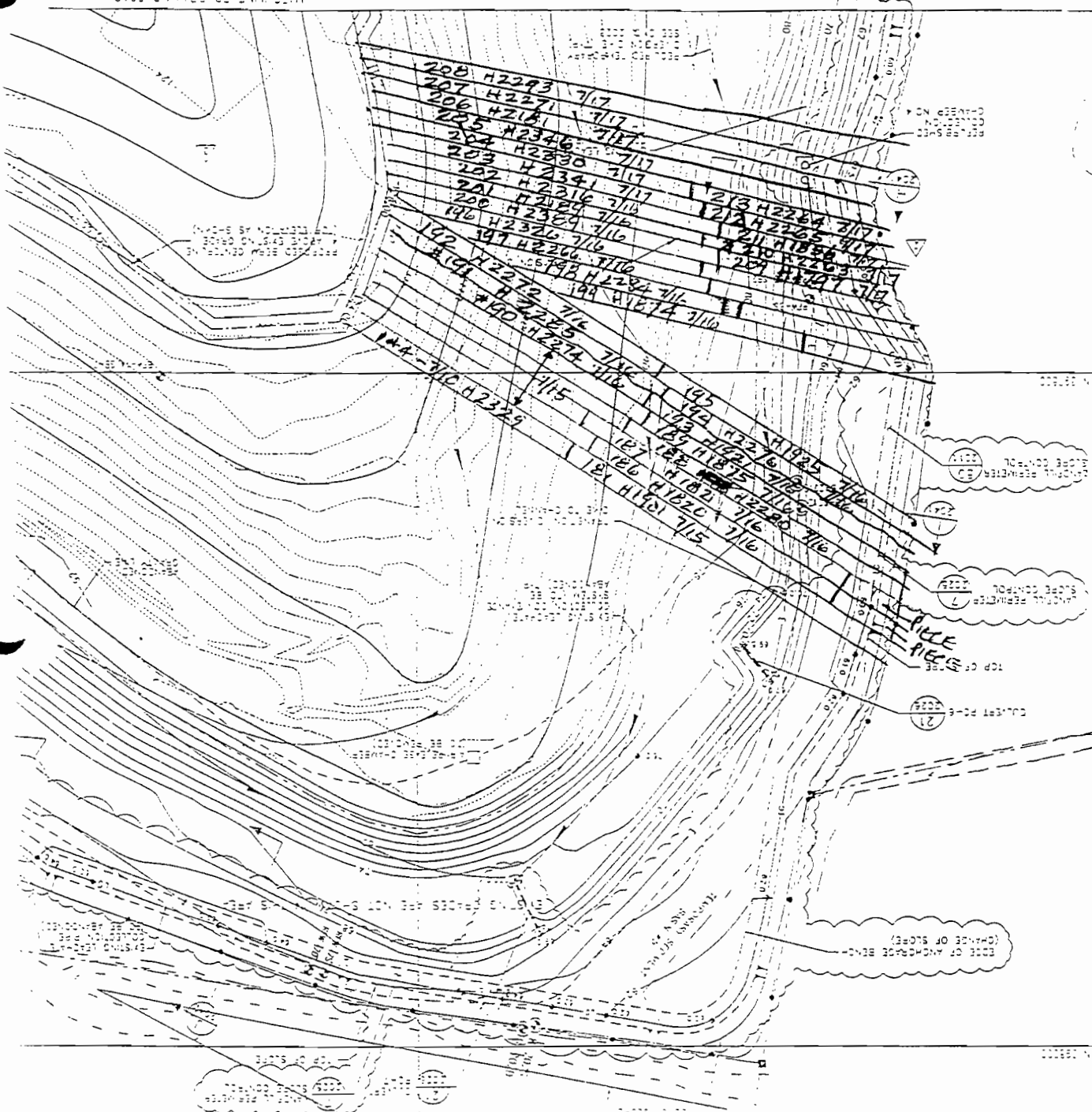
Weather	High	Low
CLR/CLR	99	69

[illegible]

Remarks: OBSERVED PLACEMENT OF DRAINAGE COMPOSITE ON LFP-3 (11 Polls)
SECTIONS B-8 & B-9
OBSERVED PLACEMENT OF RAIN CAP ON TOP SECTIONS B-7 B-8 & B-9
OBSERVED PLACEMENT OF RAIN CAP ON LOWER LEVEL SECTION B-9

[illegible]

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: July 18, 1997

IDR #: 311

Weather	High	Low
clear/ptly cldy	96	71

Description of work performed and inspected

[illegible]

Remarks: Observed EL roll out & stitch 4 rolls Amoco 4506. Approved subgrade on behalf of J. Wood/ly (NIA)
Observed air lance of seams and boots. Measured geo composite w/ M. Diano
Observed EL cut destructs DS 33, 34, 35

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 5 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Inspector's name

2 of 6

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: July 18, 1999

INSPECTOR: BC

LINER TECHNICIAN:

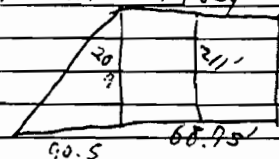
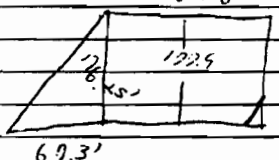
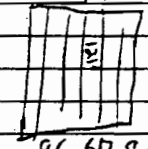
WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 91		96 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
Flap PVC			104.5	12.75		1,332.45F 148.5y Flap at NW corner LFP3 on west slope
Flap T600			104.5	12.75		1,332.45F 148.5y 
T600						23,963.65F 2,662.65y 82.6'
						
T600	6 panels		121	79.9		19,820.15F 2,202.25y 79.4'
						
						96 67.95F 1,074.25y
Amaco 456 4 rolls						
	102090723					
	102093096					
	102092616					
	102092594					

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

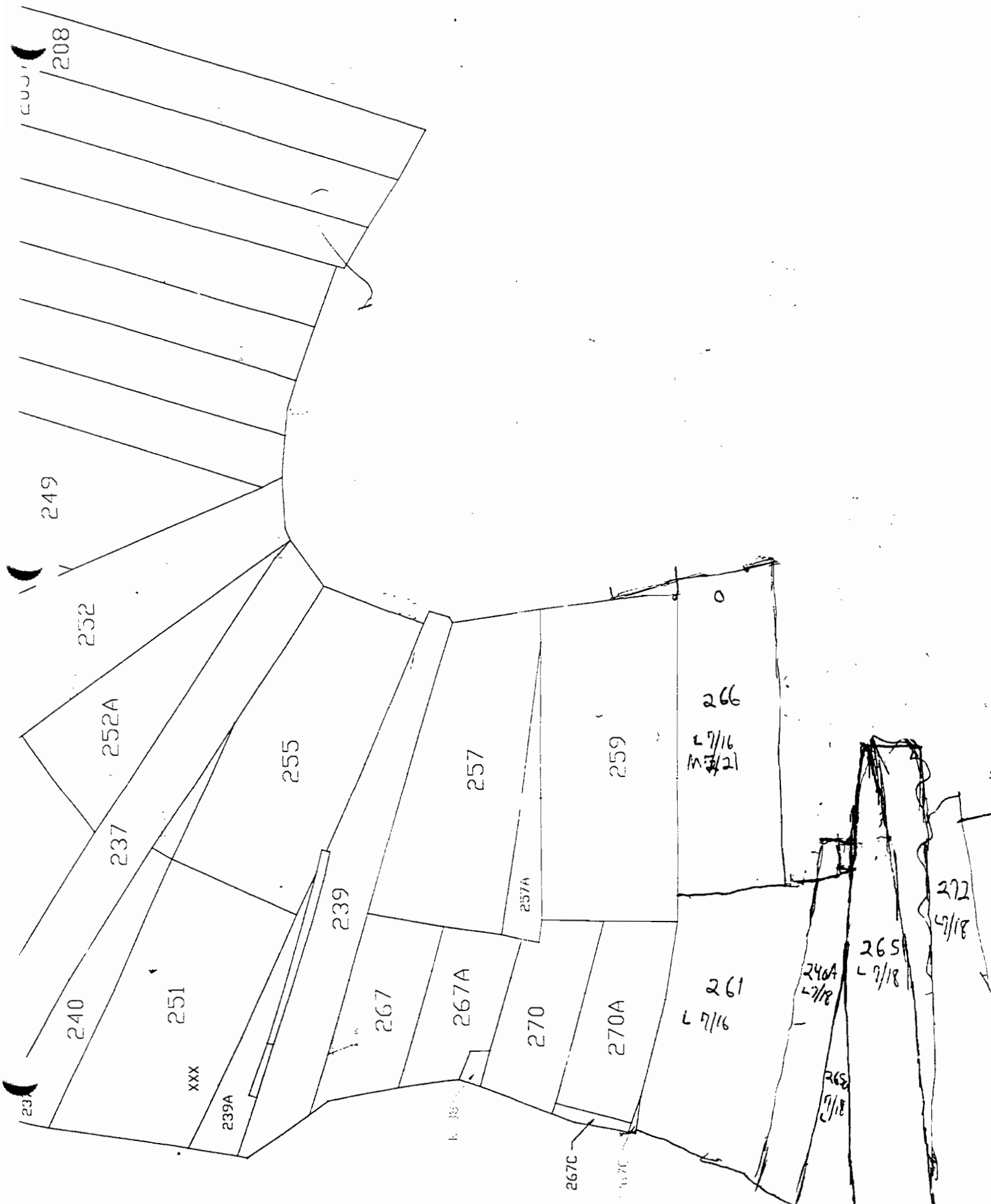
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 18, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	R. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 11		96 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH (F) S

No: 03228-018-001-0003-00

Date: 7/18/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 311

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / PRTLY CLDY	96	71

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 6 PANELS OF DRAINAGE COMPOSITES ON LFB-3
SECTIONS B-8 & B-9
ALSO OBSERVED PLACEMENT OF RAINCAP ON UPPER SECTIONS - TOP SECTION - 602
GEO TEXTILE & DRAINAGE NET BEFORE PLACEMENT OF SOIL ON TOP OF SLOPE

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1600

page 1 of 3 pages
 \\clarktw\vidforms\ldr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 1/12/97
INSPECTOR: Joseph L. FALCONE
LINER TECHNICIAN:

WEATHER	AM	PM
TEMP DEG F	HI <u>96</u>	LO <u>71</u>
WIND	AM	PM
PRECIPITATION	AM	PM

[illegible]

COMMENTS: OBSERVED PLACEMENT OF DRAINAGE COMPOSITE
ON LFP-3 SECTIONS B-8 & B-9



7/18/97
JOE FALCONE
PAGE 3 OF 3

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: July 21, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 314

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
ptly cldy / cldy	86	63

Description of work performed and inspected

[illegible]

Remarks: Performed 4 density tests on LFP3 core soil (1st lift) near GE 40 (North + west)
Took density tests w/ BL on screened service for slurry wall meeting. (6 tests)
Observed EL pullout panels B110, B280, B270A, B267A, B268
Measured PVC panels + TG 600 composite w/M. Diana.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 4 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

2 of 4

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: July 21, 1999

INSPECTOR: BZ

LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

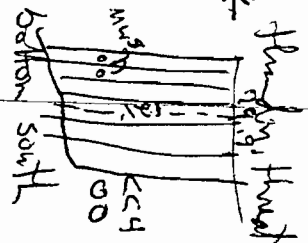
Clear AM / PM	<u>F. Cloudy</u> AM / PM	<u>Overcast</u> AM / PM	Rain evening AM / PM
63 AM			PM 86
SEMI AM / PM	<u>L. Breeze</u> AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	<u>Humid</u> AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B266			200.9	52.6	P	10,567.35F 1,174.5y
B261						10,567.35F 1,174.5y
B240A			190.65	36.35		15,909.55F 1,762.75y
B265A			131	54.65		6,930.15F 770.5y
						3,579.65F 397.75y
B272A			58.7	18.2		534.25F 59.45y
B272B			57.8	20.2	138.5	3,852.95F 428.15y
					146.5	3,852.95F 428.15y
B265						18,198.5F 1,133.15y
						29.9 140.3
						54.2 22.7
						14.2 34.8
TG600	4 panels to stage break		266	52		13,832.5F 1,536.95y
TG600	4x2 panels		338.4	54		18,273.65F 2,030.45y
B269			218.8			11,673.5F 1,297.5y

4/5

1330-1415 get about 100 ft in hanging, thrust

6 panels
79.9 x 121'



- All compounds measured top to bottom south
of CC #4 valve pit
America rolls used today 102090223, 102093092
102092616, 102092594

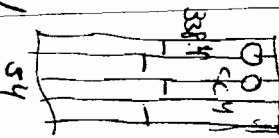
7/21/99 pth/clay 60°
0645 B & P - 20°
0710 trails meeting - down not here
& will go in to north side
0720 Bruce + I to strongly favorable side
to get beds in lower meeting in 1500' down
#1 Woodstock Sandstone - 120
WC OD 07 Br. 07.11
#1 119.7 113.8 94.8 5.2 W
#2 115.6 108.8 90.6 6.3 W
#3 104.0 97.1 80.9 7.1 W
#4 100.5 96.2 80.1 4.5 W
#5 118.6 111.9 93.2 6.1 W
#6 128.4 122.4 102 4.9 W side

Electing

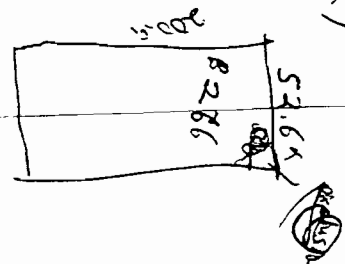
7/21/99 int'

0800 on line 0105C pushing up center or W slope
100' in line and get compounds, lying with panel

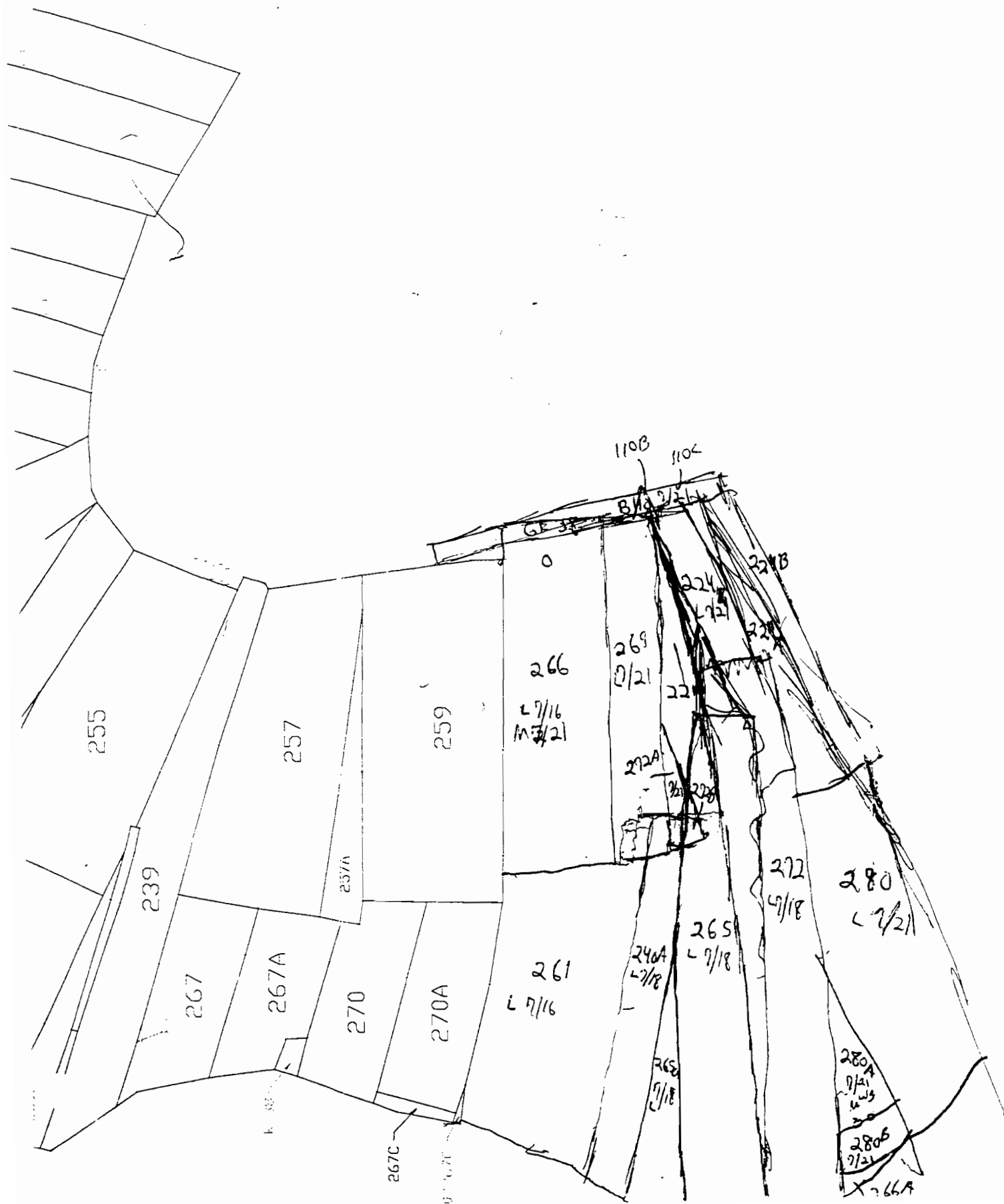
- At top 085C can come to 20' N of GE3F
A + bottom
0845 measuring TG 600 4 panel with 2 high
54' x 338' 4



Core 180' density test 15 x 147
#1 50' west of 180' North of GE410
127.9 119.0 99.1 7.6
#2 31.3 118.7 98.9 10.6
55' west of GE40 x 35' south
#3 70' x 40' west of GE40 11.0
123' 111.2 92.6
#4 100' x 75' W 129.4 118.0 98.3 9.7
1005 measuring PVC w/ 110
BQ 66 52.6' x 200.7'



Electing



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 7/21/97

IDR #: 314

Weather

High

Low

803

63

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 9 PANELS DRAINAGE COMPOSITES ON LFP-3
SECTIONS B-8 & B-9
ALSO OBSERVED PLACEMENT OF 6 OZ GEOTEXTILE & GEOWEBBANE

Equipment & Labor Record

[illegible]

Start/finish time: 0700 1/600

Page 1 of 4 pages

\\clarktwm\fidforms\ldr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 2/21/97
INSPECTOR: Joseph L. Falco
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F
WIND

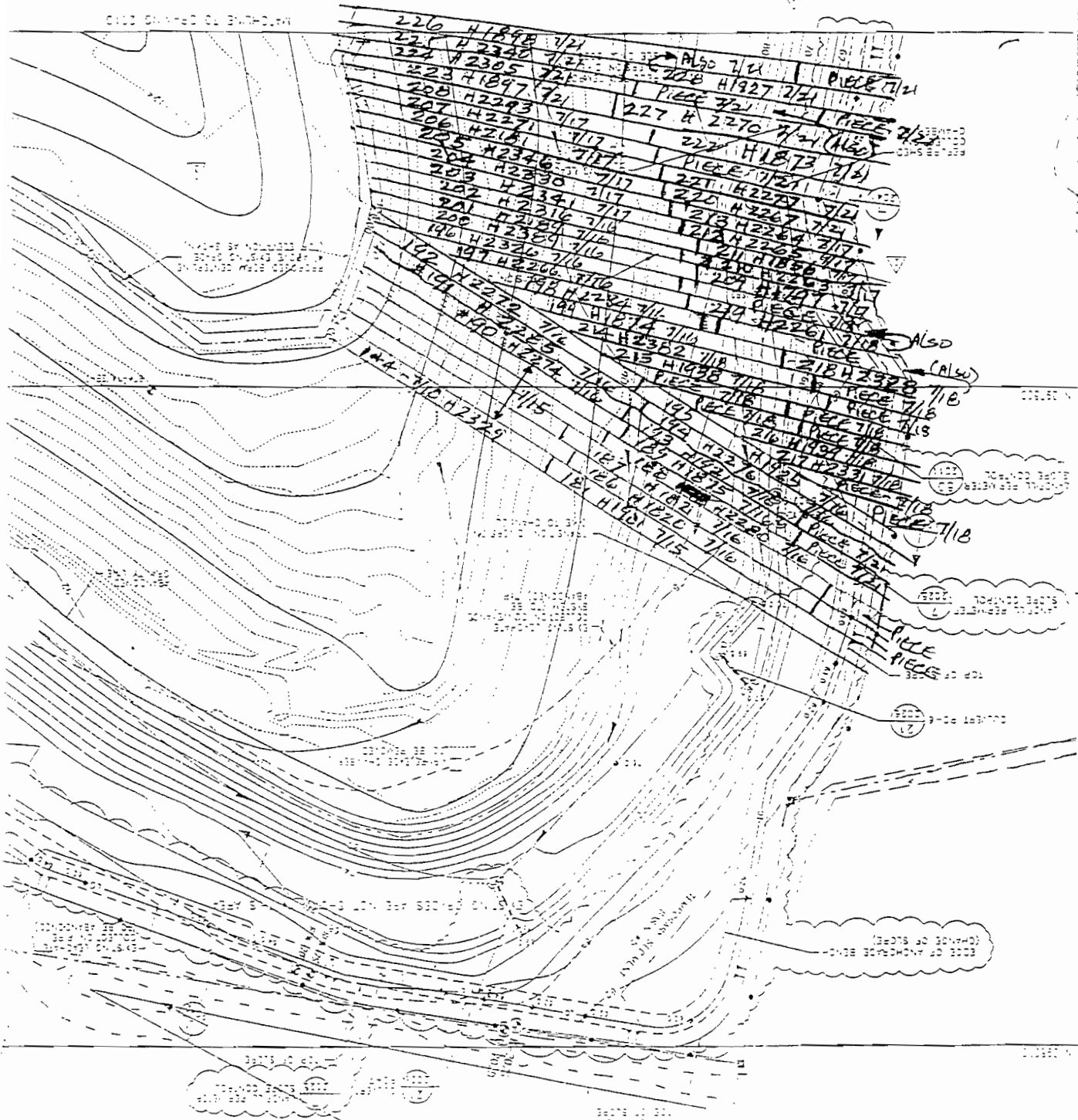
HUMIDITY

Clear AM / PM	<u>Cloudy</u> AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPW) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

PAGE 4 of 4

7/21/97 Joe Falcove



PAGE 4 of 4

7/21/97 Joe Falcove

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: July 22, 1999

INSPECTOR: BC

LINER TECHNICIAN: J D

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
61 AM	83 PM		
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B224		OK				See following page for calc 4,873.02 sf 541.4
B224A			126.5	43.8		272.65F 303.95y
B224B			177.5	37.4		6,224.35F 691.65y
B272			238.6	52.9		12,621.95F 1,402.45y
B280						14,106.45F 1,567.45y
B280A, B280B			133.3	41.6		2,772.65F 308.15y
TG600	4 panels		95.9	52.85		5,068.35F 563.15y
TG600						71,923.85F 7991.55y

1/22/97 amt'

3 of 5

EL is opening up near 239/267 to reg 42 exclusion
1125 measuring PVC w/MD

$$224 (37.3 \times 74.9) + (37.3 \times 119.5 \times \frac{1}{2}) - \\ (4.3 \times 14.5 \times \frac{1}{2}) + (4.3 \times 55 \times \frac{1}{2}) =$$

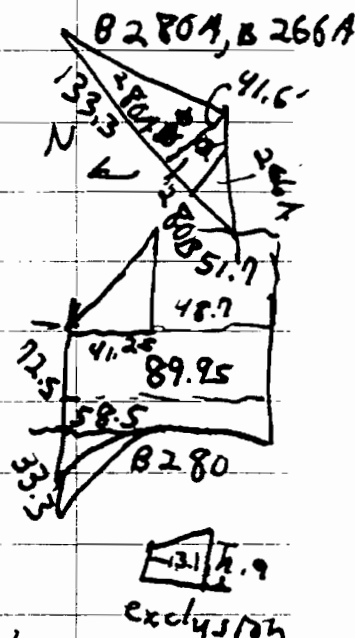
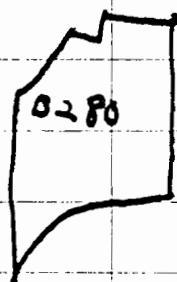
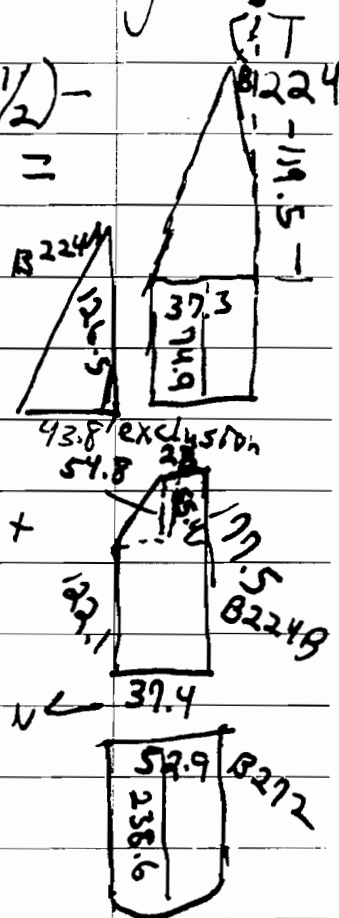
$$3224A (126.5 \times 43.8 \times \frac{1}{2}) - \\ (5.8 \times 15.3 \times \frac{1}{2}) =$$

$$B224B (37.4 \times 122.1) + (55.4 \times 23) + \\ (54.8 \times 14 \times \frac{1}{2}) =$$

$$B272 (52.9 \times 238.6)$$

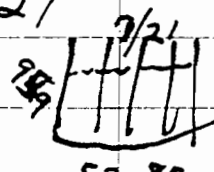
$$B280A/B/266A \\ (133.3 \times 41.6 \times \frac{1}{2})$$

$$B280 (89.95 \times 72.5) + \\ + (58.5 \times 33.3 \times \frac{1}{2}) + \\ (41.25 \times 95.65 \times \frac{1}{2}) + \\ (95.5 \times 50.2) - \\ (13.1 \times 11.9) =$$



TG600 4, parab to bottom from 7/21
(52.85 x 95.9')

Rh.t (in 1)



405

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 22, 1999
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	<u>Cloudy</u> AM / PM	Overcast AM / PM	Rain AM / PM
AM 6:1		8:3 PM	
Still AM / PM	<u>L. Breeze</u> AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
<u>Dry</u> AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
B 109/110	<u>same</u>	<u>80</u>	<u>20'</u>	<u>pass w/ minor imperfections</u>
B 110/259			<u>90'</u>	
B 110/266			<u>50'</u>	
110/269			<u>50'</u>	
266/269			<u>210'</u>	
269/261			<u>30'</u>	
269/240A			<u>20'</u>	
240A/272B			<u>25'</u>	
272B/269			<u>70'</u>	
272B/265			<u>55'</u>	
224/224B			<u>140'</u>	
269/224			<u>100'</u>	
110/224B			<u>30'</u>	
224A/224B			<u>60'</u>	
224A/224			<u>35'</u>	
224/265			<u>15'</u>	
224/272			<u>40'</u>	
265/224			<u>10'</u>	
265/272			<u>220'</u>	
272/224A			<u>25'</u>	
280/272			<u>65'</u>	
280/280A			<u>85'</u>	
272/280A			<u>60'</u>	
280A/280B			<u>35'</u>	
268/280			<u>190'</u>	
276/224B			<u>220'</u>	
276/288			<u>50'</u>	

A hand-drawn map of a property, likely a farm or estate, with various areas labeled with dates and numbers. The map is oriented with a north arrow pointing towards the top right. The property is divided into several sections by dashed lines, representing boundaries or roads. The labels are as follows:

- Top Left:** A large rectangular area labeled "7/15".
- Bottom Left:** A small rectangular area labeled "7/15".
- Left Side:** A vertical strip labeled "7/15" and "7/16".
- Center:** A large rectangular area labeled "7/15" and "7/16".
- Right Side:** A large rectangular area labeled "7/15" and "7/16".
- Bottom Right:** A small rectangular area labeled "7/15" and "7/16".
- Far Right:** A small rectangular area labeled "7/15" and "7/16".
- Other Labels:** "255A", "255B", "255C", "255D", "255E", "255F", "255G", "255H", "255I", "255J", "255K", "255L", "255M", "255N", "255O", "255P", "255Q", "255R", "255S", "255T", "255U", "255V", "255W", "255X", "255Y", "255Z", "255AA", "255AB", "255AC", "255AD", "255AE", "255AF", "255AG", "255AH", "255AI", "255AJ", "255AK", "255AL", "255AM", "255AN", "255AO", "255AP", "255AQ", "255AR", "255AS", "255AT", "255AU", "255AV", "255AW", "255AX", "255AY", "255AZ", "255BA", "255BB", "255BC", "255BD", "255BE", "255BF", "255BG", "255BH", "255BI", "255BJ", "255BK", "255BL", "255BM", "255BN", "255BO", "255BP", "255BQ", "255BR", "255BS", "255BT", "255BU", "255BV", "255BW", "255BX", "255BY", "255BZ", "255CA", "255CB", "255CC", "255CD", "255CE", "255CF", "255CG", "255CH", "255CI", "255CJ", "255CK", "255CL", "255CM", "255CN", "255CO", "255CP", "255CQ", "255CR", "255CS", "255CT", "255CU", "255CV", "255CW", "255CX", "255CY", "255CZ", "255DA", "255DB", "255DC", "255DD", "255DE", "255DF", "255DG", "255DH", "255DI", "255DJ", "255DK", "255DL", "255DM", "255DN", "255DO", "255DP", "255DQ", "255DR", "255DS", "255DT", "255DU", "255DV", "255DW", "255DX", "255DY", "255DZ", "255EA", "255EB", "255EC", "255ED", "255EE", "255EF", "255EG", "255EH", "255EI", "255EJ", "255EK", "255EL", "255EM", "255EN", "255EO", "255EP", "255EQ", "255ER", "255ES", "255ET", "255EU", "255EV", "255EW", "255EX", "255EY", "255EZ", "255FA", "255FB", "255FC", "255FD", "255FE", "255FF", "255FG", "255FH", "255FI", "255FJ", "255FK", "255FL", "255FM", "255FN", "255FO", "255FP", "255FQ", "255FR", "255FS", "255FT", "255FU", "255FV", "255FW", "255FX", "255FY", "255FZ", "255GA", "255GB", "255GC", "255GD", "255GE", "255GF", "255GG", "255GH", "255GI", "255GJ", "255GK", "255GL", "255GM", "255GN", "255GO", "255GP", "255GQ", "255GR", "255GS", "255GT", "255GU", "255GV", "255GW", "255GX", "255GY", "255GZ", "255HA", "255HB", "255HC", "255HD", "255HE", "255HF", "255HG", "255HH", "255HI", "255HJ", "255HK", "255HL", "255HM", "255HN", "255HO", "255HP", "255HQ", "255HR", "255HS", "255HT", "255HU", "255HV", "255HW", "255HX", "255HY", "255HZ", "255IA", "255IB", "255IC", "255ID", "255IE", "255IF", "255IG", "255IH", "255II", "255IJ", "255IK", "255IL", "255IM", "255IN", "255IO", "255IP", "255IQ", "255IR", "255IS", "255IT", "255IU", "255IV", "255IW", "255IX", "255IY", "255IZ", "255JA", "255JB", "255JC", "255JD", "255JE", "255JF", "255JG", "255JH", "255JI", "255JJ", "255JK", "255JL", "255JM", "255JN", "255JO", "255JP", "255JQ", "255JR", "255JS", "255JT", "255JU", "255JV", "255JW", "255JX", "255JY", "255JZ", "255KA", "255KB", "255KC", "255KD", "255KE", "255KF", "255KG", "255KH", "255KI", "255KJ", "255KK", "255KL", "255KM", "255KN", "255KO", "255KP", "255KQ", "255KR", "255KS", "255KT", "255KU", "255KV", "255KW", "255KX", "255KY", "255KZ", "255LA", "255LB", "255LC", "255LD", "255LE", "255LF", "255LG", "255LH", "255LI", "255LJ", "255LK", "255LL", "255LM", "255LN", "255LO", "255LP", "255LQ", "255LR", "255LS", "255LT", "255LU", "255LV", "255LW", "255LX", "255LY", "255LZ", "255MA", "255MB", "255MC", "255MD", "255ME", "255MF", "255MG", "255MH", "255MI", "255MJ", "255MK", "255ML", "255MN", "255MO", "255MP", "255MQ", "255MR", "255MS", "255MT", "255MU", "255MV", "255MW", "255MX", "255MY", "255MZ", "255NA", "255NB", "255NC", "255ND", "255NE", "255NF", "255NG", "255NH", "255NI", "255NJ", "255NK", "255NL", "255NM", "255NN", "255NO", "255NP", "255NQ", "255NR", "255NS", "255NT", "255NU", "255NV", "255NW", "255NX", "255NY", "255NZ", "255OA", "255OB", "255OC", "255OD", "255OE", "255OF", "255OG", "255OH", "255OI", "255OJ", "255OK", "255OL", "255OM", "255ON", "255OO", "255OP", "255OQ", "255OR", "255OS", "255OT", "255OU", "255OV", "255OW", "255OX", "255OY", "255OZ", "255PA", "255PB", "255PC", "255PD", "255PE", "255PF", "255PG", "255PH", "255PI", "255PJ", "255PK", "255PL", "255PM", "255PN", "255PO", "255PP", "255PQ", "255PR", "255PS", "255PT", "255PU", "255PV", "255PW", "255PX", "255PY", "255PZ", "255QA", "255QB", "255QC", "255QD", "255QE", "255QF", "255QG", "255QH", "255QI", "255QJ", "255QK", "255QL", "255QM", "255QN", "255QO", "255QP", "255QQ", "255QR", "255QS", "255QT", "255QU", "255QV", "255QW", "255QX", "255QY", "255QZ", "255RA", "255RB", "255RC", "255RD", "255RE", "255RF", "255RG", "255RH", "255RI", "255RJ", "255RK", "255RL", "255RM", "255RN", "255RO", "255RP", "255RQ", "255RR", "255RS", "255RT", "255RU", "255RV", "255RW", "255RX", "255RY", "255RZ", "255SA", "255SB", "255SC", "255SD", "255SE", "255SF", "255SG", "255SH", "255SI", "255SJ", "255SK", "255SL", "255SM", "255SN", "255SO", "255SP", "255SQ", "255SR", "255SS", "255ST", "255SU", "255SV", "255SW", "255SX", "255SY", "255SZ", "255TA", "255TB", "255TC", "255TD", "255TE", "255TF", "255TG", "255TH", "255TI", "255TJ", "255TK", "255TL", "255TM", "255TN", "255TO", "255TP", "255TQ", "255TR", "255TS", "255TT", "255TU", "255TV", "255TW", "255TX", "255TY", "255TZ", "255UA", "255UB", "255UC", "255UD", "255UE", "255UF", "255UG", "255UH", "255UI", "255UJ", "255UK", "255UL", "255UM", "255UN", "255UO", "255UP", "255UQ", "255UR", "255US", "255UT", "255UU", "255UV", "255UW", "255UX", "255UY", "255UZ", "255VA", "255VB", "255VC", "255VD", "255VE", "255VF", "255VG", "255VH", "255VI", "255VJ", "255VK", "255VL", "255VM", "255VN", "255VO", "255VP", "255VQ", "255VR", "255VS", "255VT", "255VU", "255VV", "255VW", "255VX", "255VY", "255VZ", "255WA", "255WB", "255WC", "255WD", "255WE", "255WF", "255WG", "255WH", "255WI", "255WJ", "255WK", "255WL", "255WM", "255WN", "255WO", "255WP", "255WQ", "255WR", "255WS", "255WT", "255WU", "255WV", "255WW", "255

WESTON
ESTABLISHED 1904

S M T W TH F S

Date: 7/22/97

IDR #: 315

Weather	High	Low
CLDY / SUNNY	83	61

[illegible]

Remarks: MONITORED PLACEMENT OF 30 PANELS OF DRAINAGE COMPOSITE & AIR LANCE
TESTS LFP-3 ON SECTION B-7

[illegible]

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/22/97
INSPECTOR: JOSEPH L FALCONE
LINER TECHNICIAN: _____

WEATHER CLDY/SUNNY
TEMP DEG F AM _____ PM _____
HI 83 LO 61
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H1871				NOT MEASURED
H 2297				
H 2321				
H 2355				
H 2309				
H 2358				
H 2339				
H1892				
H 2314				
H 2345				
H 2312				
H 2188				
H 2388				
H1895				
H 2359				
H1912				
H 2315				
H 2392				
H 2320				
H 2384				
H 2178				
H 2383				
H 2362				
H 2308				
H 2291				
H 2317				
H 1896				
H 2391				

H1870
COMMENTS: H1853

MONITORED PLACEMENT OF 30 PANELS OF DRAINAGE COMPOSITE
ON LFP-3 - SECTIONS B-7

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T **W** TH F S

Job No: 03228-018-001-0003-00

Date: July 23, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 316

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
ptly cldy / cldy	83	63

Description of work performed and inspected

[illegible]

Remarks: Observed EL pull PVC panels B223, B279, B275, B277 and B223A. Most seams were hot welded except 223/275. Observed EL rolling out Amoco 4506. Walked subgrade w/ J.W. for approval. Observed EL prepare for expected storm. Air-lanced failed seam 239/261 after reconstruction. Observed EL put Flap on toe of liner (602).

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 2 pages

s:\clarktw\fidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: July 23, 1997
INSPECTOR: B/C
LINER TECHNICIAN: JD

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
63 AM		83 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Remarks: OBSERVED PLACEMENT OF 12 PANELS OF DRAINAGE COMPOSITE ON LFP-3
SECTIONS A-6, A-7, B-6, B-7 & C-7. ALSO OBSERVED PLACEMENT OF
7 PANELS OF 6 OZ. GEOTEXTILE

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/23/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER
TEMP DEG F HI 83 LO 63
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

CLDY / RPTLY CLDY

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H 2357	(DRAINAGE Composite)			NOT MEASURED
H 1923				
H 1911				
H 2363				
H 2393				
H 2319				
H 2169				
H 2360				
H 2386				
H 2273				
H 2313				
H 2327				
102092523	(6 oz. GEOTEXTILE)			NOT MEASURED
102090857				
102090686				
102009468				
102091867				
102090771				
102063709				

OBSERVED
COMMENTS: PLACEMENT OF 12 PANELS OF DRAINAGE Composite on LRP-3
SECTIONS A-6, A-7, B-6, B-7, C-7 - ALSO OBSERVED PLACEMENT OF
7 PANELS OF 6 oz. GEOTEXTILE

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: July 24, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 317

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
rain/rain	61	59

Description of work performed and inspected

[illegible]

Remarks: Spent most of day on paper-work. Walked site in AM. EL not working
490 E digging gas pipe trench on North slope. Gravel cleaning silt fences
Measured TG 600 and PVC panels w/ M. Diana.

Equipment & Labor Record

[illegible]

Start/finish time: 09:00, 15:30

Page 1 of 2 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

WESTON

S M T W TH F S

Date: 7/27/97

IDR #: 317

Weather	High	Low
RAINY/RAIN	61	59

[illegible]

Remarks: NO LINER WORK DONE TODAY BECAUSE OF ~~WIND~~

[illegible]

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: July 25, 1999

Consultant: Roy F. Weston of New York, Inc.

IDR #: 318

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
cldy / pty cldy	80	60

Description of work performed and inspected

[illegible]

Remarks: Inspected land fill to assess damage from rains of 7/24
Spent day making as built schematic of geocomposite placed to date

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 1 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 7/25/97

IDR #: 318

Weather

High

Low

description of work performed and inspected

[illegible]

Remarks:

Remarks: NO ACTIVITY BECAUSE OF RAIN PREVIOUS DAY
LINERS & DRAINAGE COMPOSITES NOT BEING PLACED.

Equipment & Labor Record

[illegible]

time. 0700, 0900

1 of 1 pages

\\ktwn\fidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 1/28/97

IDR #: 321

Weather	High	Low
---------	------	-----

PRtyCLDm/PRtyCLDy	94	68
-------------------	----	----

Description of work performed and inspected

[illegible]

Remarks: WITNESSED TESTING OF DRAINAGE PANELS IN TRAILER @ 8:30 AM. (RESULTS ABOVE)
WITNESSED 15 AIR LOCK TEST AS PER ATTACHED FORM. MONITORED PLACEMENT OF 18 ROLLS
OF DRAINAGE GEOTEXTILE PANELS - AS PER ATTACHED FORM & ALSO 3 ROLLS OF G O Z
GEOTEXTILE

Equipment & Labor Record

[illegible]

start/finish time: 0700 / 1600

Page 1 of 4 pages
clarktw\fidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/28/97
INSPECTOR: JOSEPH L. FARONE
LINER TECHNICIAN: _____

WEATHER AM 68 PM 84
TEMP DEG F HI 94 LO 68
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF / 9 = SY
H 2338				NOT MEASURED
H 2300				
H 1940				
H 2349				
H 2390				
H 2199				
H 2202				
H 2193				
H 2381				
H 2354				
H 2353				
H 2310				
H 2361				
H 2336				
H 2172				
H 1852				
H 2343				
H 2174				
102090813				602 GEOTEXTILE
102090724				NOT MEASURED
102090738				

COMMENTS: OBSERVED PLACEMENT OF 18 ROLLS DRAINAGE TEXTILE - LFP-3
B-6, B-7, C-6, C-7 " " " 3 ROLLS 602 GEOTEX.

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M (T) W TH F S

Date: July 28, 1995

IDR #: 222

Weather	High	Low
ptly cldy / clear	84	67

Description of work performed and inspected[illegible]

Remarks: Observed EL pull out PVC panels B113 (smooth) and B273, 277, 279, and 268A on west slope. Walked subgrade in area between GE34 and GE31 for approx. per J. Woodley. Assisted Jason on Troxler testing on subgrade in sand area. Measured panels B278 and B223A/275A, plus 27 panels of TB600 w/ in/d. tank. Observed Bartlett placing gas manifold pipe near GE37 (Bruce measured)

Equipment & Labor Record

[illegible]

Start/finish time: 0900/1530

Page 1 of 3 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature

Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: July 29, 1997

INSPECTOR. *B²*

LINER TECHNICIAN:

WEATHER

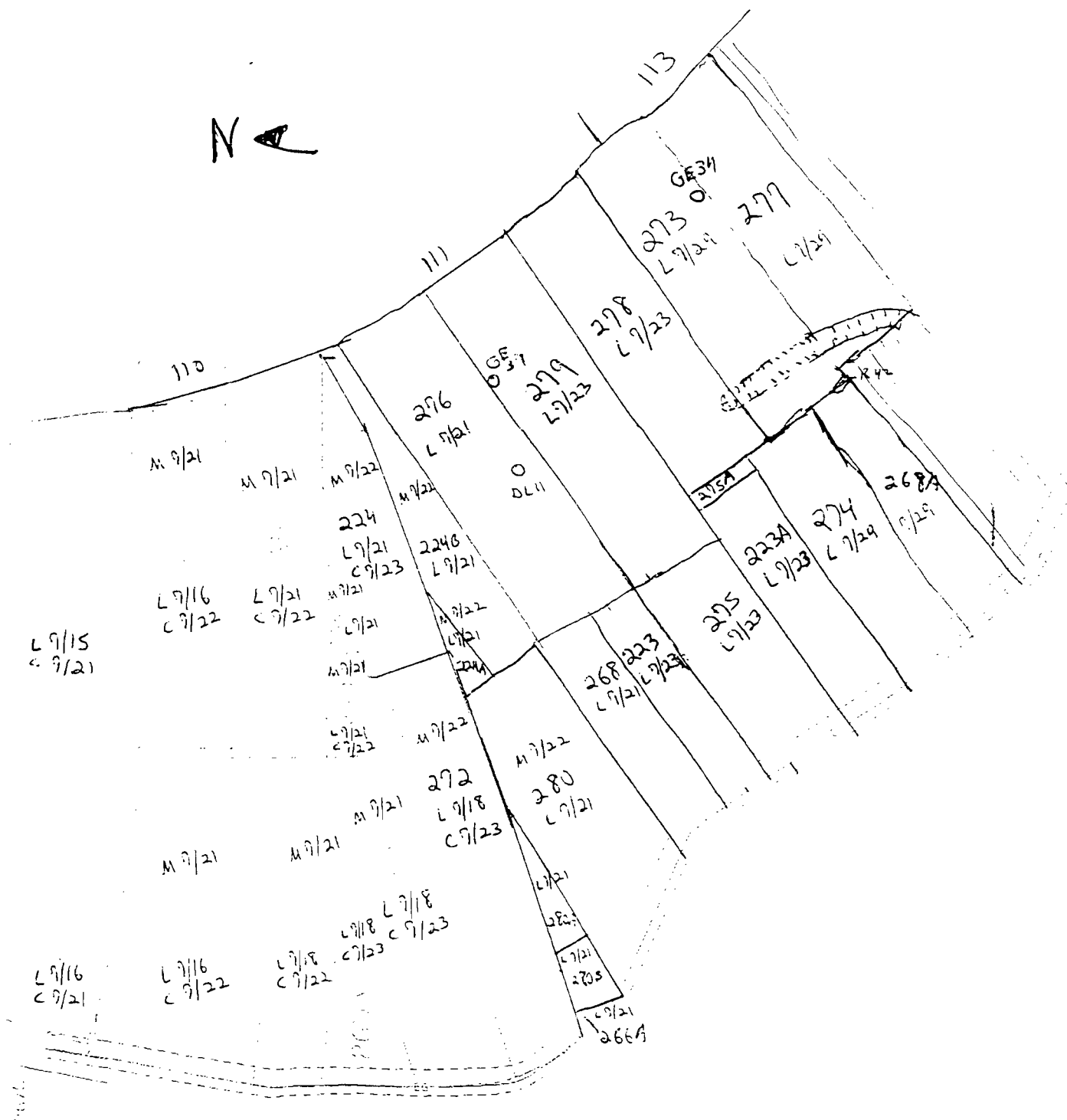
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Sun AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



WESTON

S M T W TH F S

Date: 7/29/97

IDR #: 322

Weather	High	Low
Partly cloudy / CLEAR	84	67

[illegible]

Remarks: OBSERVED PLACEMENT OF 7 PANELS OF DRAINAGE COMPOSITION ON LFP-3 SECTIONS B-5, B-6, C-5, C-6
ALSO OBSERVED AIRLANCE TESTING OF GEOMEMBRANE PANELS AS PER ATTACHED FORM.
OBSERVED PLACEMENT OF G-2 UNDERLAY GEOTEX - AS PER ATTACHED FORM
" PLACEMENT OF GEOMEMBRANE PANEL # 274, 113

[illegible]

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/29/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	PM
TEMP DEG F	HI 84	LO 67
WIND	AM	PM
PRECIPITATION	AM	PM

[illegible]

COMMENTS:

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

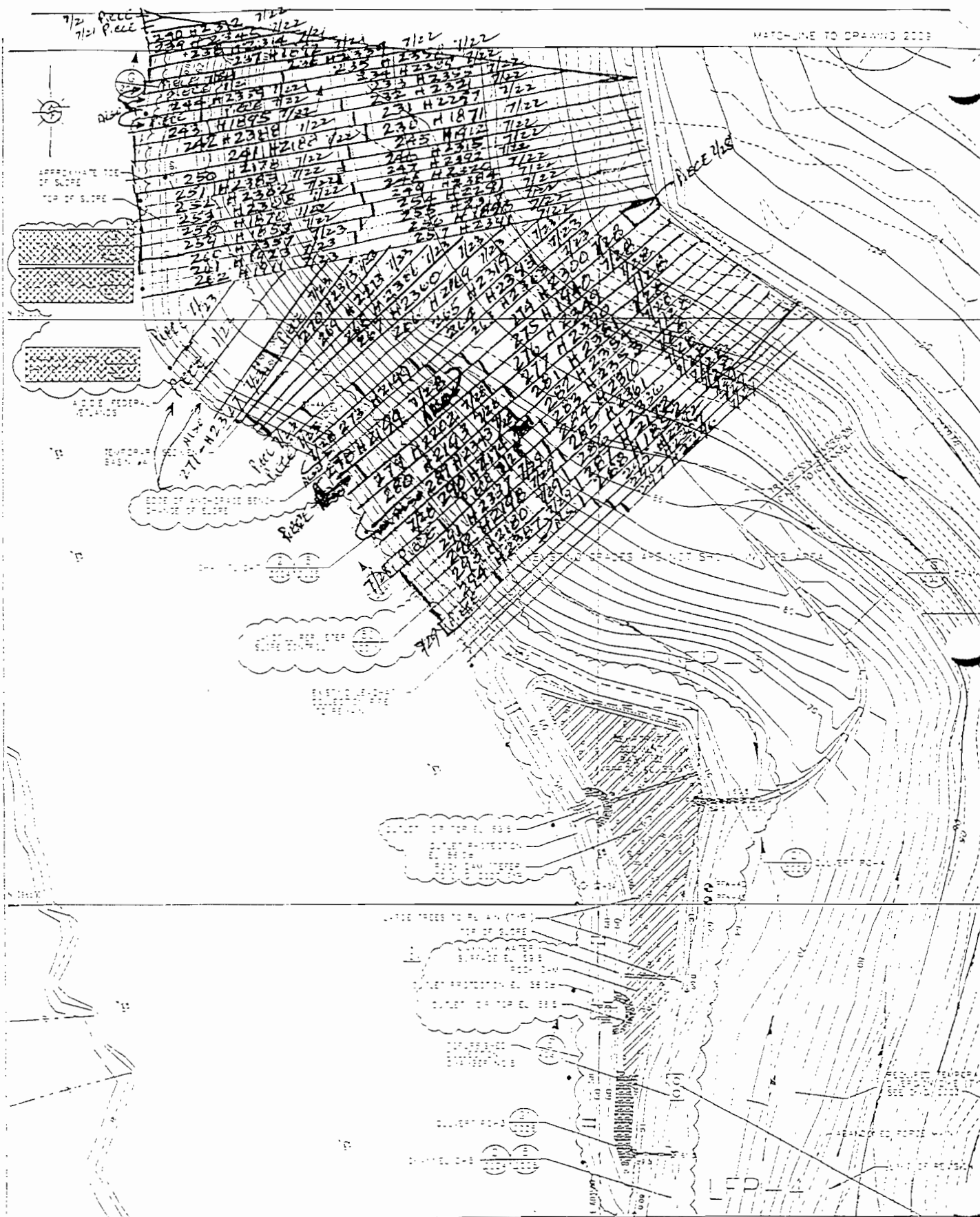
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/29/97
INSPECTOR: Joseph L. Falcione
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Partly AM / PM
AM	67		PM 84
Sea AM / PM	L. Breeze AM / PM	Moderate AM / PM	High V. (1000 ft) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



JOE FALCONE 7/29/97

PAGE 4 OF 4

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T (W) TH F S

Job No: 03228-018-001-0003-00

Date: July 30, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 323

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
clear/clear	88	53

Description of work performed and inspected

[illegible]

Remarks: Observed EL place composite and 6 oz. fabric. ORSC prepared subgrade to GE33. Walked subgrade at Flare station + okayed it per J. Woodley. Measured textured panels on slope + smooth panels at top of west slope. Measured DN + 6 oz. between breaks in drainage Flaps at East end of West slope near GE44 and at east corner of North slope. ORSC placed 5 loads of WMX at lower part of LFPU near GR33 for erosion control. ORSC dug hole where scarp was softening subgrade by GE33 and backfilled w/ 1 bucket stone, 1 bucket WMX. Inspected 1st layer of 6 oz + DN at Flare station.

Equipment & Labor Record

[illegible]

finish time: 0900, 1530

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: July 30, 1997

INSPECTOR: B'C

LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 53	PM 88		
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B273	embossed	OK	220.6	90.1		19,876.1sf 2,208.5sy
B274	embossed		164.5	91.7		15,084.7sf 1,676.1sy
B112	smooth		155.7	30		4,671sf 519sy
B111A	smooth		97	30		2,310sf 256.7sy
B111	smooth		70.35	30		2,110.5sf 234.5sy
B110A	smooth		31	30		930sf 103.3sy
B110	smooth		109	30		3,270sf 363.3sy
B109	smooth		144	30		4,470sf 496.7sy
B277	embossed		221.85	90.1		19,988.7sf 2,221.0sy
B268A/274A	embossed		116'	45'		5,220sf 580sy
B229/266A/275B	embossed		107'	49.25'		5,267.8sf 585.5sy
B219	embossed		335.6	36.45		12,232.6sf 1,359.2sy
B225	embossed		324	37		11,988sf 1,332sy
B263A	embossed		188	52		4,888sf 543.1sy triangle
			(188x52x5)=			
B263	embossed		192	48.7		4,675.2sf 519.5sy triangle
			(192x48.7x5)=			

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: Jul. 30, 1997

INSPECTOR: BC

LINER TECHNICIAN:

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 53		8 PM	
Sol AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

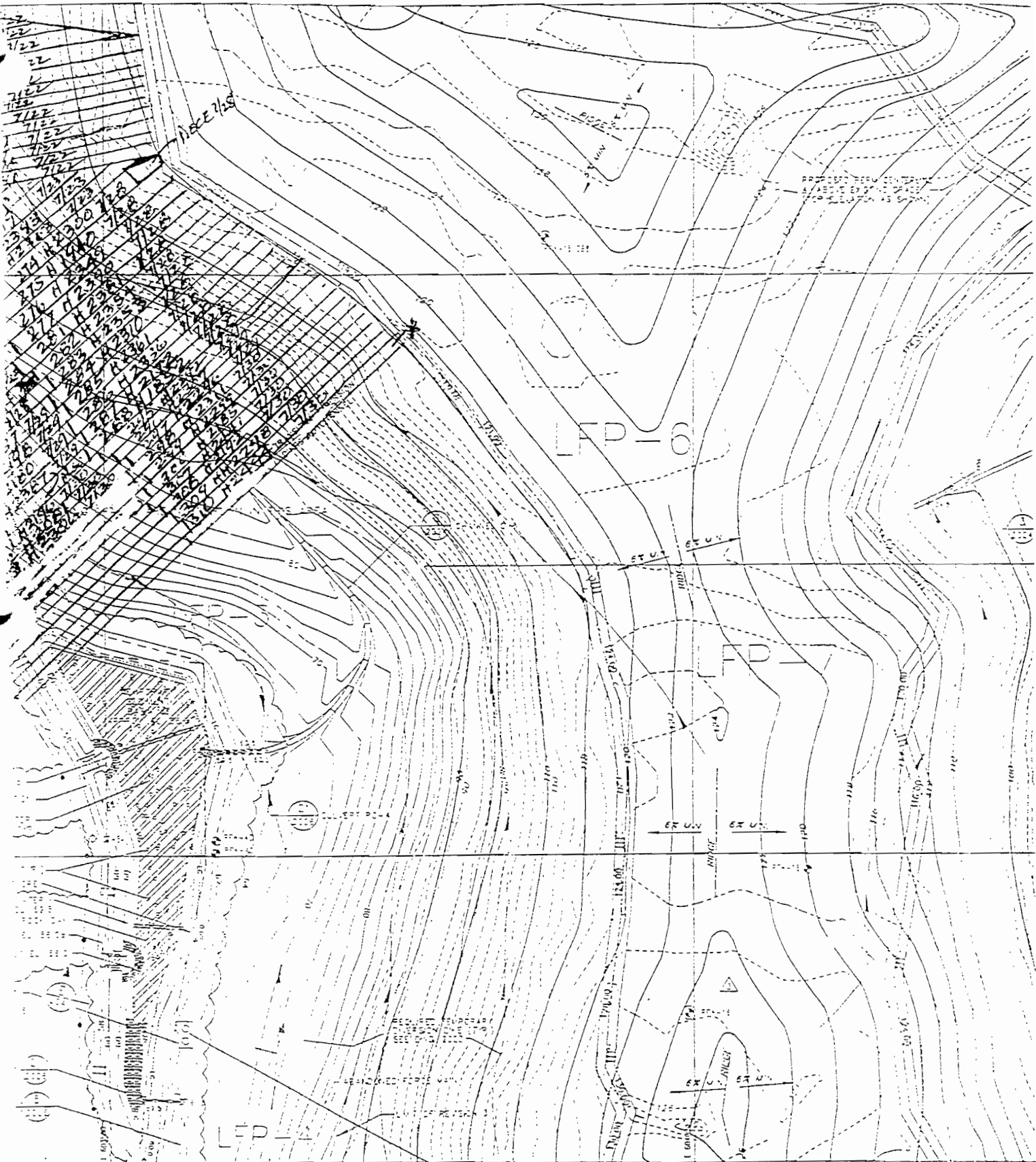
DATE: 7/30/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	<u>Clear</u>	PM	<u>Clear</u>
TEMP DEG F	HI	<u>88</u>	LO	<u>53</u>
WIND	AM	_____	PM	_____
PRECIPITATION	AM	_____	PM	_____

[illegible]

COMMENTS:

MATCH-LINE TO DRAWING 2009



MATCH-LINE TO DRAWING 2009

JOSEPH L. FALCONE 7/30/97

PAGE 4 OF 4

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: July 31
INSPECTOR: BL
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 5	94 PM		
Sol AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

WESTON

S M T W TH F S

Date: 7/31/97

IDR #: 324

Weather	High	Low
CLF/CLF	94	57

[illegible][illegible]

Inspector's signature
Joseph L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7/31/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER AM CLR PM CLR
TEMP DEG F HI 94 LO 57
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H 2438				NOT MEASURED
H 2448				
H 2200				
H 2457				
H 2183				
H 2196				
H 2081				
H 2306				
H 2303				
H 2191				
H 2350				
H 2187				
H 2342				
H 2295				
H 2179				
H 2435				
H 2455				
H 1991				
H 2440				
H 2452				
H 1985				
H 2449				
H 2400				
H 2395				
H 2439				
H 2431				
	102009771	} 602 GEOTECH FABRIC		NOT MEASURED
	102065781			
COMMENTS:	102091086			
	102086815			
	102008932			

JOE FALCONE 7/3/97
PAGE 3 OF 3

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

lob No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: 7-31-97

IDR #: 329

Weather

High

Low

CLR / CLR

94

57

Description of work performed and inspected

[illegible]

- Remarks: • OBSERVED INSTALLATION OF GAS COLLECTION NET AT FLARE STATION (SECTOR H6 AND I6). INFORMED QA THAT CONCRETE PIPE POLES NOT INSTALLED ACCORDING TO PLAN DWS # 2036 DETAIL #31 WHERE GCS NOT BEING SEALED. 2" DIA. ST. PIPE AIR LANCE TESTED SEAMS B273/277, 277/263, 275/277, 263/263A, 266A/255A, 266A/275E, 225 AND DS #46, #47 (SECTOR CS AND DS IN LFP3)
- OBSERVED INSTALLATION OF 602. /SYNTHETIC NON-WOVEN GEOTEXTILE (SECTOR E, C4, DS AND D4)

Equipment & Labor Record

[illegible]

Start/finish time: 700 / 1600

Page 1 of 2 pages

p:\clarktwn\fidforms\ldr.xls

Chen

Inspector's signature

GUINN JOSEF

Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-31-97
INSPECTOR: G.I.
LINER TECHNICIAN: GRAN AND JOHN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
5 AM		9 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 1, 1999

INSPECTOR: BL

LINER TECHNICIAN:

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
60 AM		91 PM	
Sol AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B226/226A	triangle Embossed	OK	304 (304 x 58.9 x .5) = 1yd	58.9		8,943.8sf 993.8sy
B262	"		303.8	51.95		15,782.4sf 1,753.6sy
B271	"		296.75	51.85		15,386.5sf 1,709.6sy
B264	"		297.65	52.5		15,626.6sf 1,736.3sy
B183B	(smooth)		30	79.3		2,379sf 264.3sy
B183A	"		76.8	30		2,304sf 256sy
B183	"		83.25	30		2,497.5sf 277.5sy
B156	smooth Flare station		90	73		6,570sf 730sy
DN Flare station (2 layers)			90 (90 x 73 x 2)	73		13,140sf 1,460sy
Amoco 4506 Flare station (2 layers)						13,140sf 1,460sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

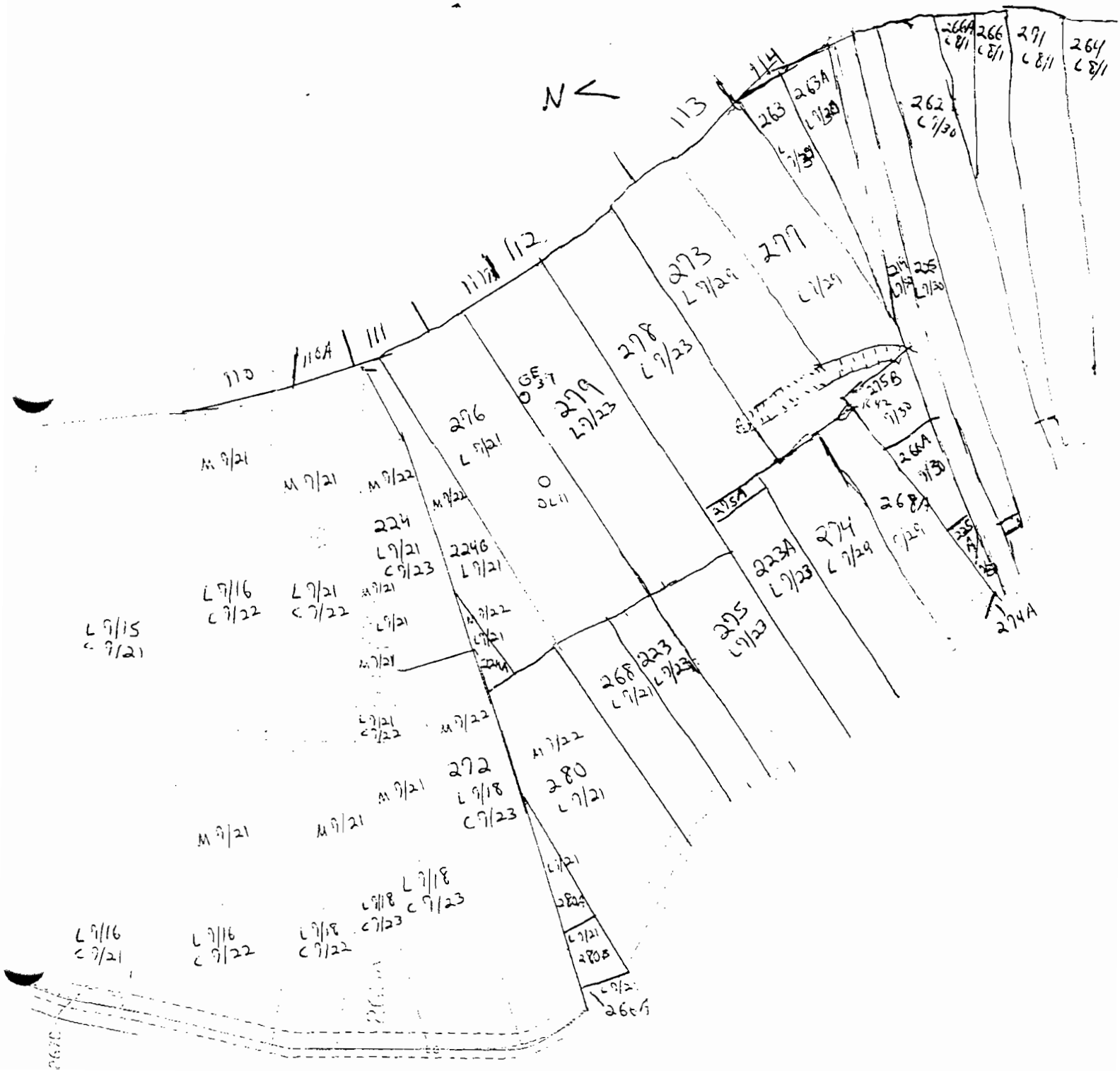
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 1, 1999
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
60 AM		92 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL PLACEMENT FORM

Project: Clarkstown Landfill

Client: Town of Clarkstown

Job No: 03228-018-001-0003-00

Contractor: Ogden Remedial Services Corporation

Liner Installer: Environmental Liners

Date: 08/01/97

Inspector: Glenn Iosue

Liner Technician: John and Rick

Weather AM Ptly Cldy PM Ptly Cldy

Temp (°F)	HI	<u>92</u>	LO	<u>60</u>
-----------	----	-----------	----	-----------

Wind **AM** Moderate **PM** Moderate

Precipitation AM Dry PM Dry

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 8/4/97

IDR #: 328

Weather

High

Low

CLDY/CLDY

88

67

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 25 PANELS DRAINAGE COMPOSITION ON LFP-3,
SECTIONS 4C, 4D, 3C, 3D
OBSERVED AIR LANCE TESTING OF GEOMEMBRANE PANELS AS PER ATTACHED FORM
ALS = OBSERVED PLACEMENT OF 60Z UNDERLAY GEOTEX - AS PER ATTACHED FORM

Equipment & Labor Record

[illegible]

...nish time: 0700, 1600

Page 1 of 4 pages
clarktw\fidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
Joseph L. Falcone
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/14/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER
TEMP DEG F
WIND
PRECIPITATION

CLDY
AM 67 PM 88
HI 67 LO 88
AM _____ PM _____
AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H 2348				NOT MEASURED
H 2195				
H 2194				
H 2171				
H 2347				
H 2177				
H 2182				
H 2173				
H 2451				
H 1930				
H 2301				
H 2407				
H 1992				
H 2411				
H 2401				
H 2394				
H 2426				
H 2036				
H 2436				
H 2201				
H 2365				
H 2076				
H 1943				
H 1917				
H 1971				
102178039	(6 OZ GEOTEX FABRIC)			NOT MEASURED
102009845				
102086321				
102086194				

COMMENTS



JOE FALCONE 8/4/97

2 of 3

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 4, 1999
INSPECTOR: BE
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
67 AM	88 PM		
SEI AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
TG600			(176.6 x 114 x .5) + (81.6 x 17.9) + (17.9 x 38 x .5) =			
TG600			(33 x 167) + (78.75 x 113.8 x .5) + (112.6 x 35) + (52.7 x 123) =			

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 4, 1997
INSPECTOR: BZ
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6 AM		8 PM	
SEN AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 NPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

No: 03228-018-001-0003-00

Date: 8/5/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 329

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
PTLY/CLDY, PTLY/CLDY	85	61

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF DRAINAGE COMPOSITE ON LFP-3 (9 ROLLS)
AS PER ATTACHED FORMS - PLUS 6 OZ GEOTEXTILE (7 ROLLS)

26 SMALL HOLES IN BLANKETS ON TOP SECTION WERE PATCHED BY LINER COMPANY - HOLES WERE CAUSED BY GAS PIPES BEING DRAGGED ACROSS BLANKETS BY COMPANY INSTALLING PIPES.

Equipment & Labor Record

[illegible]

start/finish time: 1, 3

Inspector's signature
JOSEPH L. FALCONE
Inspector's name



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 5, 1999
INSPECTOR: BC
LINER TECHNICIAN:

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6 / AM		8:5 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

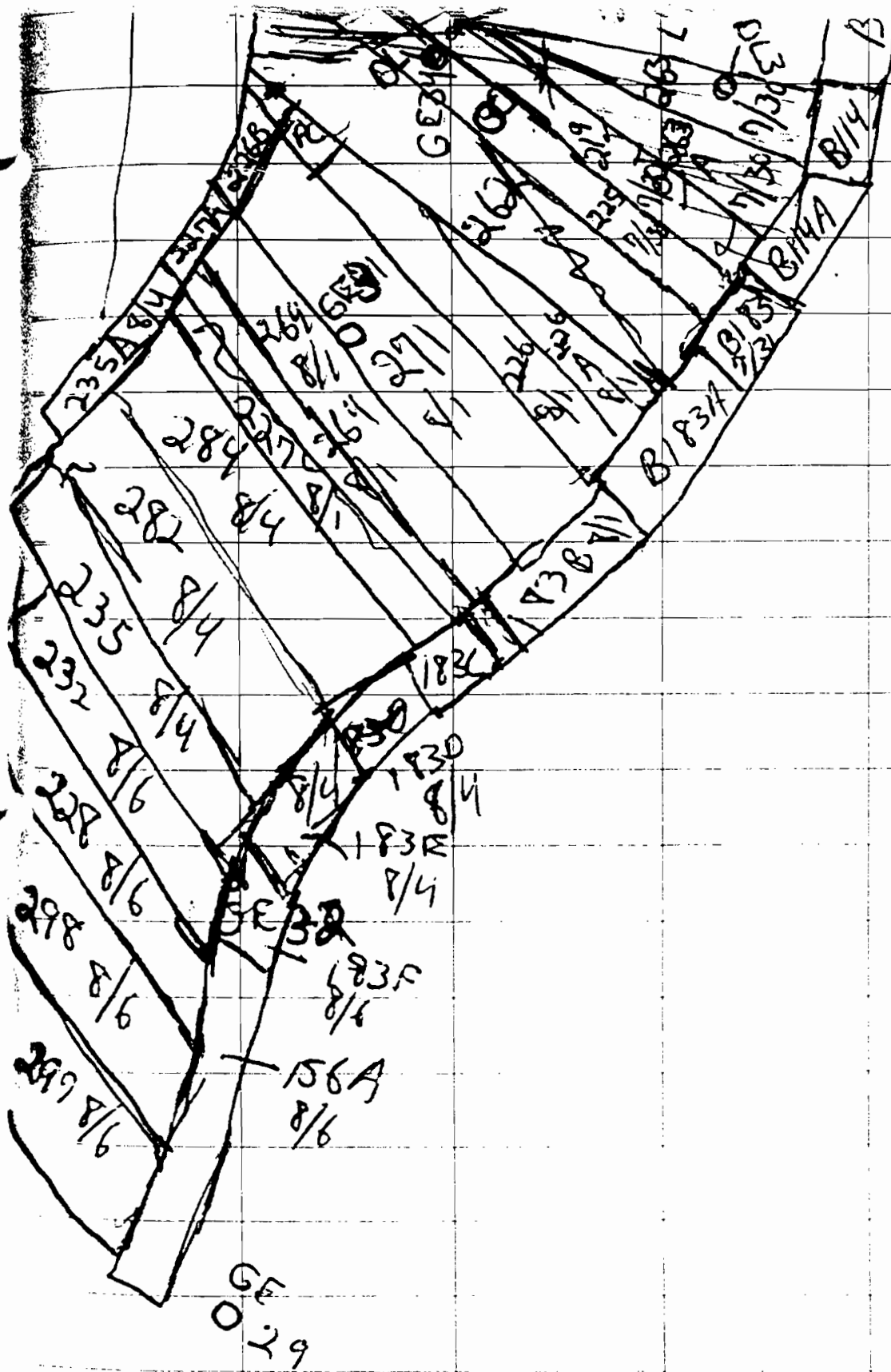
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 5, 1999
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6 AM			8:5 PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 8/6/97

IDR #: 350

Weather

High

Low

CLD/PTLY CLON

84

59

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF DRAINAGE COMPOSITE ON LFB-3 (16 ROLLS)
SECTIONS 3C, 4C, 3D, 4D AS PER ATTACHED FORM (ALSO 6 ROLLS - 202 GEOTEXTILE)
OBSERVED PLACEMENT OF 10 LINER PANELS

Equipment & Labor Record

[illegible]

finish time: 0700 / 1600

ge 1 of 5 pages

clarktwn\fidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

**ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM**

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/6/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

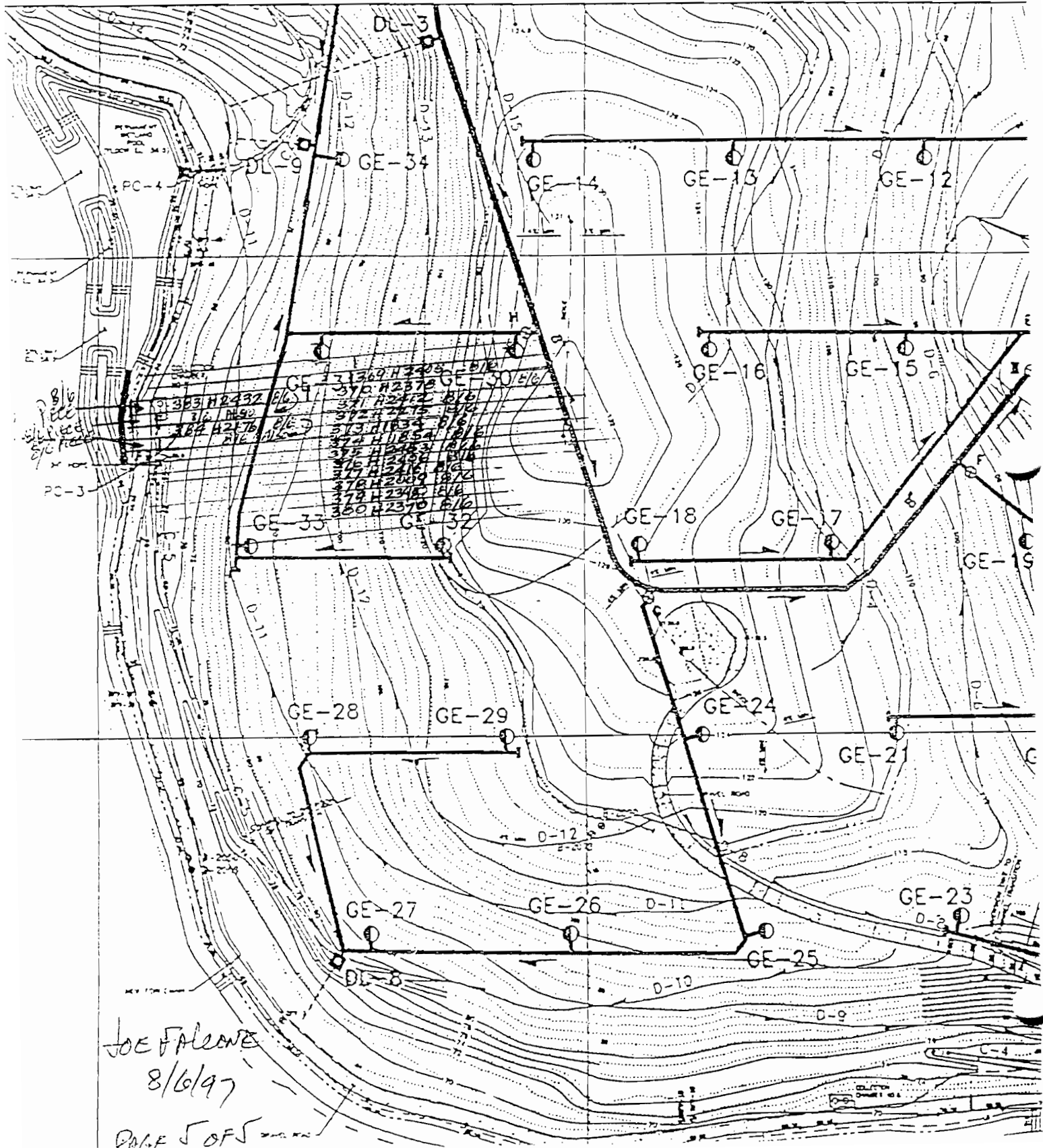
WEATHER AM CLDY PM Ptly CLDY
TEMP DEG F HI 59 LO 84
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H 2176	DRAINAGE (Composite)			NOT MEASURED
H 2432				
H 2402				
H 2443				
H 2370				
H 2398				
H 2009				
H 2416				
H 2406				
H 2453				
H 1854				
H 1834				
H 2275				
H 2412				
H 2378				
H 2405				
102009496	6026 GEOTEXTILE			NOT MEASURED
102009456				
102009773				
102063745				
102063535				
102009702				

COMMENTS: _____



Joe FALCONE 8/6/97



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: August 6, 1999

Consultant: Roy F. Weston of New York, Inc.

IDR #: 330

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
clr/ptly cldy	84	59

Description of work performed and inspected

[illegible]

Remarks: Inspected damage to liner at Flare station. 1 hole in liner, but still much soil covering. Observed EL pull out B232, B228, B298, B297, and B293. Observed EL rolling out composite. Jul F. Keeping track. Air lance boots at CC #5 and seems on liner (see p. 3). Measured PVC + TS 600 w/ M.I. trans. (see p. 2).

Equipment & Labor Record

[illegible]

Start/finish time: 0900, 1630

Page 1 of 4 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 6, 1997

INSPECTOR: BC

LINER TECHNICIAN:

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
59 AM		84 PM	
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 6, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
59 AM		84 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

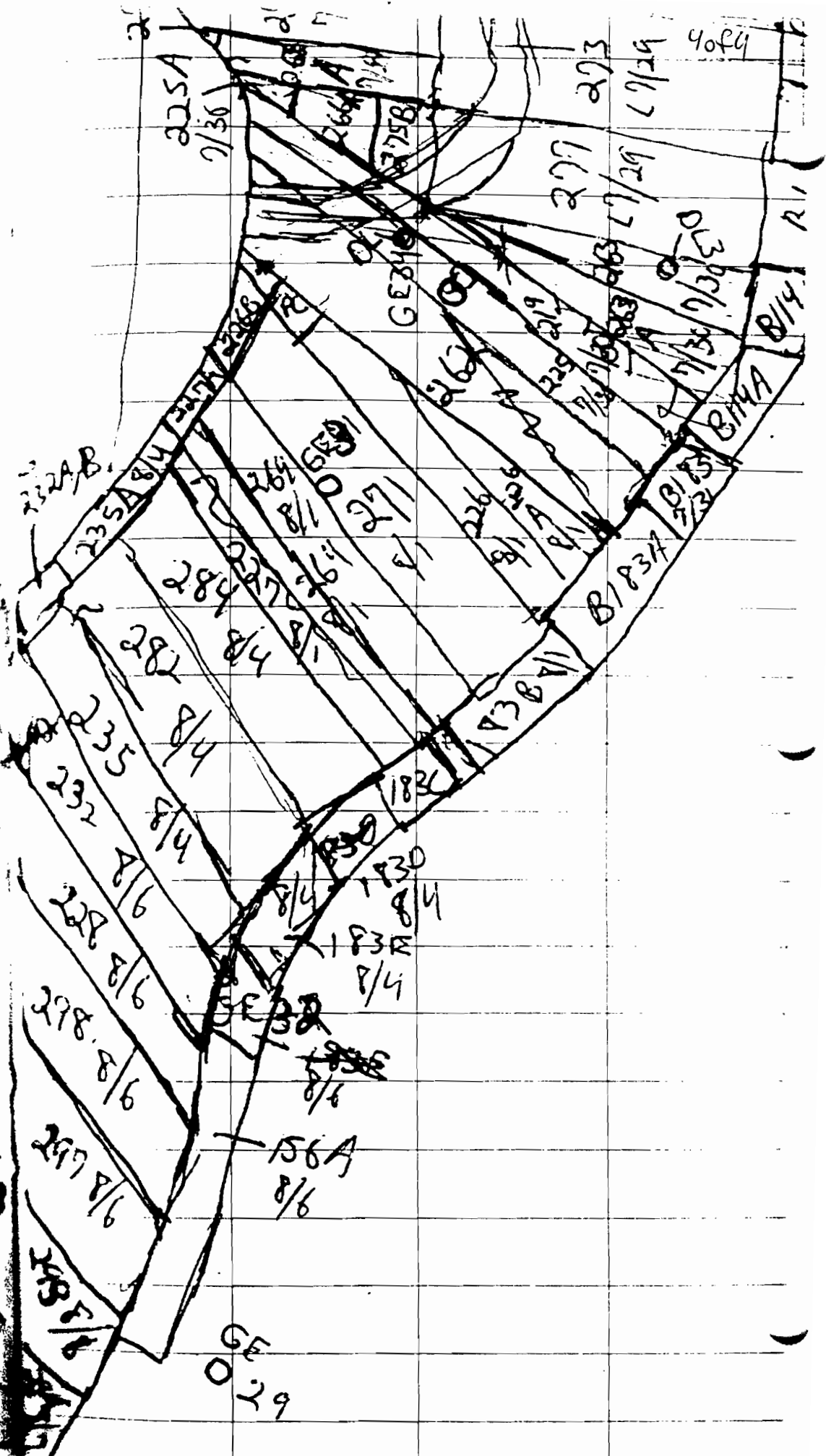
[illegible]

~~#2~~ B114 Smith
OK, called

St. Louis
Missouri
Wood
192
RFW
305

This page is almost entirely obscured by heavy black ink scribbles. Visible fragments of text include:

- Top left: 2288 8/7
- Top right: 2258 8/7
- Middle left: 2238 8/7
- Middle right: 293 8/7
- Bottom left: 294 8/7
- Bottom right: 291 8/7



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

No: 03228-018-001-0003-00

Date: 8/7/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 331

Contractor: Ogden Remedial Services Corporation

Weather		High	Low
Partly CLdy	Partly CLdy	88°	65°

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF DRAINAGE COMPOSITE ON LFB-3 (12 ROLLS)
ON SECTIONS 3C, 3D, 4C & 4D. AS PER ATTACHED FORMS
ALSO 5 ROLLS 602 GEOTEXTILE
PLACEMENT OF 11 BLANKETS (LIVER PANELS)
AIR LANCING 4 PANELS & 2 DESERTY SAMPLES (SEE ATTACHED FORM)

Equipment & Labor Record

[illegible]

finish time: 0700, 1600

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

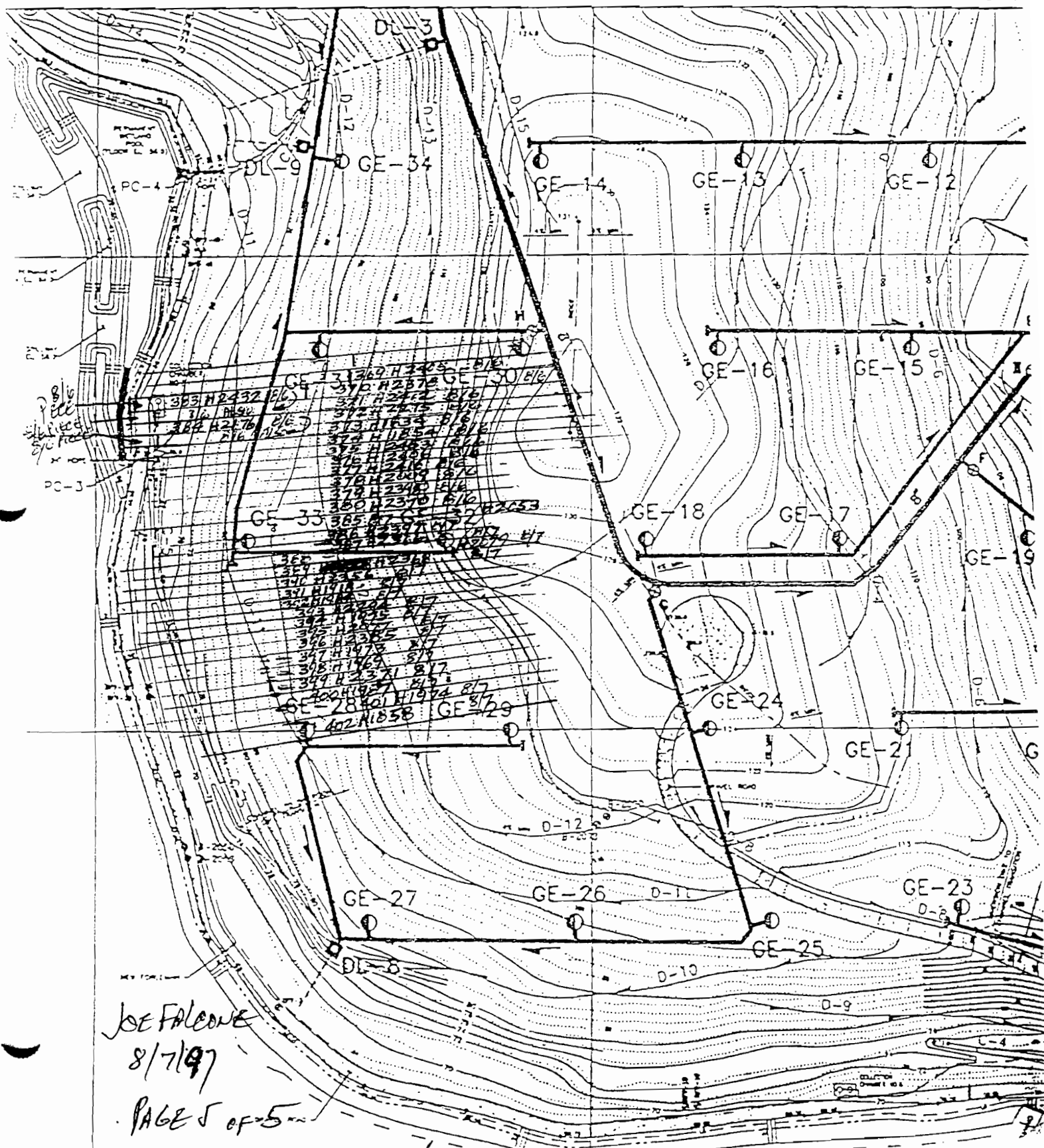
DATE: 8/7/97
INSPECTOR: JOE FALONE
LINER TECHNICIAN: _____

WEATHER
TEMP DEG F
WIND
PRECIPITATION

Ptly Clay AM _____ PM _____
HI 88 LO 68
AM _____ PM _____
AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H 1858	DRAINAGE COMPOSITE			NOT MEASURED
H 1974				
H 1987				
H 2371				
H 1969				
H 1973				
H 2385				
H 2077				
H 1975				
H 2294				
H 1984				
H 1918				
H 2356				
H 2368				
H 2079				
H 2366	(6 OZ GEOTEXTILE)			
H 2397				
H 2053				
10200859				
102009700				
102063720	DRAINAGE NETS			
102009470				
102063727				
E 2912				
E 2561				
E 2156				

COMMENTS:



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: August 7, 1997

IDR #: 331

Weather	High	Low
ptly cldy	88	68

Description of work performed and inspected

[illegible]

Remarks: Documented holes in liner at Flare station - 28 holes in 6' x 15' area caused by growler pads - Observed EL rock out panels B 294, B 294A, B 291, and pieces B 232A, B, B 292, B 225B, B 228B, A, B 223B. Airlanded seams (see p. 2). Observed EL take structures DS 55, 56, 59, 58

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 3 pages

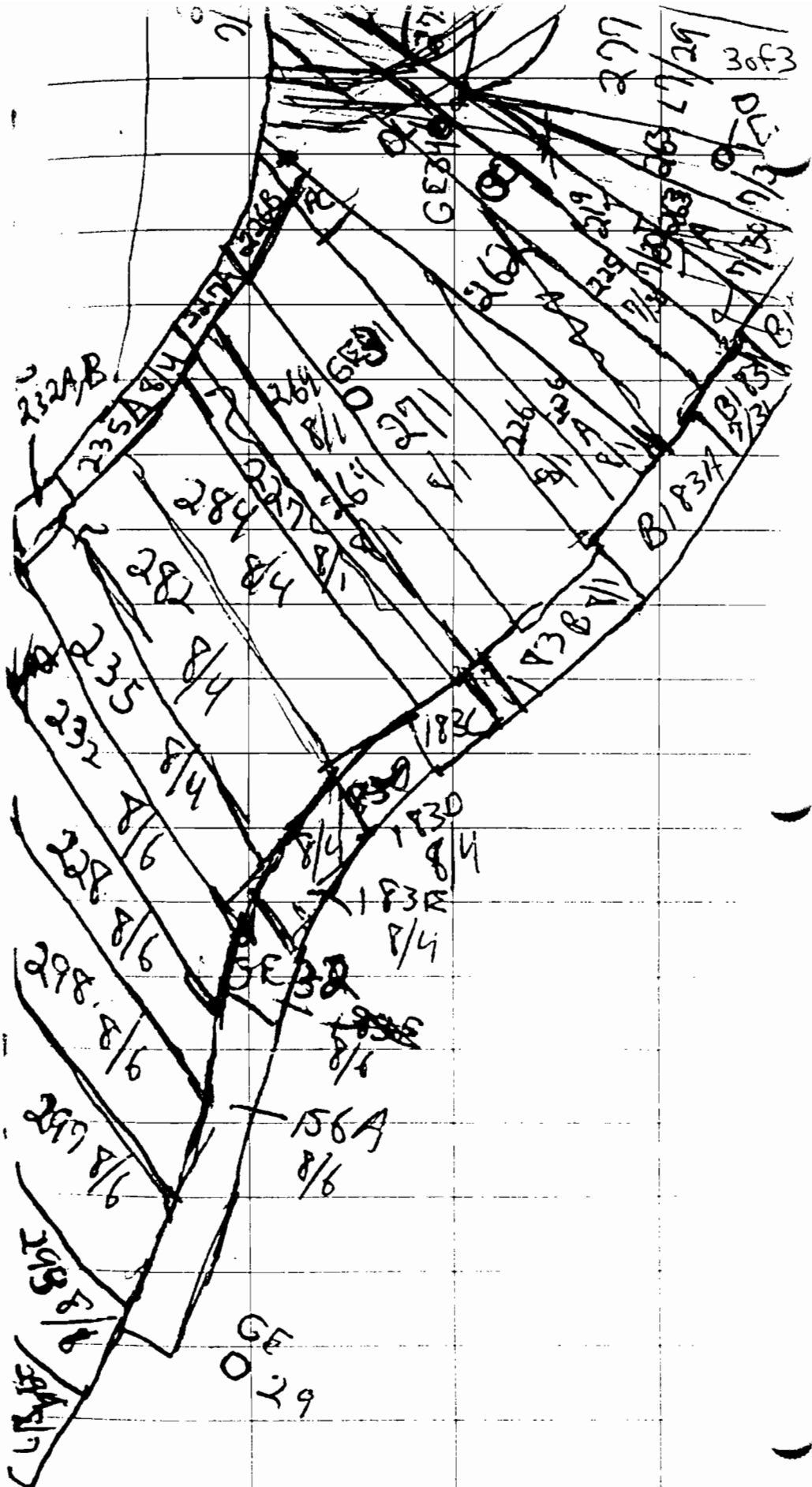
s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Channingham
Inspector's name

9 wire off
300 pms

3262B/14 Smith
55 OK, called

two dt loads
which
b. Wood
2288
2258
2284
2238
293
294
291
GE44
GE28
GE29
305
304
303
302
301
300
299
298
297
296
295
294
293
292
291
290
289
288
287
286
285
284
283
282
281
280
279
278
277
276
275
274
273
272
271
270
269
268
267
266
265
264
263
262
261
260
259
258
257
256
255
254
253
252
251
250
249
248
247
246
245
244
243
242
241
240
239
238
237
236
235
234
233
232
231
230
229
228
227
226
225
224
223
222
221
220
219
218
217
216
215
214
213
212
211
210
209
208
207
206
205
204
203
202
201
200
199
198
197
196
195
194
193
192
191
190
189
188
187
186
185
184
183
182
181
180
179
178
177
176
175
174
173
172
171
170
169
168
167
166
165
164
163
162
161
160
159
158
157
156
155
154
153
152
151
150
149
148
147
146
145
144
143
142
141
140
139
138
137
136
135
134
133
132
131
130
129
128
127
126
125
124
123
122
121
120
119
118
117
116
115
114
113
112
111
110
109
108
107
106
105
104
103
102
101
100
99
98
97
96
95
94
93
92
91
90
89
88
87
86
85
84
83
82
81
80
79
78
77
76
75
74
73
72
71
70
69
68
67
66
65
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0





Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

No: 03228-018-001-0003-00

Date: 8/8/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 332

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDn/CLDn	80	53

Description of work performed and inspected

[illegible]

Remarks: MONITORED PLACEMENT OF DRAINAGE COMPOSITES ON LFB-3 (15 ROLLS)
SECTIONS 3C, 4C, 3D & 4D AS PER ATTACHED FORMS &
2 ROLLS 60Z GEOTEXTILE

Equipment & Labor Record

[illegible]

start/finish time: 0700, 1600

Page 1 of 4 pages
clarktw\nfidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

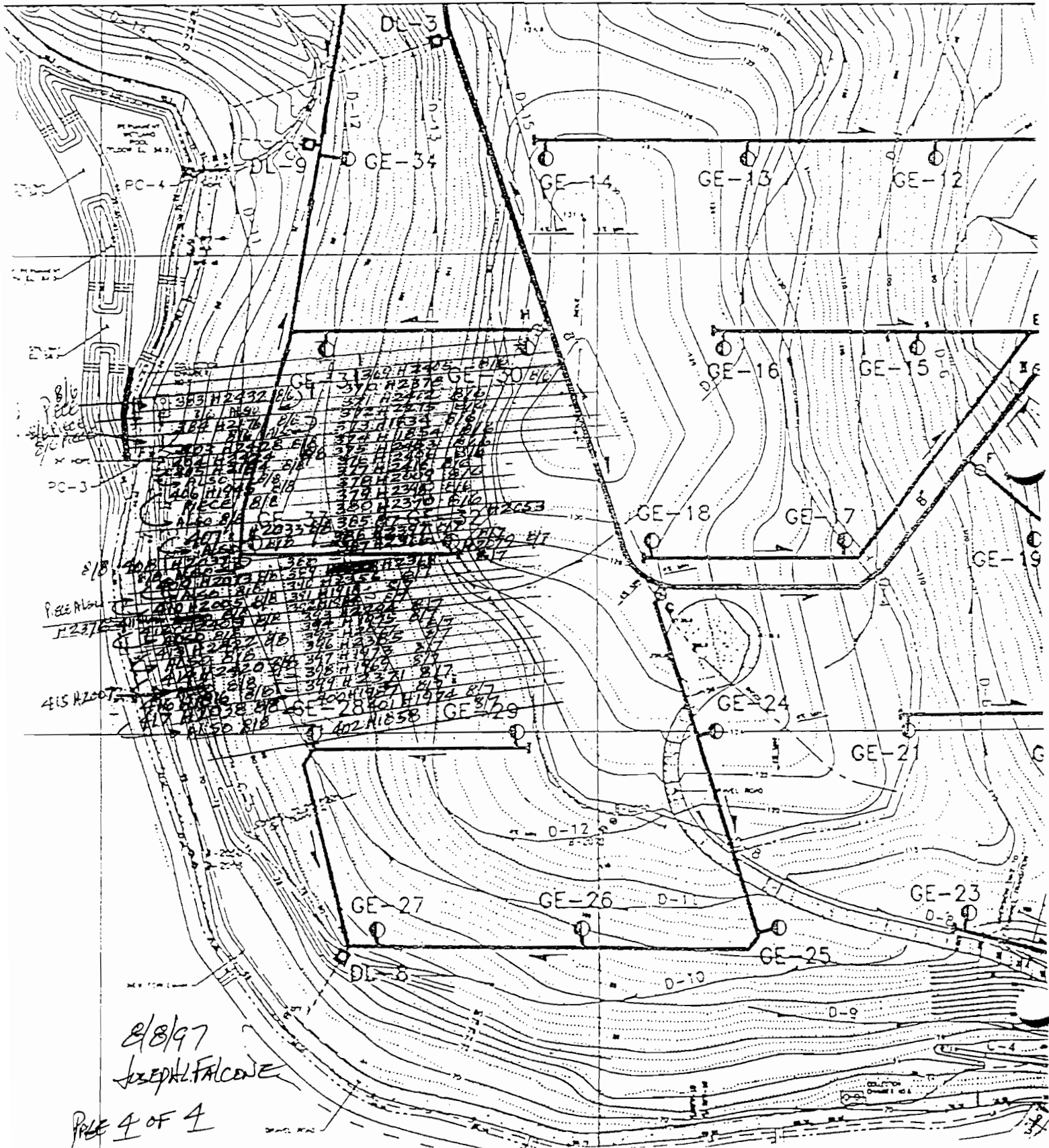
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/8/97
INSPECTOR: Joseph L. Falcone
LINER TECHNICIAN: _____

WEATHER	AM <u>clear</u>	PM <u>clear</u>
TEMP DEG F	HI <u>53</u>	LO <u>80</u>
WIND	AM _____	PM _____
PRECIPITATION	AM _____	PM _____

[illegible]

COMMENTS:



8/8/97
Joseph L. Falco

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 8, 1997

INSPECTOR: BSC

LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	53		PM 80
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B293/228A/228B			325.8	59.6		19,417.7 sf 2,157.5 sy
B294/294A	2 triangles		$(98.8 \times 39.1 \times \frac{1}{2}) +$ $(98.8 \times 298.5 \times \frac{1}{2}) =$			15,689.4 sf 1,743.3 sy
B291/291A	triangle and exclusion		$(297.6 \times 116 \times \frac{1}{2}) -$ $(55.3 \times 21.2 \times \frac{1}{2}) =$			16,680.2 sf 1,853.8 sy
B231/231A	triangle		$(303 \times 71 \times \frac{1}{2}) -$ lyd exclusion			10,747.5 sf 1194.2 sy
TG600	8 panels at bottom		131.2	105		13,776 sf 1,530.7 sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 8, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

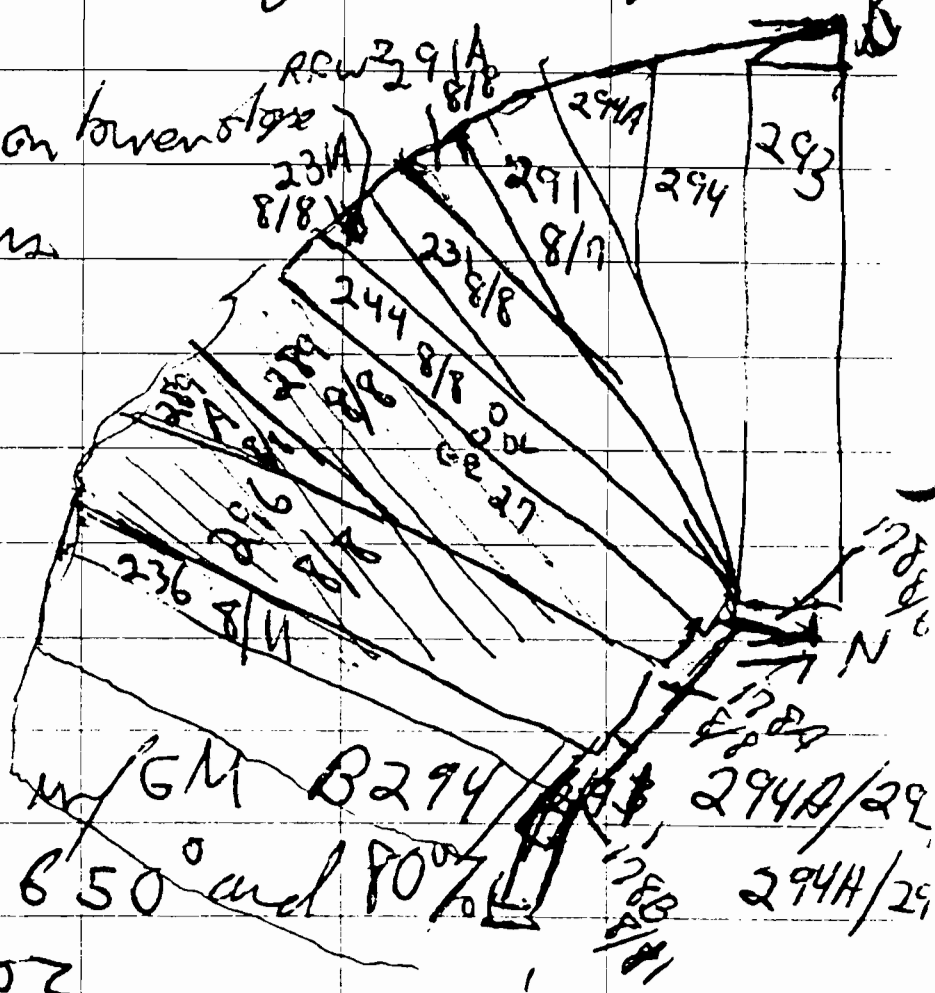
WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	53		PM 80
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

15 Rechecked July 602 number w/ M. Diana
55 on 1mer. EC pulling out B231, B281A,
291B

making composite on
e making tied seams



35 air lanceing in GM B294/294A/294B/294C/294D/294E/294F/294G/294H/294I/294J/294K/294L/294M/294N/294O/294P/294Q/294R/294S/294T/294U/294V/294W/294X/294Y/294Z/294AA/294AB/294AC/294AD/294AE/294AF/294AG/294AH/294AI/294AJ/294AK/294AL/294AM/294AN/294AO/294AP/294AQ/294AR/294AS/294AT/294AU/294AV/294AW/294AX/294AY/294AZ/294BA/294BB/294BC/294BD/294BE/294BF/294BG/294BH/294BI/294BJ/294BK/294BL/294BM/294BN/294BO/294BP/294BQ/294BR/294BS/294BT/294BU/294BV/294BW/294BX/294BY/294BZ/294CA/294CB/294CC/294CD/294CE/294CF/294CG/294CH/294CI/294CJ/294CK/294CL/294CM/294CN/294CO/294CP/294CQ/294CR/294CS/294CT/294CU/294CV/294CW/294CX/294CY/294CZ/294DA/294DB/294DC/294DD/294DE/294DF/294DG/294DH/294DI/294DJ/294DK/294DL/294DM/294DN/294DO/294DP/294DQ/294DR/294DS/294DT/294DU/294DV/294DW/294DX/294DY/294DZ/294EA/294EB/294EC/294ED/294EE/294EF/294EG/294EH/294EI/294EJ/294EK/294EL/294EM/294EN/294EO/294EP/294EQ/294ER/294ES/294ET/294EU/294EV/294EW/294EX/294EY/294EZ/294FA/294FB/294FC/294FD/294FE/294FF/294FG/294FH/294FI/294FJ/294FK/294FL/294FM/294FN/294FO/294FP/294FQ/294FR/294FS/294FT/294FU/294FV/294FW/294FX/294FY/294FZ/294GA/294GB/294GC/294GD/294GE/294GF/294GG/294GH/294GI/294GJ/294GK/294GL/294GM/294GN/294GO/294GP/294GQ/294GR/294GS/294GT/294GU/294GV/294GW/294GX/294GY/294GZ/294HA/294HB/294HC/294HD/294HE/294HF/294HG/294HH/294HI/294HJ/294HK/294HL/294HM/294HN/294HO/294HP/294HQ/294HR/294HS/294HT/294HU/294HV/294HW/294HX/294HY/294HZ/294IA/294IB/294IC/294ID/294IE/294IF/294IG/294IH/294II/294IJ/294IK/294IL/294IM/294IN/294IO/294IP/294IQ/294IR/294IS/294IT/294IU/294IV/294IW/294IX/294IY/294IZ/294JA/294JB/294JC/294JD/294JE/294JF/294JG/294JH/294JI/294JJ/294JK/294JL/294JM/294JN/294JO/294JP/294JQ/294JR/294JS/294JT/294JU/294JV/294JW/294JX/294JY/294JZ/294KA/294KB/294KC/294KD/294KE/294KF/294KG/294KH/294KI/294KJ/294KK/294KL/294KM/294KN/294KO/294KP/294KQ/294KR/294KS/294KT/294KU/294KV/294KW/294KX/294KY/294KZ/294LA/294LB/294LC/294LD/294LE/294LF/294LG/294LH/294LI/294LJ/294LK/294LL/294LM/294LN/294LO/294LP/294LQ/294LR/294LS/294LT/294LU/294LV/294LW/294LX/294LY/294LZ/294MA/294MB/294MC/294MD/294ME/294MF/294MG/294MH/294MI/294MJ/294MK/294ML/294MM/294MN/294MO/294MP/294MQ/294MR/294MS/294MT/294MU/294MV/294MW/294MX/294MY/294MZ/294NA/294NB/294NC/294ND/294NE/294NF/294NG/294NH/294NI/294NJ/294NK/294NL/294NM/294NN/294NO/294NP/294NQ/294NR/294NS/294NT/294NU/294NV/294NW/294NX/294NY/294NZ/294OA/294OB/294OC/294OD/294OE/294OF/294OG/294OH/294OI/294OJ/294OK/294OL/294OM/294ON/294OO/294OP/294OQ/294OR/294OS/294OT/294OU/294OV/294OW/294OX/294OY/294OZ/294PA/294PB/294PC/294PD/294PE/294PF/294PG/294PH/294PI/294PJ/294PK/294PL/294PM/294PN/294PO/294PP/294PQ/294PR/294PS/294PT/294PU/294PV/294PW/294PX/294PY/294PZ/294QA/294QB/294QC/294QD/294QE/294QF/294QG/294QH/294QI/294QJ/294QK/294QL/294QM/294QN/294QO/294QP/294QQ/294QR/294QS/294QT/294QU/294QV/294QW/294QX/294QY/294QZ/294RA/294RB/294RC/294RD/294RE/294RF/294RG/294RH/294RI/294RJ/294RK/294RL/294RM/294RN/294RO/294RP/294RQ/294RR/294RS/294RT/294RU/294RV/294RW/294RX/294RY/294RZ/294SA/294SB/294SC/294SD/294SE/294SF/294SG/294SH/294SI/294SJ/294SK/294SL/294SM/294SN/294SO/294SP/294SQ/294SR/294SS/294ST/294SU/294SV/294SW/294SX/294SY/294SZ/294TA/294TB/294TC/294TD/294TE/294TF/294TG/294TH/294TI/294TJ/294TK/294TL/294TM/294TN/294TO/294TP/294TQ/294TR/294TS/294TT/294TU/294TV/294TW/294TX/294TY/294TZ/294UA/294UB/294UC/294UD/294UE/294UF/294UG/294UH/294UI/294UJ/294UK/294UL/294UM/294UN/294UO/294UP/294UQ/294UR/294US/294UT/294UU/294UV/294UW/294UX/294UY/294UZ/294VA/294VB/294VC/294VD/294VE/294VF/294VG/294VH/294VI/294VJ/294VK/294VL/294VM/294VN/294VO/294VP/294VQ/294VR/294VS/294VT/294VU/294VV/294VW/294VX/294VY/294VZ/294WA/294WB/294WC/294WD/294WE/294WF/294WG/294WH/294WI/294WJ/294WK/294WL/294WM/294WN/294WO/294WP/294WQ/294WR/294WS/294WT/294WU/294WV/294WW/294WX/294WY/294WZ/294XA/294XB/294XC/294XD/294XE/294XF/294XG/294XH/294XI/294XJ/294XK/294XL/294XM/294XN/294XO/294XP/294XQ/294XR/294XS/294XT/294XU/294XV/294XW/294XX/294XY/294XZ/294YA/294YB/294YC/294YD/294YE/294YF/294YG/294YH/294YI/294YJ/294YK/294YL/294YM/294YN/294YO/294YP/294YQ/294YR/294YS/294YT/294YU/294YV/294YW/294YX/294YY/294YZ/294ZA/294ZB/294ZC/294ZD/294ZE/294ZF/294ZG/294ZH/294ZI/294ZJ/294ZK/294ZL/294ZM/294ZN/294ZO/294ZP/294ZQ/294ZR/294ZS/294ZT/294ZU/294ZV/294ZW/294ZX/294ZY/294ZZ/295A/295B/295C/295D/295E/295F/295G/295H/295I/295J/295K/295L/295M/295N/295O/295P/295Q/295R/295S/295T/295U/295V/295W/295X/295Y/295Z/296A/296B/296C/296D/296E/296F/296G/296H/296I/296J/296K/296L/296M/296N/296O/296P/296Q/296R/296S/296T/296U/296V/296W/296X/296Y/296Z/297A/297B/297C/297D/297E/297F/297G/297H/297I/297J/297K/297L/297M/297N/297O/297P/297Q/297R/297S/297T/297U/297V/297W/297X/297Y/297Z/298A/298B/298C/298D/298E/298F/298G/298H/298I/298J/298K/298L/298M/298

R. L. C. 1.

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 5/11/97

IDR #: 338

Weather	High	Low
cloudy / cloudy	84	63

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 602 GEOTEXTILE - NO COMPOSITES PLACED
BECAUSE OF DELAY OF TEST RESULTS ON LINER -
LEFT @ AT 10 AM TO GO TO VALHALLA OFFICE

Equipment & Labor Record

[illegible]

Start/finish time: 07:00 11:00

Page 1 of 1 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S (M) T W TH F S

Date: August 11, 1999

IDR #: 335

Weather	High	Low
ptly cldy/4dy	84	63

Description of work performed and inspected

[illegible]

Remarks: Observed EL place 602 Amoco 450# and Lay out P/C pands B178, B236, B403, B404. Measured geocomposite with M. Diana (p.2) Observed ORSE cutting channel C-3. They removed 8 1/2 trucks (truck) of material which was placed in Lake Lucille. 80 percent of excavated material is WMX placed during structural fill operations. It should be deducted from material paid for previously under Item 56.

Equipment & Labor Record

[illegible]

Start/finish time: 0900; 1530

Page 1 of 3 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 11, 1997
INSPECTOR: AC
LINER TECHNICIAN: JC, JG

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
63 AM		84 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

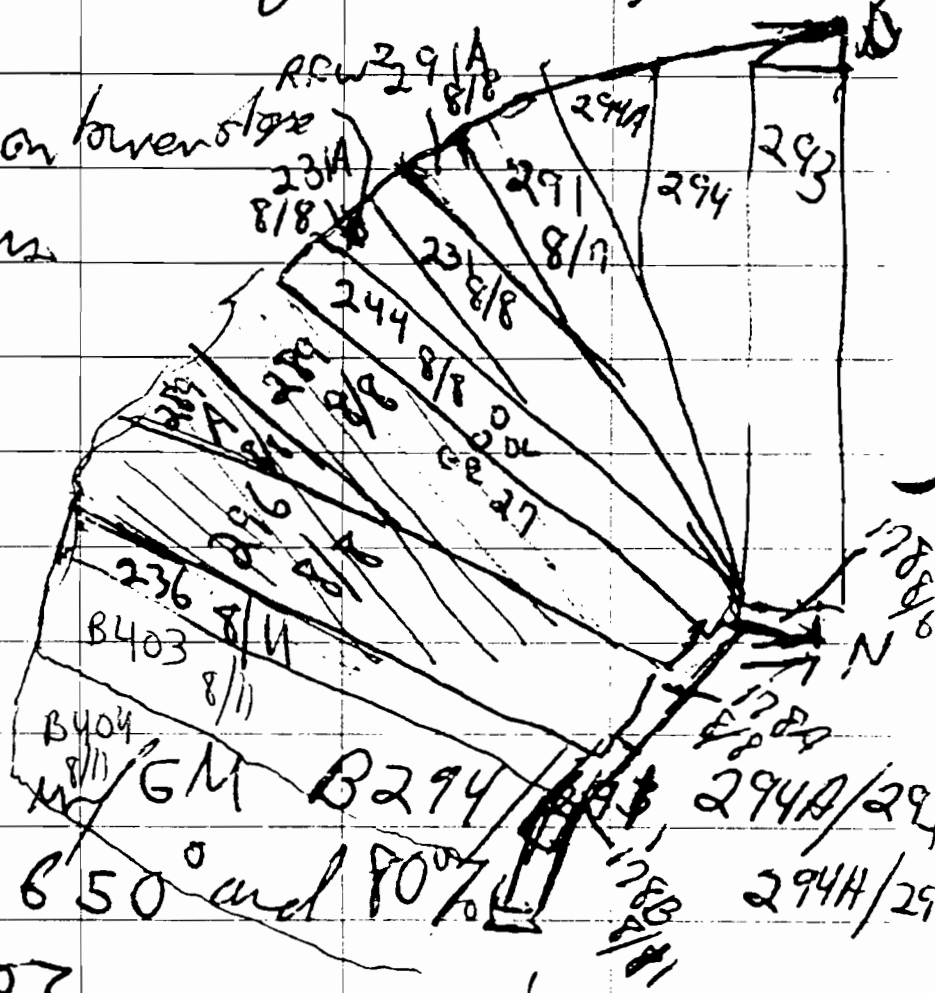
361 294A/291 8/7 50' down 233' from top

8/8/99 sth cldy 55°

55 BC on site

15 Reconnected July 602 number w/ M. Diana
 55 on line. EC pulling out B231, B231A,
 291B

running composite on tower top
 e making tied beams



35 air lancing w/ GM B294 294A/291
 ARe seaming at 650° and 80°
 pulling out 602

12 Take, while seaming taped over
 to generator + spilled gas on B294-150' up
 "merry B 293/- (59.6 x 325.8)
 228A/228B

PI LC. D.

**ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM**

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/12/97
INSPECTOR: Joseph L. Falcone
LINER TECHNICIAN: _____

WEATHER AM CLDY PM CLDY
TEMP DEG F HI 86 LO 67
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF / 9 = SY
H 2408				NOT MEASURED
H 2404				
H 2396				
H 2068				
H 2450				
H 2442				
H 2190				
H 2423				
H 2399				
H 2373				
H 2437				
H 1915				
H 1999				
H 2364				
102009995	602 GEOTEXTILE			
102086033				1
102063671				
102066300				
102085958				

COMMENTS: _____

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 8/12/97
INSPECTOR: Joseph L. Falcione
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
67 AM	86 PM		
Sol AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: August 12, 1997

IDR #: 336

Weather	High	Low
40y	86	69

Description of work performed and inspected

[illegible]

Remarks: Observed Truck loads of structural fill to LFP4 SE corner. Totals on Jason's sheet. Observed ORSC regrade channel C-3. Filling it 1' on west end to 3" on east. Effectively, only 1' of original cover soil was excavated 70% of that replaced with WMX. WMX loads were only 3 buckets of loader - light even for struck loads until 9:00. Observed EL place 602, PVC (panels B 295, 403, 236A. Airlanced spams with Grant Morgan (p.3). Measured PVC with M. Ojima (p.2) Observed EL place glue composite

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 4 pages

s:\clarktwn\fidforms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 12, 1997

INSPECTOR: BC

LINER TECHNICIAN: JK

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 67		86 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 12, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 6:30	8:30 PM		
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

WESTON
Engineering • Construction • Consulting

S M T (W) TH F S

Date: 8/13/97

IDR #: 337

Weather	High	Low
CLOUDY/RAIN	77	69

[illegible]

Remarks: OBSERVED PLACEMENT OF 9 ROLLS DRAINAGE COMPOSITE
UNTIL 11:30 AM STARTED TO ~~RAIN~~ RAIN. AT 12:30 I LEFT FOR THE
VALHALLA OFFICE BECAUSE OF RAIN

[illegible]

start/finish time: 0700, 1230

Page 1 of 3 pages
s:\clarktw\nfidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

8/13/97
JOE FALONE
PAGE 3 OF 3

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

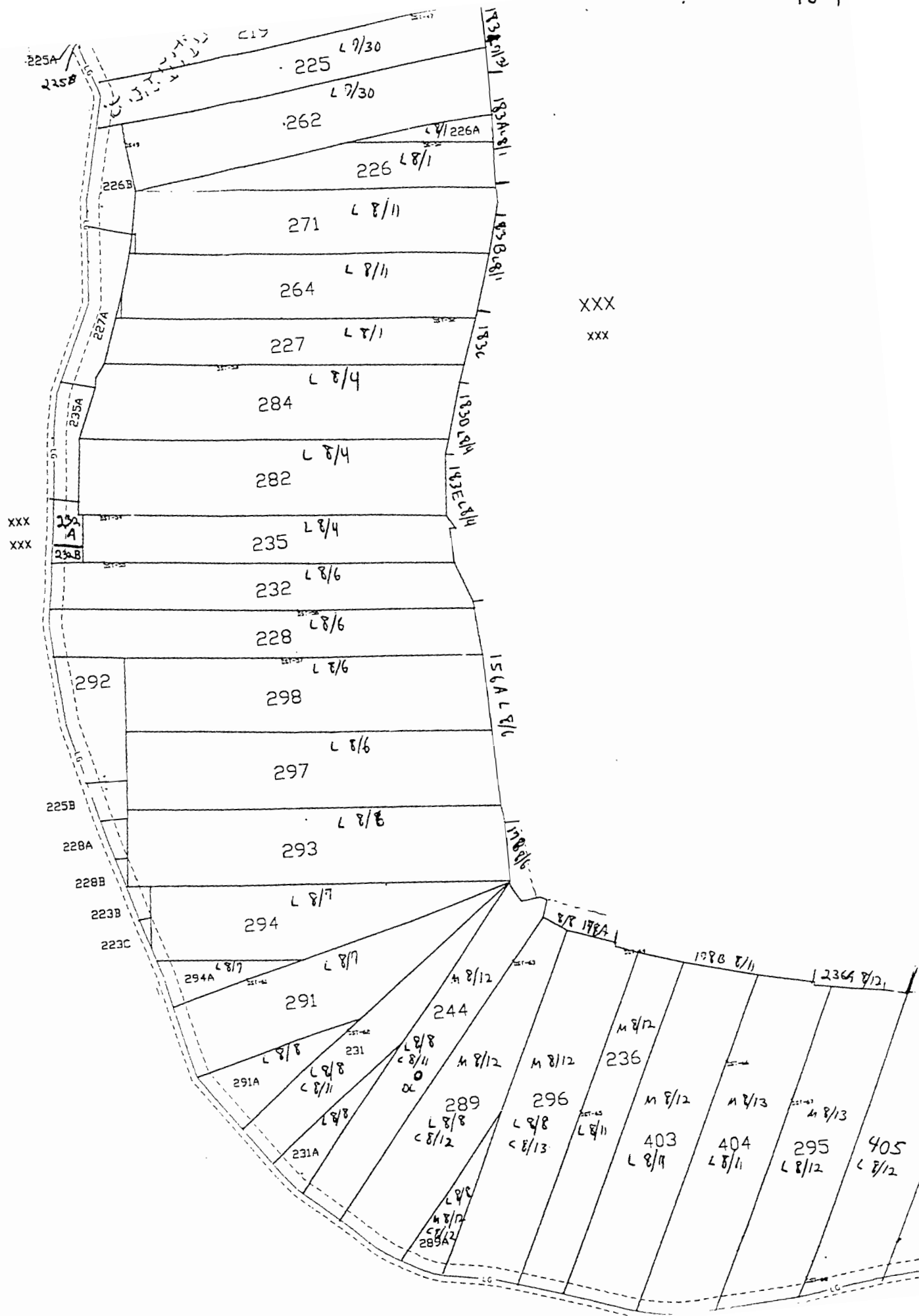
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 13, 1997
INSPECTOR: BC
LINER TECHNICIAN: OM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 69	77 PM		
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

׳ב No: 03228-018-001-0003-00

Date: 8/14/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 338

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Partly cldy	89	70

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 23 ROLLS OF DRAINAGE COMPOSITE & ON LFB-3 SECTIONS 1C, 1D, 2C, 2D, 3C & 3D AS PER ATTACHED FORMS ALSO AIR LANCING AND 3 LIVER PANELS

Equipment & Labor Record

[illegible]

start/finish time: 0700 / 1600

Page 1 of 5 pages

s:\clarktwn\fldforms\ldr.xls

Joseph L. Falcone
Inspector's signature
Joseph L. Falcone
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/14/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	R. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	70		PM 89
Sun AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (>50 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

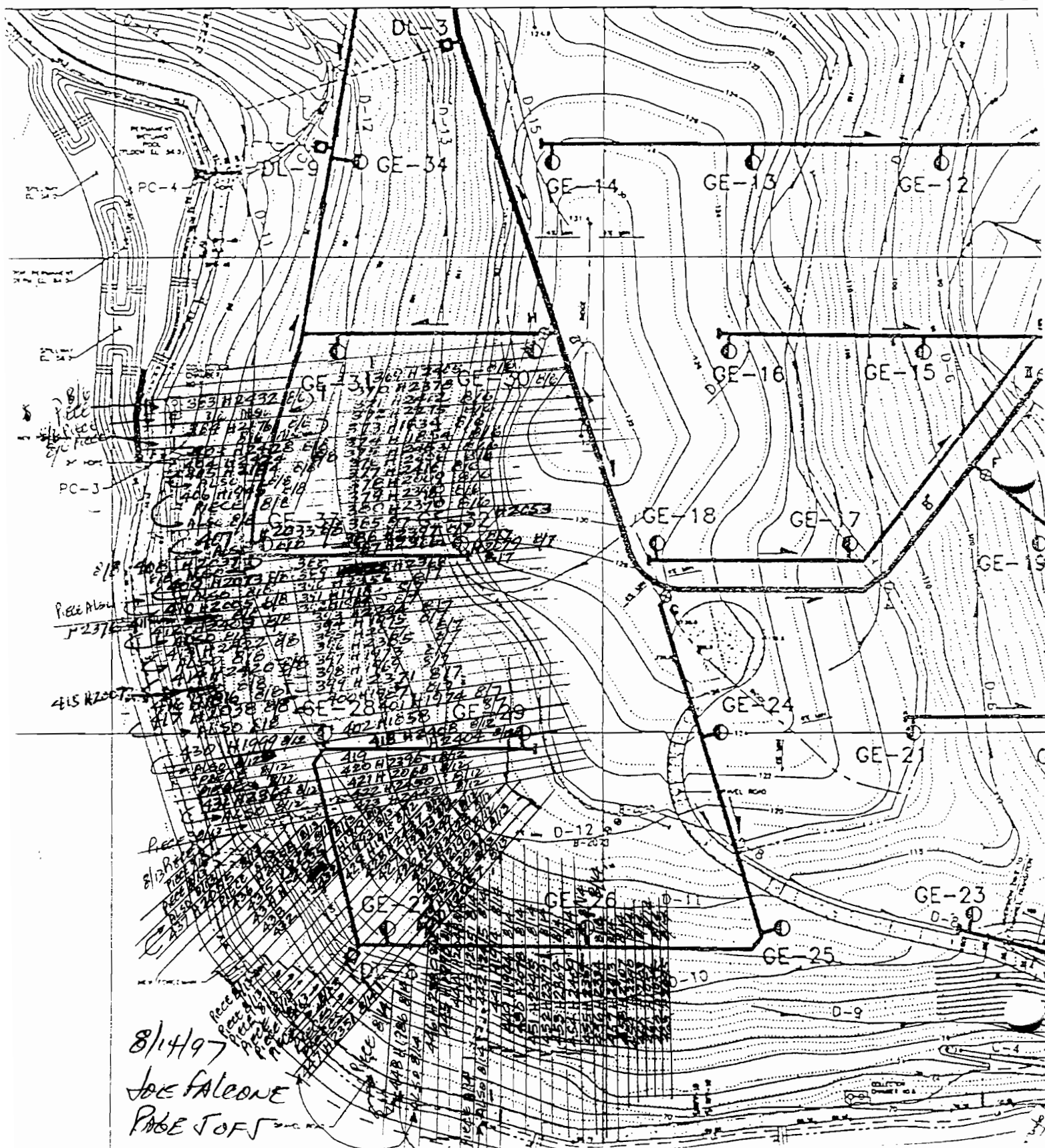
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/14/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER Partly Cloudy
AM X PM X
TEMP DEG F HI 89 LO 70
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF / 9=SY
H1914				NOT MEASURED
H2415				
H2051				
H2048				
H1990				
H2380				
H2351				
H1986				
H1994				
H2078				
H2445				
H2379				
H2369				
H2409				
H2367				
H2334				
H2413				
H2107				
H2290				
H2103				
H1954				
H1955				
H2095				

COMMENTS:



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 14, 1999

INSPECTOR: BC

LINER TECHNICIAN:

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
2d AM			8 PM
Sun AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
TG600	2x2 panels		309.5	27.3		2,449.4sf 938.8sy
	pie of 8 pcs.		306	105		16,065sf 1,785sy
	6x2 panels		300	79		23,900sf 2,633.3sy

Diagram illustrating the layout of the panels, showing a circular structure divided into three segments: 2x2, pie, and 6x2. The dimensions are labeled as follows:

- 2x2 segment: Length 309.5, Width 27.3
- pie segment: Length 306, Width 105
- 6x2 segment: Length 300, Width 79
- Total Length: 1210.5
- Vertical dimension: 300.5
- Horizontal dimension: 27.3

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 14, 1990
INSPECTOR: BC
LINER TECHNICIAN: Rm

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
70 AM		89	PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

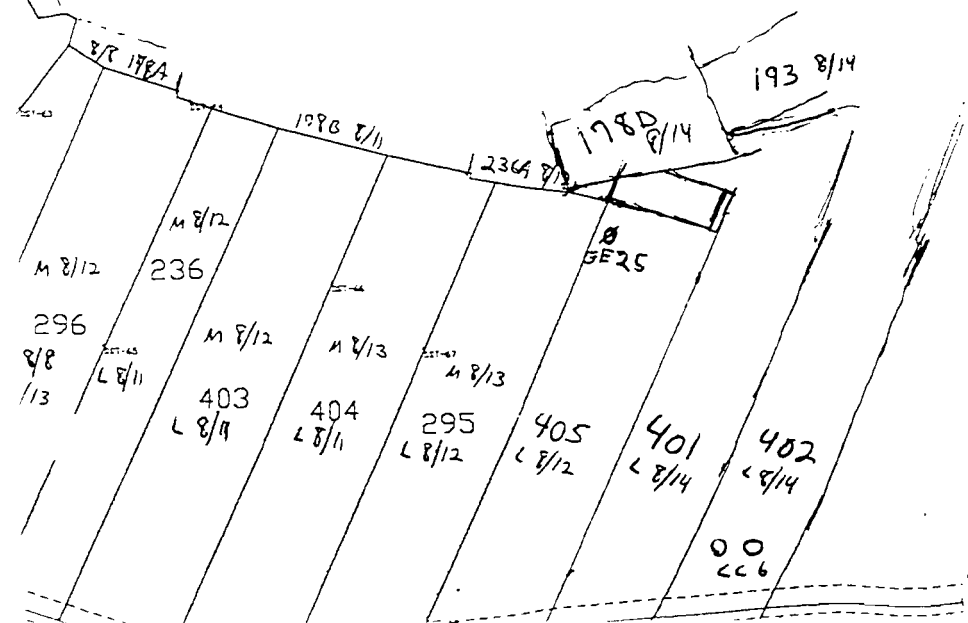
[illegible]

40.54

1834 8/11
1834 8/11
1834 8/11
1834 8/11
1834 8/11

XXX
XXX

56A L 8/16



CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

WEATHER	Clear AM / PM	B. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
TEMP. DEG F	AM <u>60</u>		PM <u>84</u>	
WIND	Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
HUMIDITY	Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PAGE 2 OF 4
c:\clarktwn\fldforms\lner.xls

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/15/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

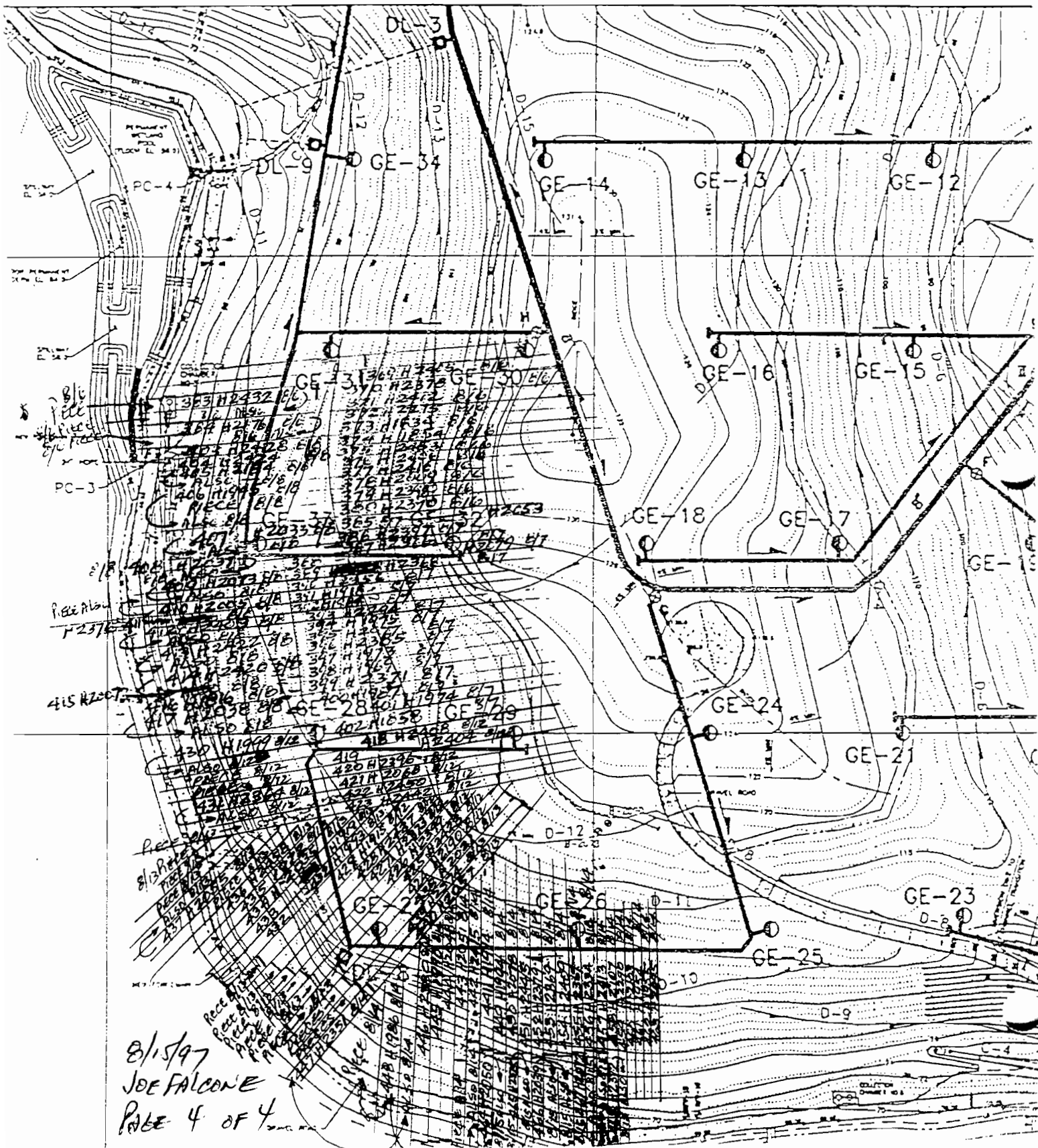
WEATHER
TEMP DEG F
WIND
PRECIPITATION

AM 66 PM 66
HI 87 LO 66
AM _____ PM _____
AM _____ PM _____

Ptly CLDY

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF / 9=SY
H 2372	DRAINAGE Composites			NOT MEASURED
H 2072				
H 2039				
H 2037				
H 2050				
10174894	6 02 GEOTEXTILE			
102086001				
102086873				
101532003				
E 2028	DRAINAGE NETS			
E 2150				

COMMENTS: _____



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 15, 1997
INSPECTOR: BC
LINER TECHNICIAN: JS

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
66 AM		84 PM	
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 15, 1997
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
66 AM		84 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Hand-drawn map of a land parcel, likely a survey or boundary map. The map shows a series of connected line segments forming a boundary. Key features include:

- Top Boundary:** A horizontal line with a label "19" on the left. Below it, a line segment is labeled "L 7/30".
- Left Boundary:** A vertical line with several points labeled "225", "262", "271", "264", "227", "34", "2", "3", and "7".
- Right Boundary:** A vertical line with labels "1834.811", "1836.811", "1836", "1830.64", "1836.811", "1564.811", and "1836.811".
- Internal Labels:** Several labels are placed within the boundary, including "L 7/30", "L 8/11", "L 8/1", "L 8/4", "L 8/6", "L 8/6", "L 8/6", "L 8/6", and "L 8/6".
- Other Labels:** "226A" is labeled near the top right, and "1836.811" is labeled near the bottom right.

XXX

A hand-drawn map showing several land parcels, likely in a coastal or wetland area. The parcels are delineated by solid and dashed lines. Annotations include dates (e.g., 8/7, 8/12, 8/13, 8/14, 8/15), numbers (e.g., 231, 244, 236, 289, 296, 403, 404, 295, 405, 401, 402, 407, 406), and letters (e.g., L, M). Some areas are labeled with "LG" (likely "Large") and others with "GE25". There are also some scribbled-out areas and handwritten notes like "2364 8/11" and "178D". The map appears to be a field sketch or a preliminary plan.

WESTON

S ~~M~~ T W TH F S

Date: 8/18/97

IDR #: 42

Weather	High	Low
RAIN/CLEAR	77	60

[illegible]

Remarks: WENT FOR PHYSICAL IN A.M. - NO ACTIVITY WITH
LINEERS - WENT TO MAINALLA OFFICE IN AFTERNOON

[illegible]

.t/finish time: 7 /

Page 1 of 1 pages
s:\clark\tn\fidforms\idr.xls

Inspector's signature
Inspector's name



S (M) T W TH F S

Date: August 18, 1997

IDR #: 342

Weather	High	Low
rain/clear		

[illegible]

Remarks: Observed storm damage on Landfill. West side gullies 4"-8" deep except areas near GR28, TB-3 was erosion to liner x 2'-8" wide. On North slope little damage (protected by top soil) except at swale bottom and edge of liner. Spent most of day (after 0930) on paper work.

[illegible]

Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 8/19/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 443

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
C.R. / PTLy Cldy	81	76

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF DRAINAGE COMPOSITES (25 ROLLS) & REPLACEMENT OF DAMAGED GEOTEXTILES & NETTING ON TOP OF LANDFILL

Equipment & Labor Record

[illegible]

start/finish time: 0700, 1300

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

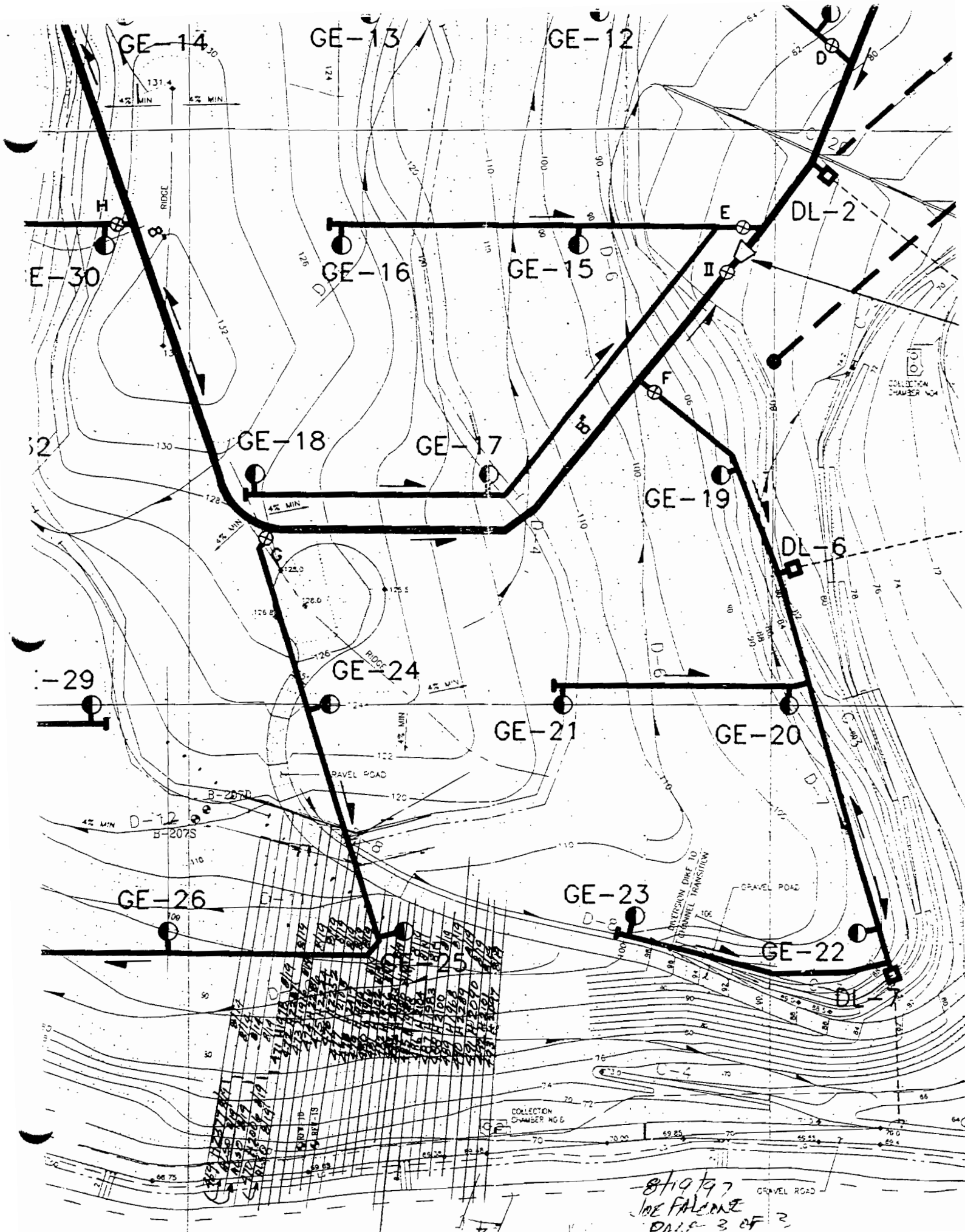
DATE: 8/19/81
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER
TEMP DEG F
WIND
PRECIPITATION

AM Prty CLDg/CLR PM
 HI 81 LO 56
 AM PM
 AM PM

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/ 9=SY
H 2377				
H 2006				
H 1978				
H 2287				
H 1916				
H 2286				
H 2244				
H 2252				
H 2105				
H 2417				
H 1946				
H 1966				
H 2102				
H 1956				
H 2083				
H 1980				
H 1958				
H 2104				
H 1983				
H 2100				
H 1968				
H 2289				
H 2090				
H 2101				
H 2097				

COMMENTS:



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: August 19, 19

IDR #: 343

Weather	High	Low
clear / pty clod	81	56

Description of work performed and inspected

[illegible]

Remarks: Observed E.C. place compacts. Observed ORSC prepare next subgrade.
Partial OK because much of it is not walked by metal. Advanced scans, boots, reports w/GM (p.2)
Observed E.C. cut destructs 69, 70, 71. Spent 2 hrs. in AM doing paper work

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 2 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 19, 1999
INSPECTOR: PC
LINER TECHNICIAN: CM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
56 AM		81 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

ב"ב No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 8/28/97

IDR #: 344

Weather

High

Low

CLAY/SHOWERS

70

61

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 6 ROLLS OF DRAINAGE COMPOSITE
& 4 ROLLS OF 6 OZ GEOTEXTILE AS PER ATTACHED FORMS (LFPL 4-)
RAIN COMMENCED AT 2:30 PM. (SECTIONS 1D, 1E, 2D & 2E)

Equipment & Labor Record

[illegible]

5. finish time: 0700, 11500

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

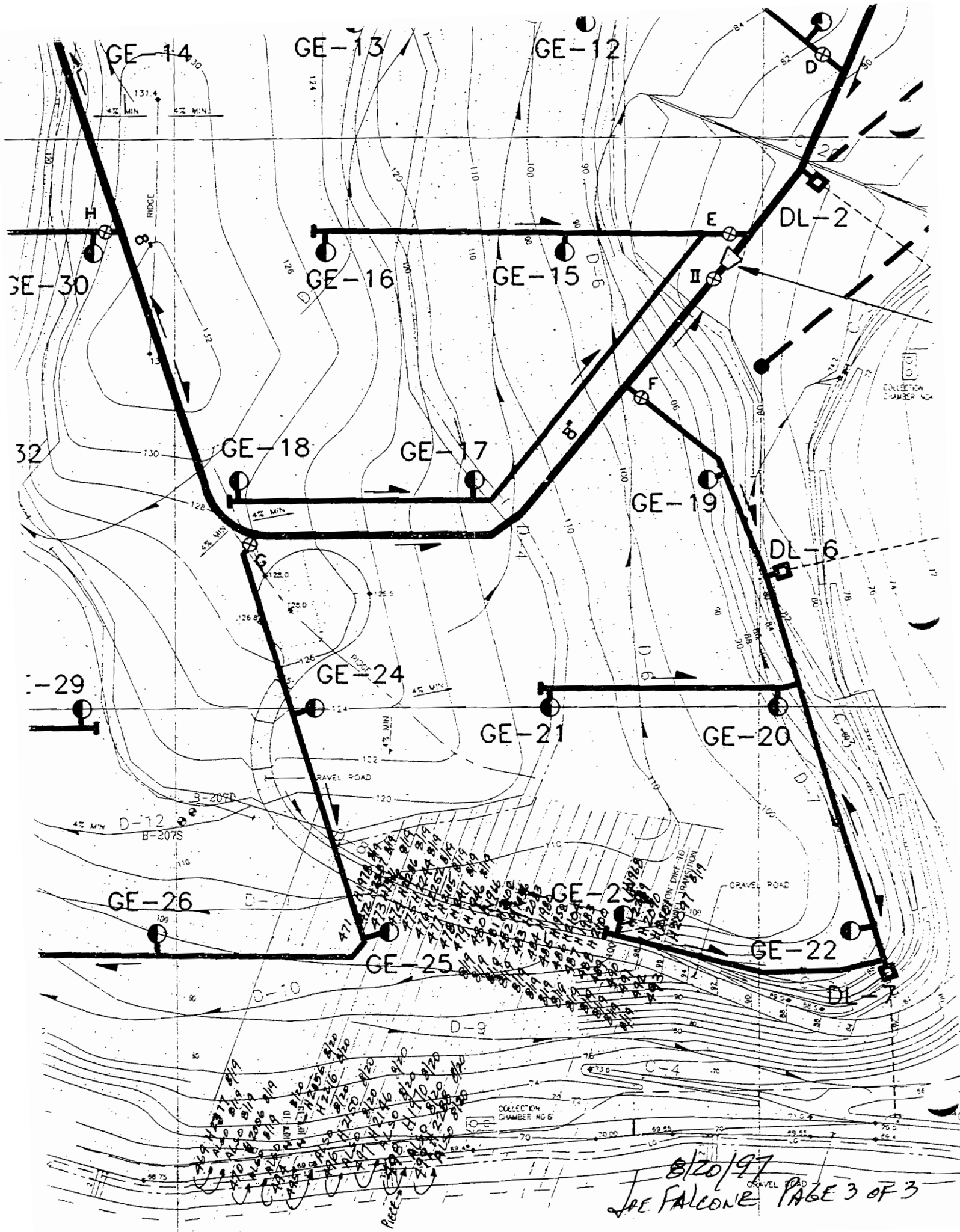
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/20/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	PM
TEMP DEG F	HI <u>70</u>	LO <u>61</u>
WIND	AM	PM
PRECIPITATION	AM	PM

[illegible]

COMMENTS: OBSERVED PLACEMENT OF 6 ROLLS OF DRAINAGE COMPOSITE
 & 4 ROLLS OF 6 OZ GEOTEXTILE - PAIN COMMENCED @ 2:30 PM



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: August 20, 1997

IDR #: 344

Weather

High

Low

city/showers		
--------------	--	--

Description of work performed and inspected

[illegible]

Remarks: Observed EL cover subgrade in southeast corner (LRP4) with Amoco 4506, and roll out geocomposite on south slope. Also they repaired geocomposite and placed 6 oz. fabric on GE31 and began to line channel at head wall 13. Work ceased due to showers at 1330.

Equipment & Labor Record

[illegible]

Start/finish time: 0709/1530

Page 1 of 1 pages

s:\clarktwn\fldforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: August 21, 1991

IDR #: 345

Weather	High	Low
rain	66	57

Description of work performed and inspected

[illegible]

Remarks: Walked site inspecting rain damage from 9:00 - 10:30 - damage relatively minor over most of site. Noted headwall failure at TB-6 due to erosion of stone. John Volk says it happened during 1st storm after construction. Spent rest of day doing paperwork. Subgrade appears to be holding up under 6oz. fabric at SE corner.

Equipment & Labor Record

[illegible]

Start/finish time: 0900 / 1500

Page 1 of 1 pages
s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 8-22/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 346

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Cloudy	86	61

Description of work performed and inspected

[illegible]

Remarks: NO ACTIVITY AT LINER & COMPOSITE AREA. OBSERVED ACTIVITY AT HEADWALL #16 WHICH HAD SHIFTED SLIGHTLY DUE TO RAIN & EROSION OF SOIL BEHIND HEADWALL. HEADWALL & DRAIN PIPE WAS REMOVED & RESET. APPROX 6' X 15' AREA IN FRONT OF HEADWALL WAS FULL OF SILT & SETTLED BETWEEN BLOWNET & DRAINAGE COMPOSITE. ALL SILT WAS REMOVED & CLEANED. BOB C. & I AGREED ON CLOSING COMPOSITE WITH TIES COVERING PIPE WITH 60Z ~~GEOTEXTILE~~ GEOTEXTILE & ALSO ANOTHER LAYER OF DRAINAGE COMPOSITE. HEADWALL SET IN PLACE WITH BEDDING MATERIAL & FABRIC UNDER HEADWALL DRAPED AROUND OUTFALL AREA. 9 BUCKETS OF GRAVEL & 11 BUCKETS OF RIP RAP PLACED AROUND OUTFALL AREA.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1600

Inspector's signature
JOSEPH L. FALCONE
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: August 22, 1977

Consultant: Roy F. Weston of New York, Inc.

IDR #: 346

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
cldy	86	61

Description of work performed and inspected

[illegible]

Remarks: No liner work today. Liner repair at HW 13, 14 washed out due to sloppy subgrade. Observed ORSC re-set HW 16 due to washout of stone. Observed them remove a "pillow" of sediment 3.5' x 10' x 1' between PVC liner and geocomposite in drainage channel. ORSC repaired geocomposite by placing a layer of 6 oz and 2nd layer of geocomposite over. In PM observed ORSC place HW 8, 60' of 24" HDPE corrugated pipe.

Equipment & Labor Record

[illegible]

Start/finish time: 0900, 1730

Page 1 of 1 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 8/24/97

IDR #: 349

Weather	High	Low
CLR / Ptly CLDY	86	58

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF (1) ROLL 602 GEOTEXTILE & (5) ROLLS DRAINAGE COMPOSITES (AS PER ATTACHED FORMS - ALSO 6 LINER BLANKETS - ALL ON LFP-4 - SECTION 1 & 2, C, D, E & F

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1600

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

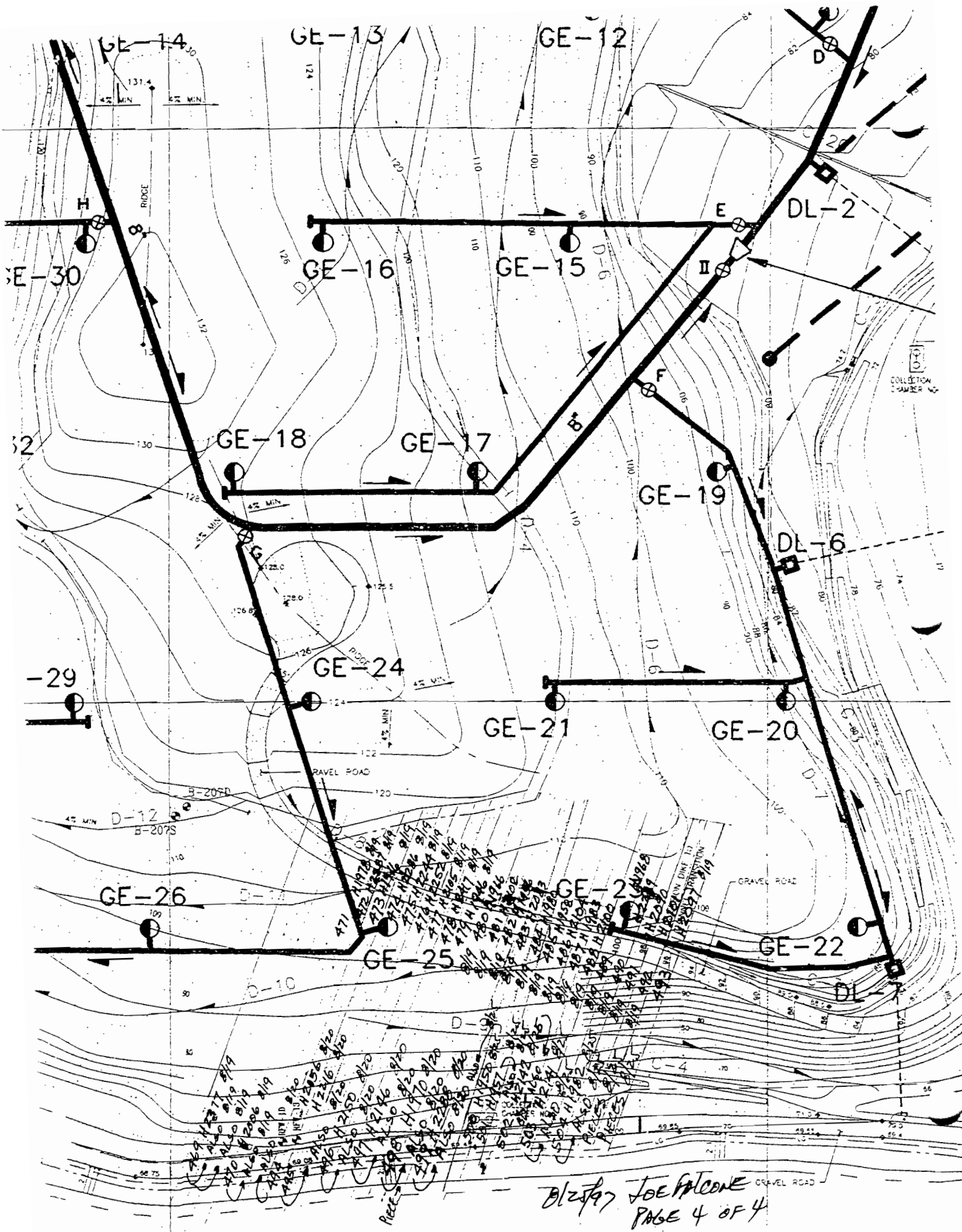
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/25/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER AM Sunny PM Cloudy
TEMP DEG F HI 86 LO 58
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H1950	DRAINAGE COMPOSITE			NOT MEASURED
H1957				
H 2142				
H 1982				
H 2141				
102086875	602-GEOTEXTILE			

COMMENTS:





S **M** T W TH F S

Date: August 25, 1999

IDR #: 349

Weather	High	Low
c/r/pthy cldy	86	58

[illegible]

Remarks: Observed EL pull out PVC Blankets B283, 283A, 281, 281A, 409, 408, 408A, all embossed.
4 seams Hot welded, 3 seams glued (409, 408, 408A) (p-3)
Measured +6600 w/ M. DMM.

[illegible]

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

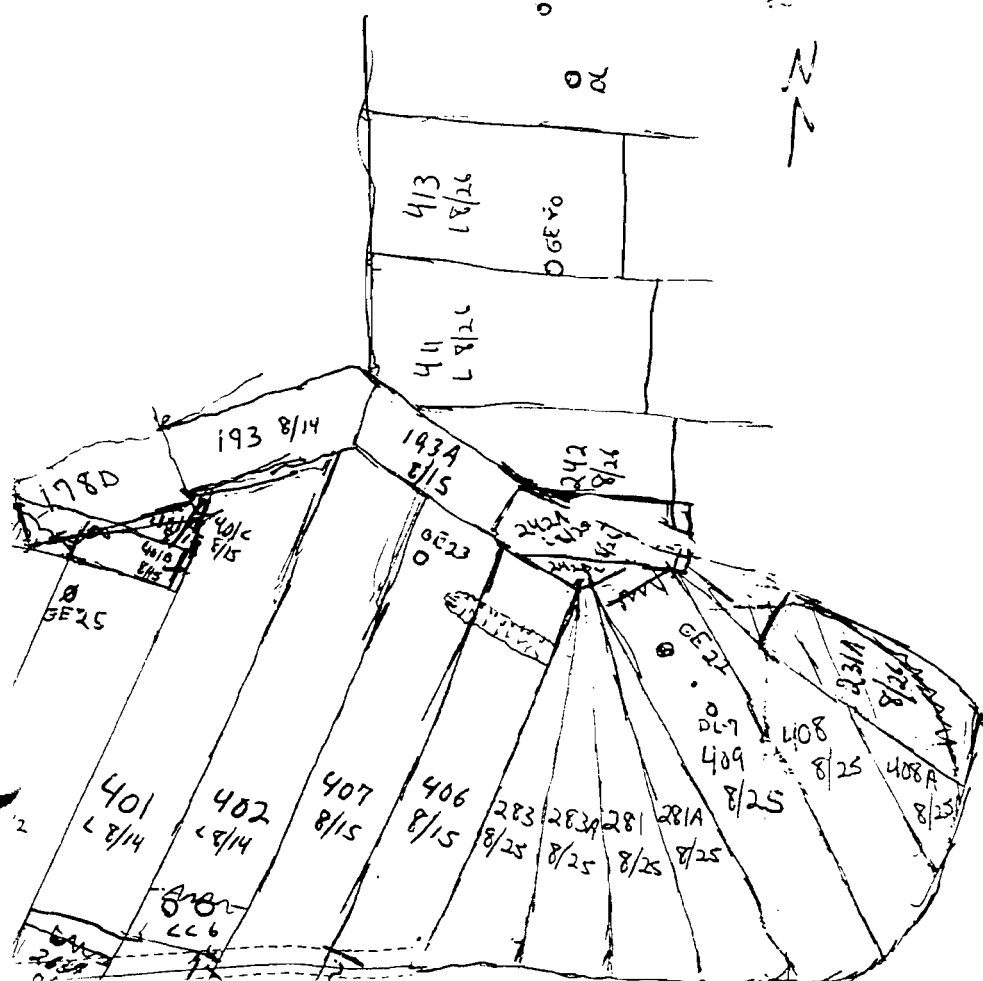
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 25, 1997
INSPECTOR: BC
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	R. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
58 AM		76 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/26/97
INSPECTOR: Joseph L. FALCONE
LINER TECHNICIAN: _____

WEATHER
TEMP DEG F
WIND
PRECIPITATION

AM Ply clay PM Ply clay
HI 87 LO 61
AM _____ PM _____
AM _____ PM _____

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: August 26, 1997

IDR #: 350

Weather	High	Low
partly cloudy	87	61

Description of work performed and inspected[illegible]

Remarks: Observed EC cut destincts DS 72, 73 M, cut & roll out gogcompus Ae, and
Finishing repairs on liner at HW 13, 14 including air lance testing (p34) observed EC pull out
PVC panels B411, B413 (40'x220'). Measured PVC panels with M. Ojaha (p-2)
BC off-site at 1200

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1800

Page 1 of 5 pages
s:\clarktwn\fldforms\ldr.xls


Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 26, 1997

INSPECTOR: BC

LINER TECHNICIAN:

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6/ AM			7 PM
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B406	embossed	OK	249	59.85		14,908.75sf 1,655.95sf
B283/283A/ 281/281A	(embossed) (4 pies)		(250 x (27 x 5.1 x .5) - (19.5 x 19 x .5) =	225.8 x .5) + - =		28,108.65sf 3,123.25sf
B409	(embossed)		(261 x (30 x 23) + (30.45 x 23 x .5) =	60.45) + =		B409 16,817.65sf 1,868.65sf

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 26, 1997
INSPECTOR: BC
LINER TECHNICIAN: JD

WEATHER

TEMP. DEG F
WIND

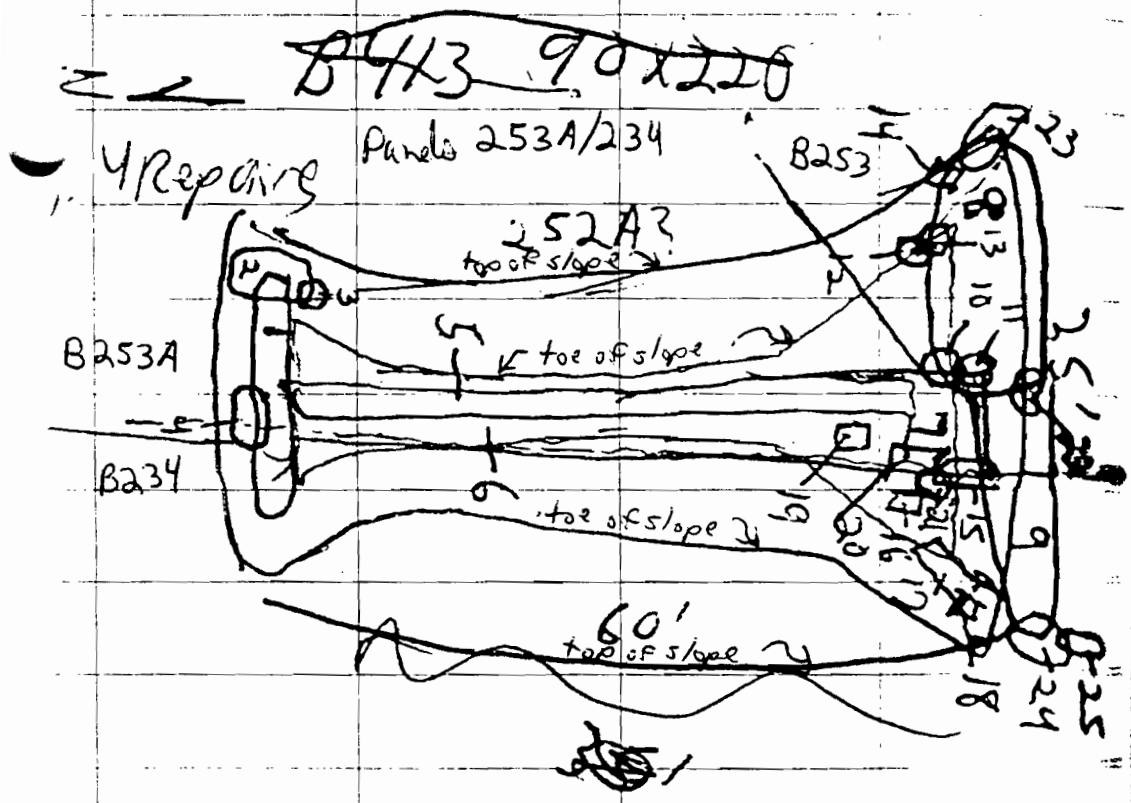
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6 AM		8 PM	
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

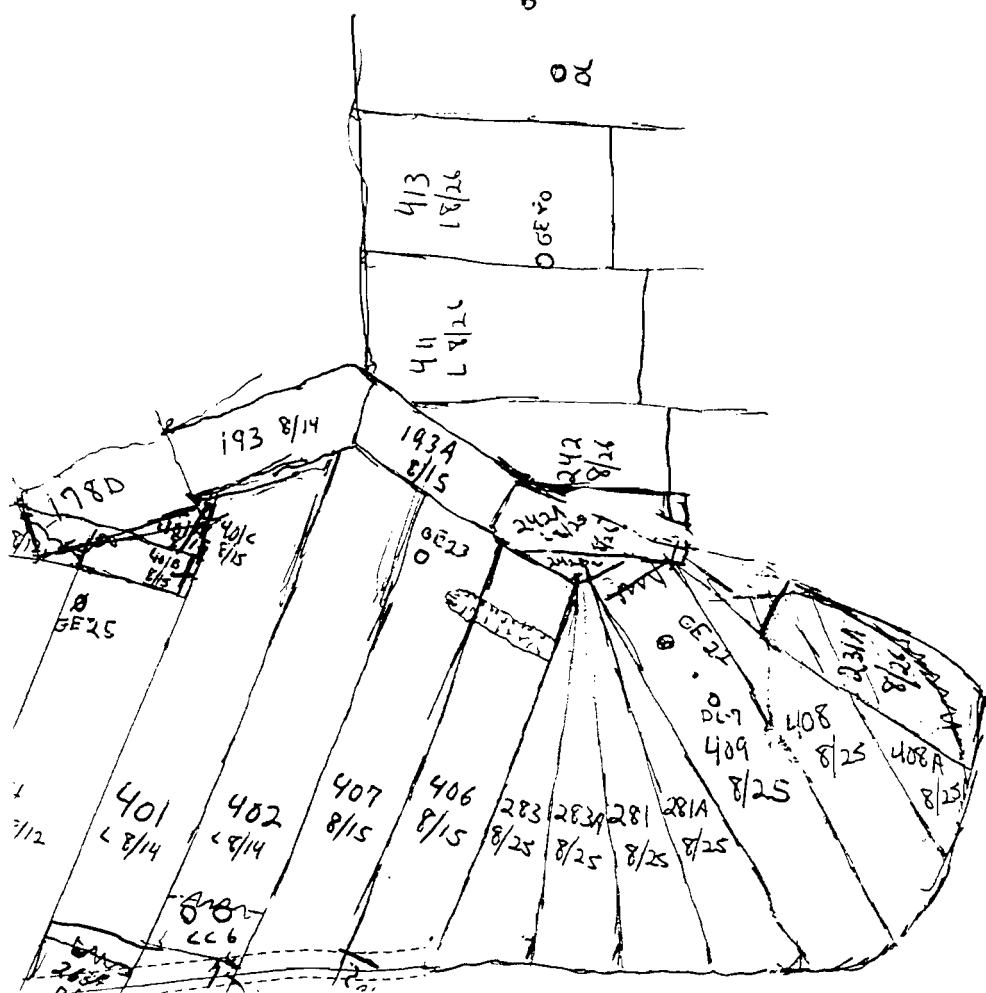
W 406/283 990' down 45' up
 281/281A 120' down 125' up
 409/408 200' down 81' up
 my gut composite -
 subgrade still needs to
 milled
 digging up anchor trench
 testing H/W 13, 14 repair

1030 EL
 1055 4 of 5
 1110 Meas
 B406 (
 83 + mag
 (22.
 83/283A/



409 (1
 (30.48

-HW 13, 14 were pulled up 8' w/gas
 Jarvis punctured & patch (R-19)
 total



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T **W** TH F S

Date: 8/27/97

IDR #: 351

Weather	High	Low
Ptly CLDY, Ptly CLDY	82	59

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 19 ROLLS DRAINAGE COMPOSITE ON LFR4 ~~SECTION~~
OBSERVED AIR LIFTING OF SEAMS ON BLANKETS (SEE ATTACHED FORMS)
SECTIONS 1C, 1D, 1E, 2C, 2D, 2E, 3C, 3D, 3E

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1600

Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

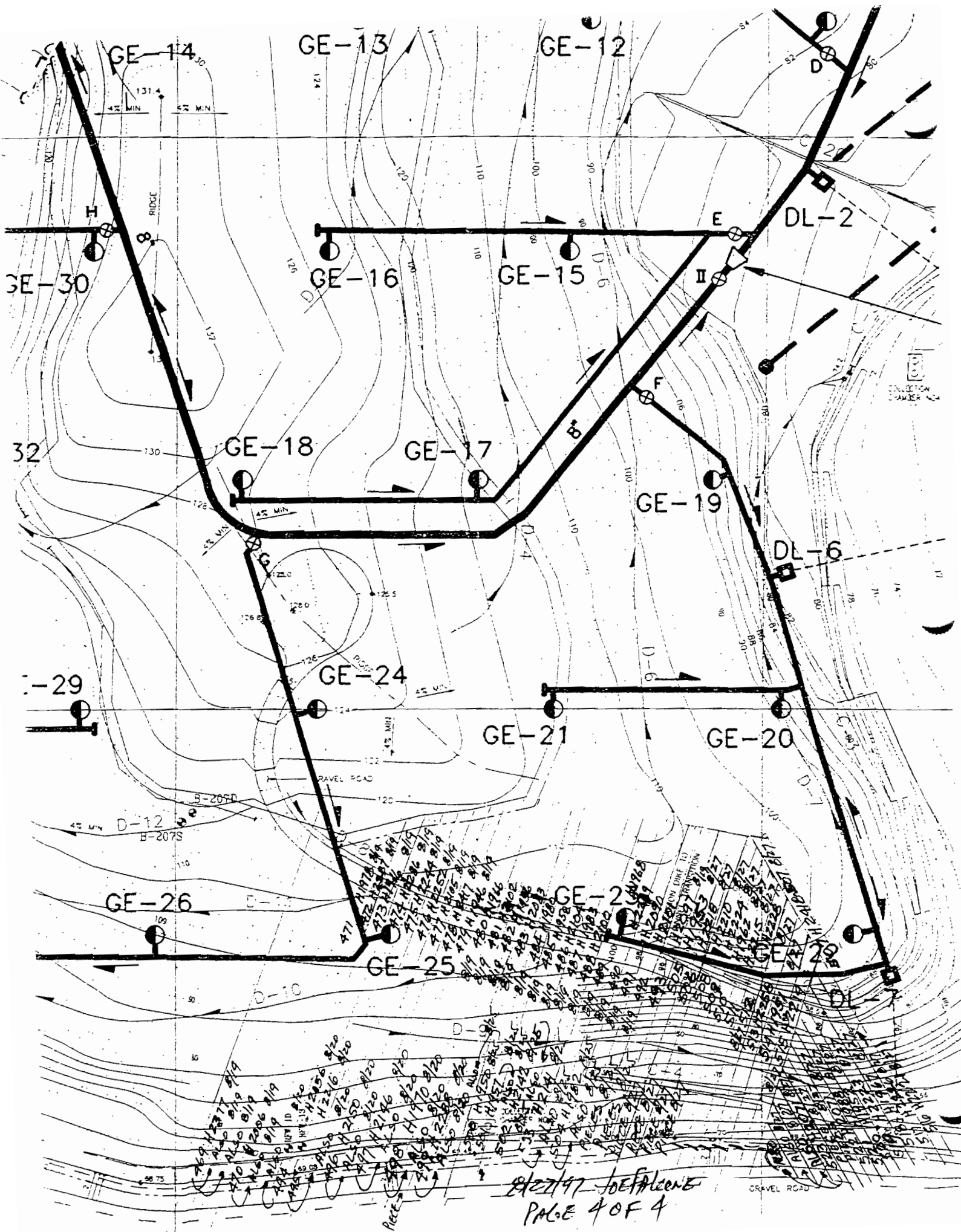
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 8/27/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	<i>ptly cldy / ptly cldy</i>	PM	
TEMP DEG F	HI	<i>82</i>	LO	<i>59</i>
WIND	AM		PM	
PRECIPITATION	AM		PM	

[illegible]

COMMENTS:



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: August 27, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 351

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
<u>ptly cldy</u>	<u>82</u>	<u>59</u>

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
<u>22D</u>	<u>LFP4 G1,2, H1,2</u>	<u>2,104.5 sy</u>	<u>B242A,B, B408/408A</u>
<u>22E</u>	<u>LFP4 E1</u>	<u>748.3 sy</u>	<u>B193, B193A</u>
<u>23A</u>	<u>LFP4 E1, G1,2, H1,2</u>	<u>2,852.8 sy</u>	
<u>24B</u>	<u>LFP4 F1, G1</u>	<u>3,165.5 sy</u>	
<u>5A</u>	<u>LFP4 5 wet spots in subgrade F3</u>	<u>38.8 cy</u>	
<u>5D</u>	<u>LFP4 F3 5 wet spots</u>	<u>33.7 cy</u>	<u>(excavation volume less 6" of reused WMX)</u>

Remarks: Observed EC air handling seams (see p. 3) and measured PVC and geocomposite with M-Dianna (see p. 2). Observed ORSC excavating soft spots in subgrade (5 spots south of DC6, near GE-19).

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700, 1730

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: August 27, 1999

INSPECTOR: BC

LINER TECHNICIAN: _____

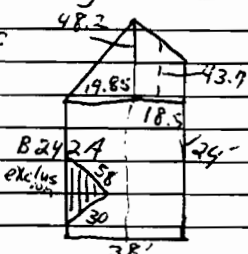
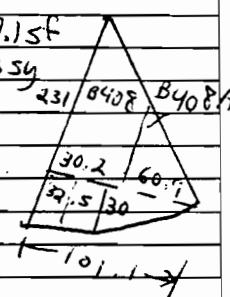
WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
59 AM		82 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B193A	(smooth)		117	28.25		3,305.35sf 367.35y
B193	(smooth)		114.6	30 - 1yd		3,429.5sf 381.5y
B242B	(embossed)	triangle	32.2	6.5		104.75sf 11.65y
B242A	(embossed)		(124 x 38) + (19.85 x 48.2 x .5) + (18.5 x 43.7) - (30 x 58 x .5) =		5,128.8sf 569.9sy	
B408/408A	(embossed)	2 triangles	(231 x 101.1 x .5) + (30.2 x 32.5) + (69.9 x 30 x .5) =		13,707.15sf 1,523.5y	
TG600	2nd layer on soft spot		25	13		325sf 36.13y
TG600	20x2 panels		215	131		28,165sf 3,129.4sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: August 27, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
59 AM		82 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

5 excavator wet spots in subgrade

Pit #1 $6 \times 9 \times 3 = 64 \text{ yds}$

Pit #2 at GE20 $10 \times 10 \times 5 = 18.5 \text{ cy}$

Pit #3 $6 \times 7 \times 3.5 = 5.4 \text{ cy}$

Pit #4 $6 \times 8 \times 3.5 = 6.2 \text{ cy} \rightarrow N$

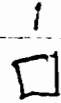
Pit #5 $6 \times 6 \times 2' = 2.7 \text{ cy}$

DL-6



5

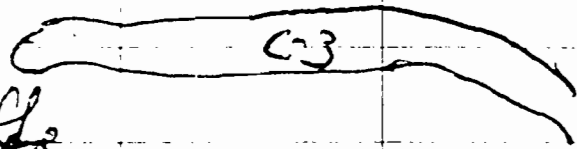
2



3

4

GE19



On the subgrade where the
 2y came in to all rule show
 how PC400 LC loader (6' bucket) can
 get stone out of Moxxy
 pits were filled w/ 1/2" stone to 6-8"
 surface and backfilled w/ saved WMIX

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: August 28, 1999

IDR #: 352

Weather	High	Low
rain/cloudy	71	60

Description of work performed and inspected

[illegible]

Remarks: ~~at~~ Worked w/ M. Diener to establish painted/surveyed marks 2' in from edge of Smith Cien at top of land fill to quantify smooth PVC pipe already placed, and give reference for measurement in future. Rain prevented EL from working - they laid off 10 workers today. A skeleton crew will be here tomorrow.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 1 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Robert Cunningham
Inspector's name



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH (F) S

Date: August 29, 1994

IDR #: 353

Weather	High	Low
ptly cdy	78	63

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
	No measurements today		

Remarks: Observed ORSC build Filter bed of Rip rap at TB-3. Observed EL stand flap 1 on top of North slope. Work ceased at 1200

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700, 1230

Page 1 of 1 pages

s:\clarktown\fdforms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M W T H F S

No: 03228-018-001-0003-00

Date: 9/2/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 357

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLAY/PTLY CLDY	82	68

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION		QUANTITIES	REMARKS
	LENGTH	WIDTH		
SECT. #1	136	15'	2040 sq ft	
SECT. #2	110.5	7.50'	828.75 "	
SECT. #3	100.5	10.80'	1085.40 "	
	TOTAL		3954.15 sq ft = 439.35 yd ²	
				(NO)

Remarks: 8:15 AM OBSERVED LINER CREW WORKING @ TOP LANDFILL NORTH EAST CORNER -
PLACEMENT OF FLAPS, LINER & COMPOSITES # SEE MEASUREMENT ABOVE FOR LINER
12:30 PM OBSERVED CUTTING HOLE IN LINER @ GE 34 TO LET GAS & AIR ESCAPE
FROM BURIED - APPROX. AREA 30' X 30' - 6" HOLE CUT & PATCHED & ENTIRE
AREA AIR LANDED & BACK FILLED

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700 / 1400

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

DATE: 9/2/97
INSPECTOR: Joseph L. Falave
LINER TECHNICIAN: _____

HUMIDITY

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
SECT. #1			136'	15'	2040	2040 SPFT
SECT. #2			110.5	7.50		828.75 ---
SECT. #3			100.5	10.80		1085.40 " "
						TOTAL 3954.15 SPFT
						439.35 sq yds.

136

SECT #1	15	100.5	
SECT #2	7.50	SECT#3	10.80
110.5			

SECT #1	SECT#2	SECT.#3
136	110.5	100.5
15	7.50	10.80
2040 SPFT	828.75	1085.4

2040

828.75

1085.40

3954.15 SPFT.

439.35 sq yds.

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 2, 1997

INSPECTOR: BC

LINER TECHNICIAN:

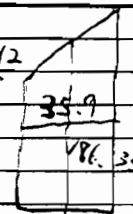
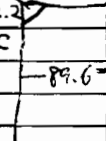
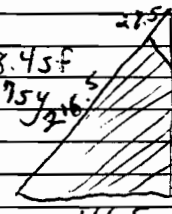
WEATHER

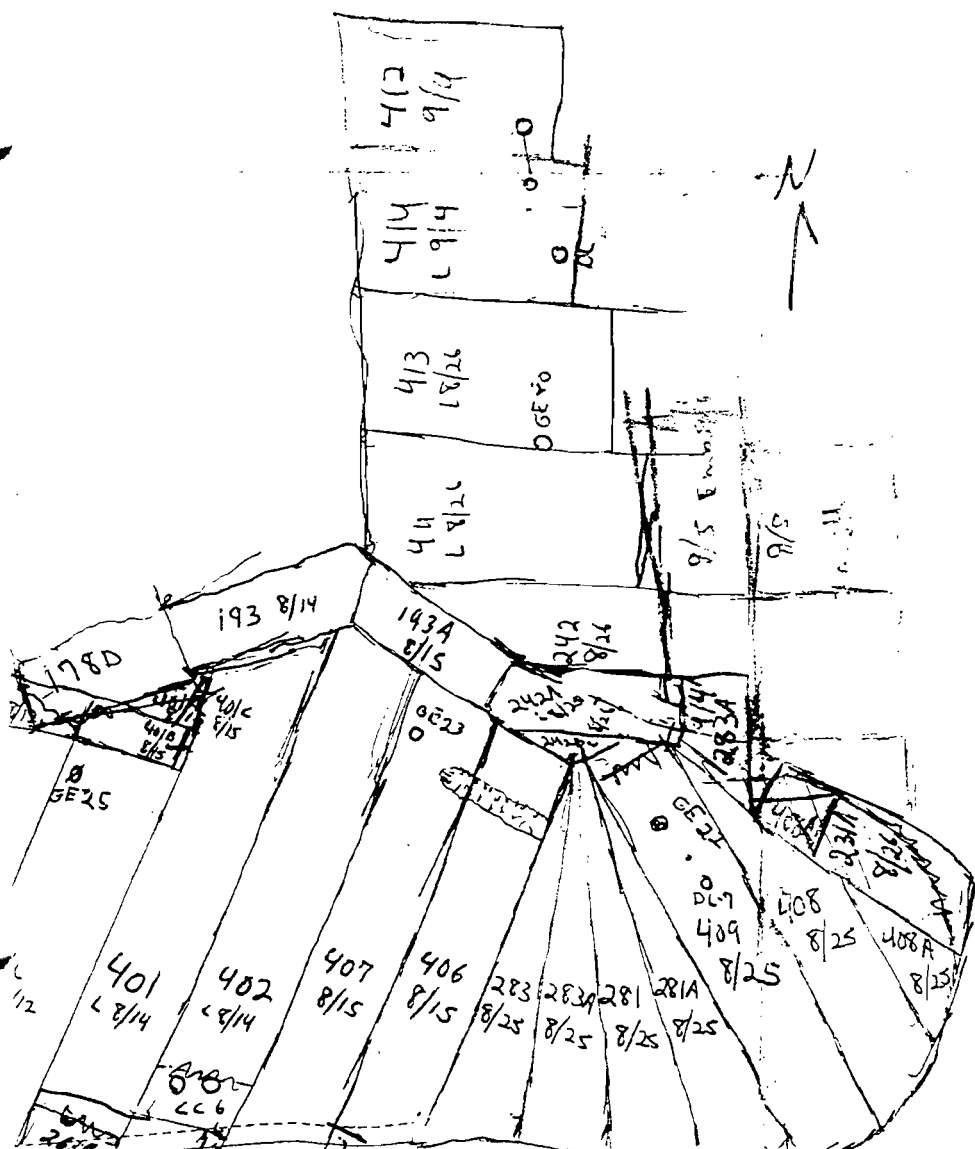
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
6 AM		8 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B242			186.35	35.90		B242 6680.5F 743.35y 35.9 186.35 
B411			(209 x 89.6) - (22.2 x 2.9 x .5) =			209 89.6 22.2 2.9 .5 18,640.2 18,640.2 2,081.25y 89.6 209 
TG605	pie - 11 panels		(216.5 x 166.5 x .5) - (53 x 28.5 x 1/2) =			216.5 166.5 .5 53 28.5 17,268.45F 1,918.75y 216.5 166.5 



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T ~~W~~ TH F S

b No: 03228-018-001-0003-00

Date: 9/3/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 358

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / PLY CLDY	75	60

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 16 ROLLS DRAINAGE COMPOSITE & 2 ROLLS 602 GEOTEXTILE ON LFP-4 SECT. 1F, 1G, 2F, 2G, 3F & 3G

Equipment & Labor Record

[illegible]

2. Ufinish time: 07:00 / 16:00

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

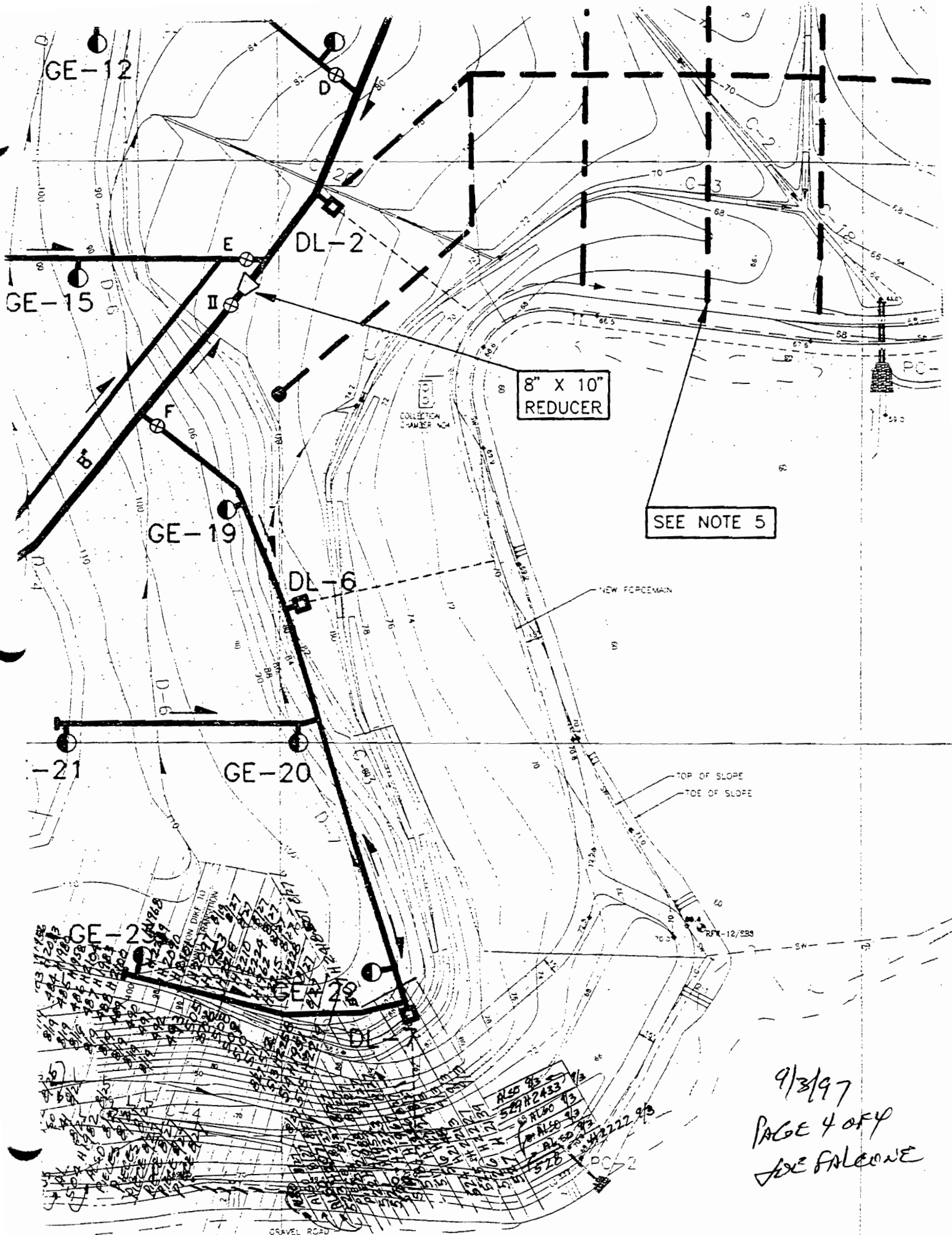
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 9/3/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN:

WEATHER	AM	CLDY	PM	PARTLY CLDY
TEMP DEG F	HI	75	LO	60
WIND	AM		PM	
PRECIPITATION	AM		PM	

[illegible]

COMMENTS:



9/3/97
PAGE 4 OF 4
JEE FALCONE



S M T W TH F S

Date: September 3, 1961

IDR #: 358

Weather	High	Low
cloudy / partly cloudy	75	60

[illegible]

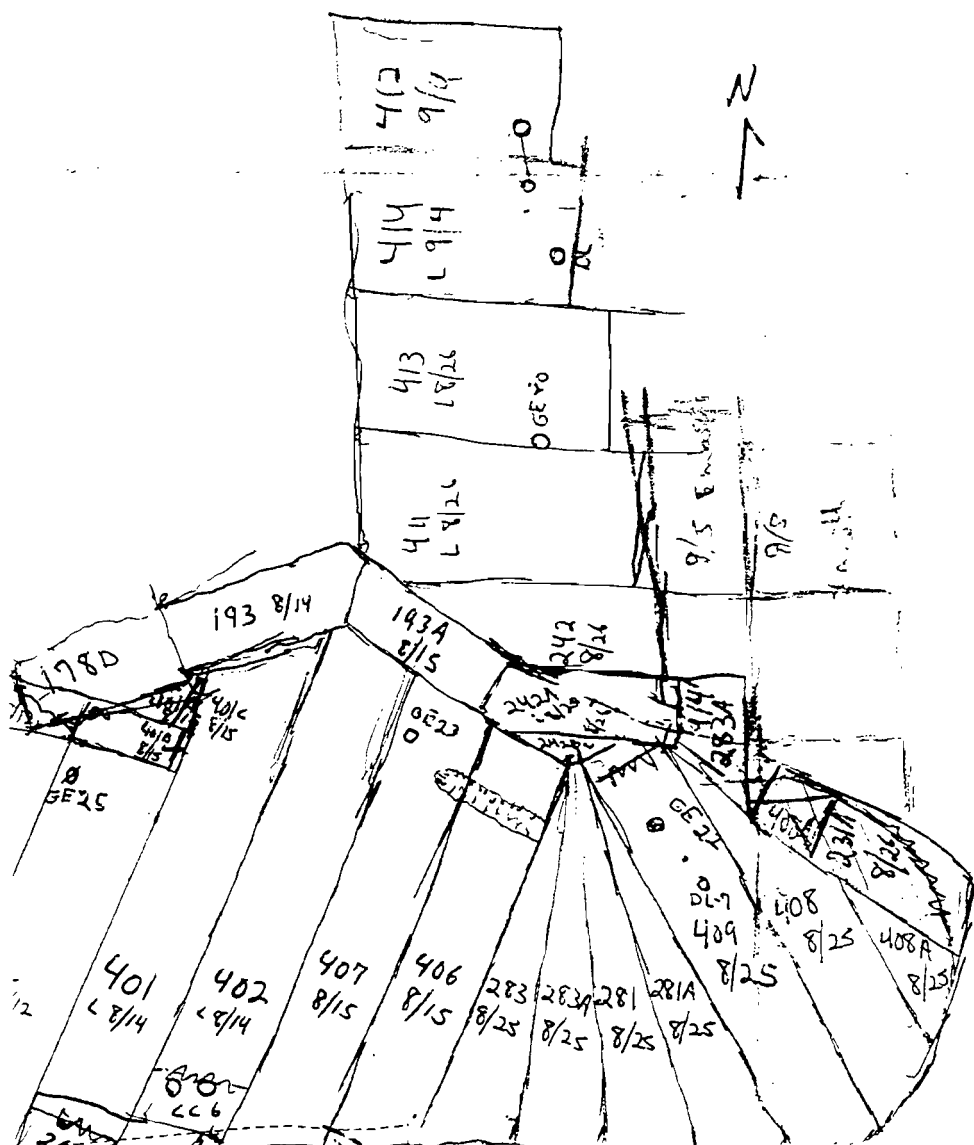
Remarks: Measured panel B231A with Mike Dwyer. Observed ORSC work on JKR
D18 placing curbside after rain mat.

observe ORSC ~~flap~~ on flap 5 attempting to complete store placement and flap trimming, but work was improperly done.

[illegible]

Robert Cunningham
Inspector's signature

Robert Cunningham
Inspector's name



WESTON

S M T W TH F S

Date: 9/5/97

IDR #: 359

Weather	High	Low
CLR/CLR	73	49

[illegible]

Remarks: OBSERVED PLACEMENT OF 3 ROLLS OF 6 OZ. GEOTEXTILE & 4 LNER
BLANKETS ON LFP-4 - SECTIONS 2F & 3F

[illegible]

Jfinish time: 07⁰⁰ 1/1600

Page 1 of 3 pages
s:\clarktw\nfidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
Joseph L. Falcone
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 9/4/97
INSPECTOR: Joseph L. Falcone
LINER TECHNICIAN:

WEATHER
TEMP. DEG F
WIND
HUMIDITY

 AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	73		PM
Sili AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

WESTON
ESTABLISHED 1900

S M T W TH ~~F~~ S

Date: 9/5/97

IDR #: 360

Weather	High	Low
CL/CL	82	52

[illegible]

Remarks: OBSERVED PLACEMENT OF 7 LINER BLANKETS & AIRLANCE OF
2 SEAMS. LPP-4 SECTIONS 2F & 3F

[illegible]

Start/finish time: 0700 / 01600

Page 1 of 3 pages
\\clarktown\\idforms\\idr.xls

Inspector's signature
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 9/15/97
INSPECTOR: Joseph L. Falone
LINER TECHNICIAN: _____

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Class AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	12		PM 82
Sun AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 9/3/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN:

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM <u>52</u>			PM <u>82</u>
Soil AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: September 5, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 360

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
clear/clear	82	52

Description of work performed and inspected

[illegible]

Remarks: Observed EL pull out prc panels B185, 193A
Measured B409A, B283C, D

Equipment & Labor Record

[illegible]

Start/finish time: 0700,

Page 1 of 2 pages
s:\clarktw\n\fidforms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 5, 1997

INSPECTOR: BC

LINER TECHNICIAN: JL

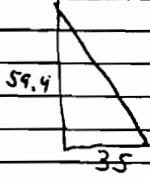
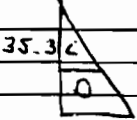
WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM <u>52</u>		PM <u>82</u>	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B409A	triangle		(59.4	x 35 x .5)		 59.4 35 1,039.5 sf 115.5 sy
B283C, D	triangle		(35.3	x 17.7 x .5)		 35.3 17.7 312.4 sf 34.7 sy

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 6, 1999

INSPECTOR: BC

LINER TECHNICIAN: JC

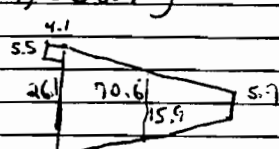
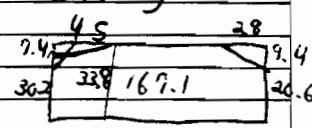
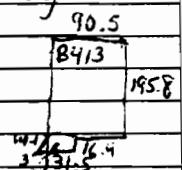
WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	<u>B. Cloudy</u> AM / PM	Overcast AM / PM	Rain AM / PM
<u>53</u> AM			<u>79</u> PM
Still AM / PM	<u>L. Breeze</u> AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
<u>Dry</u> AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B185	smooth		219.1	74.5		16,323sf 1,813.7sy
B186/186A	smooth		(218.9 x 56) - (4.4 x 22 x .5) =			12,210sf 1,356.7sy
B229A	smooth		(70.6 x 15.9) + (5.5 x 4.1) =			 1,145.1sf 127.2sy
B229/292B	smooth		(167.1 x 33.8) - (28 x 9.4 x .5) - (7.4 x 4.5 x .5)			 5,349.9sf 594.4sy
B292B	smooth		27.8	17.1		475.4sf 52.9sy
B412/229A	Embossed		213.9	85.1		18,202.9sf 2,022.5sy
B414	Embossed		186	90.6		16,851.6sf 1,872.4sy
B413/229/292B	Embossed		(195.8 x 90.5) + (31.5 x 16.4) + (14.1 x 3.7 x .5)			 18,262.6sf 2,029.2sy

03045

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 6, 1999

INSPECTOR: BC

LINER TECHNICIAN: JC

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
53 AM		79 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B411/additional embossed			(269.1	x 89.6) -		24025.9sf
292B/412A			(22.2 x	7.7 x .5) =		2,669.5sy -
						2,061.7sy (9/2)
						607.8sy additional
B283A/	embossed		(69.8	x 51.8 x .5)		1,807.8sf
409B/283B	Triangle					200.9sy
						8283B 102PM
						51.8
B292B/283A Embossed			42	32		1,344sf
						149.3sy
B292B	embossed		46.1	31.6		1,456.8sf
						161.9sy
T6600	2pies	Pie A	(85.2	x 59 x .5)		2,513.4sf
						279.3sy
		Pie B	(68.6	x 21 x .5)		720.3sf
						80sy
DN		pc. A	295	66.5		19,617.5sf
						2,179.7sy
		pc B	207	53.7		11,115.9sf
						1,235.1sy
Amoco 4506		pc A	295	66.5		19,617.5sf
						2,179.7sy
		pc B	207	53.7		11,115.9sf
						1,235.1sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: September 6, 1997
INSPECTOR: BC
LINER TECHNICIAN: GM

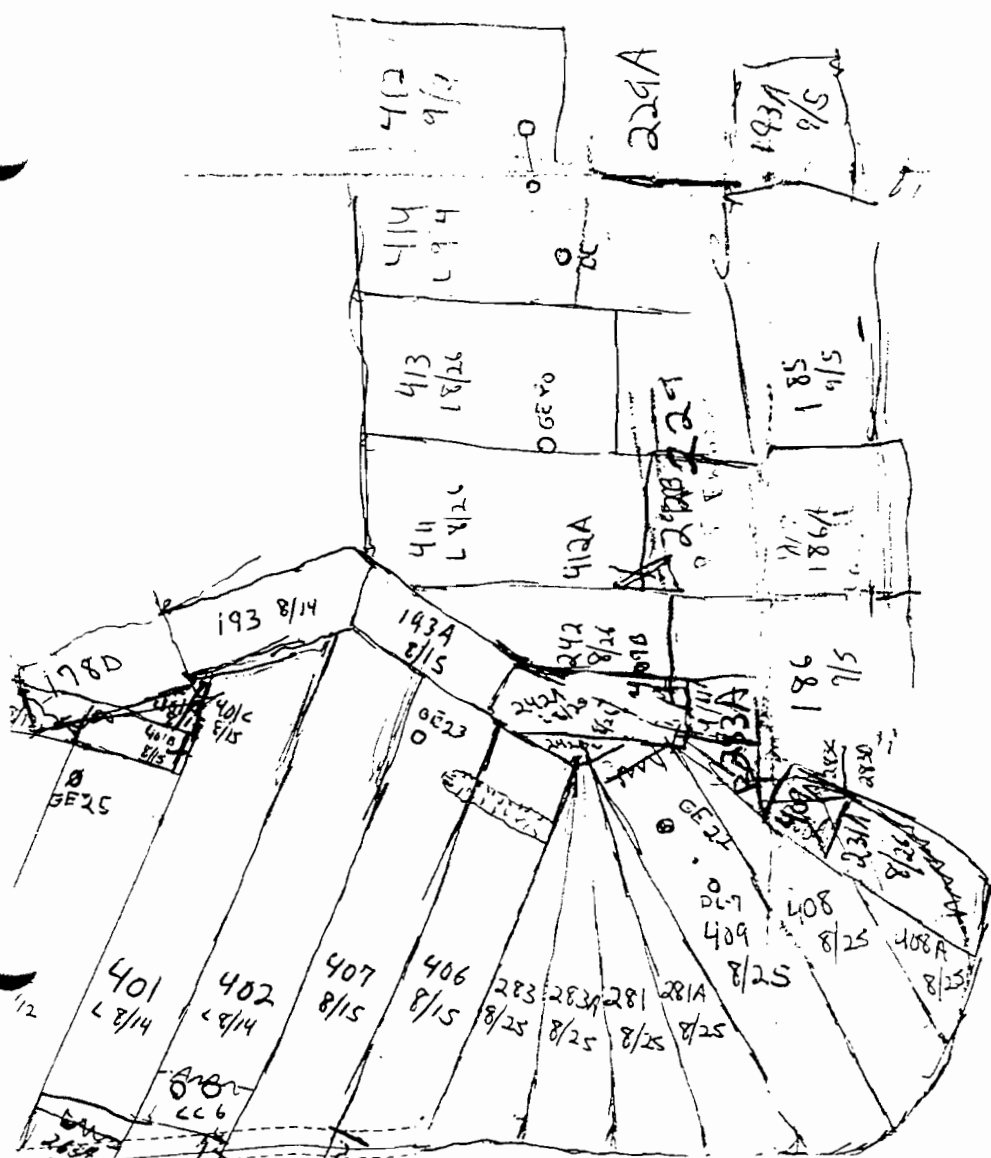
WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
53 AM		79 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



11

WESTON

S ~~(M)~~ T W TH F S

Date: 9/8/97

IDR #: 363

Weather	High	Low
cloudy/cloudy	77	60

[illegible]

Remarks: OBSERVED PLACEMENT OF 3 ROLLS OF DRAINAGE NETS & 1 ROLL OF GCOZ GEOTEXTILE ON THE SOUTH EAST ~~SECTION~~ SECTION OF LFP-4 SECTIONS 2F & 3F
ALSO THE PLACEMENT OF 11 ROLLS OF GCOZ GEOTEXTILE ON TOP SECTION OF NORTH EAST SECTION OF LFP-3 - SECTIONS 7C, D, E & 8C, D, E
ALSO PLACEMENT OF 3 ROLLS OF DRAINAGE COMPOSITE ON LFP-4 SECTIONS 2F & 3F

[illegible]

start/finish time: 8700 / 11200

page 1 of 3 pages
 clarktw\fidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

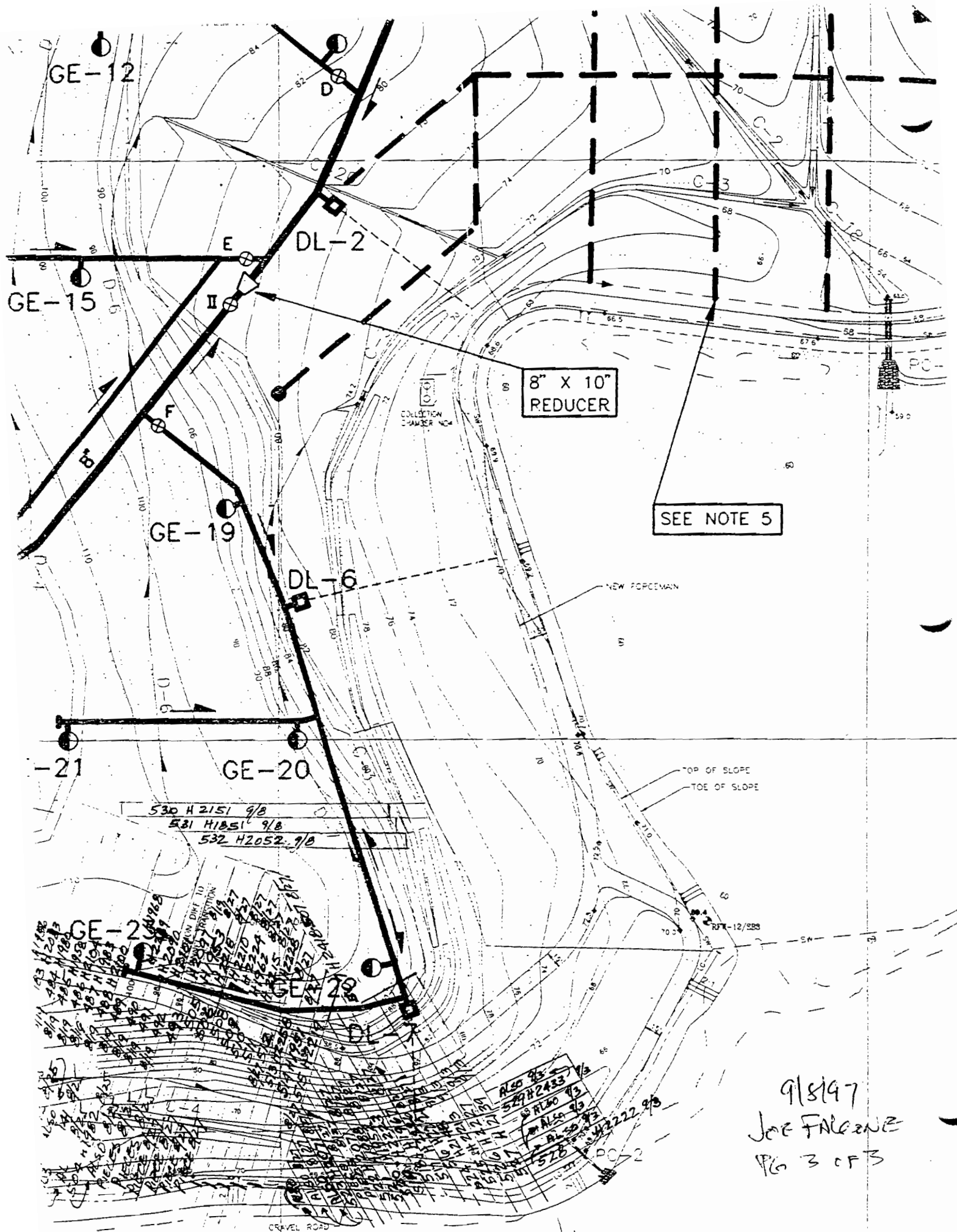
DATE: 9/8/97
INSPECTOR: Joseph L. Falcone
LINER TECHNICIAN: _____

WEATHER CLDY/CLDY
TEMP DEG F AM 77 PM 60
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

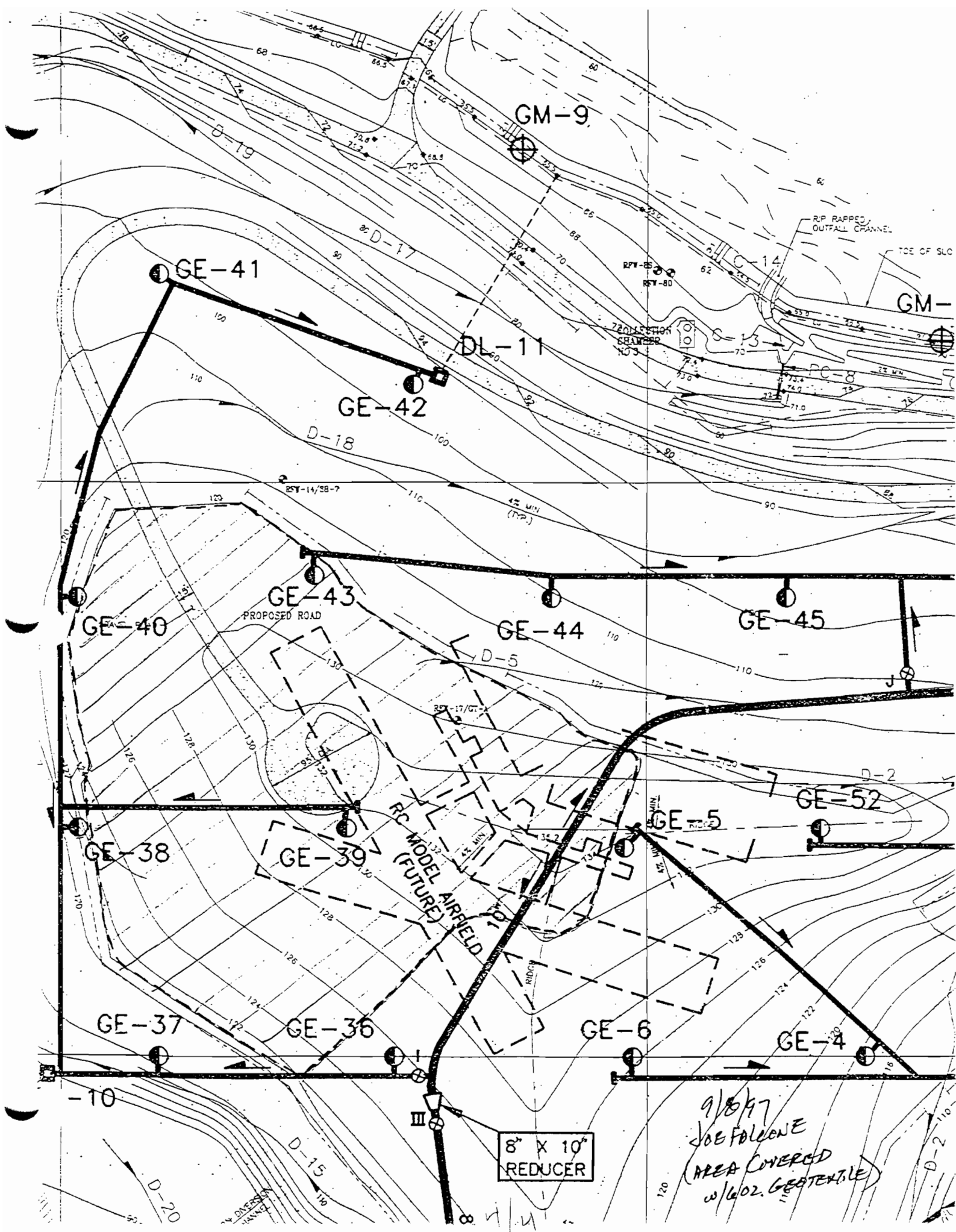
PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
H2151	DRAINAGE Composite			NOT MEASURED
H1851				
H2052				
102065512	602 GEOTEXTILE			
102066690				
102066613				
102066039				
102066435				
102066429				
102066427				
102066752				
102066482				
102091236				
102066457				
102066661				
E2161	DRAINAGE NET			
E2916				
E2033				

COMMENTS:

Pg. 2 OF 3



9/8/97
JOE FALCONE
PG 3 OF 3



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

No: 03228-018-001-0003-00

Date: 9/9/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 364

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY/CLDY	71	60

Description of work performed and inspected

[illegible]

Remarks: OBSERVED PLACEMENT OF 20 ROLLS OF DRAINAGE COMPOSITE ON LFP-4
SECTIONS 3F & 4F - MEASUREMENTS OF DRAINAGE NET & DRAINAGE
COMPOSITE TAKEN BY MIKE DIANA & I. (QUANTITIES ABOVE)

Equipment & Labor Record

[illegible]

5. finish time: 0700, 1600

Page 1 of 46 pages
s:\clark\tn\fidforms\ldr.xls

Joseph L. Falcone
Inspector's signature
Joseph L. Falcone
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

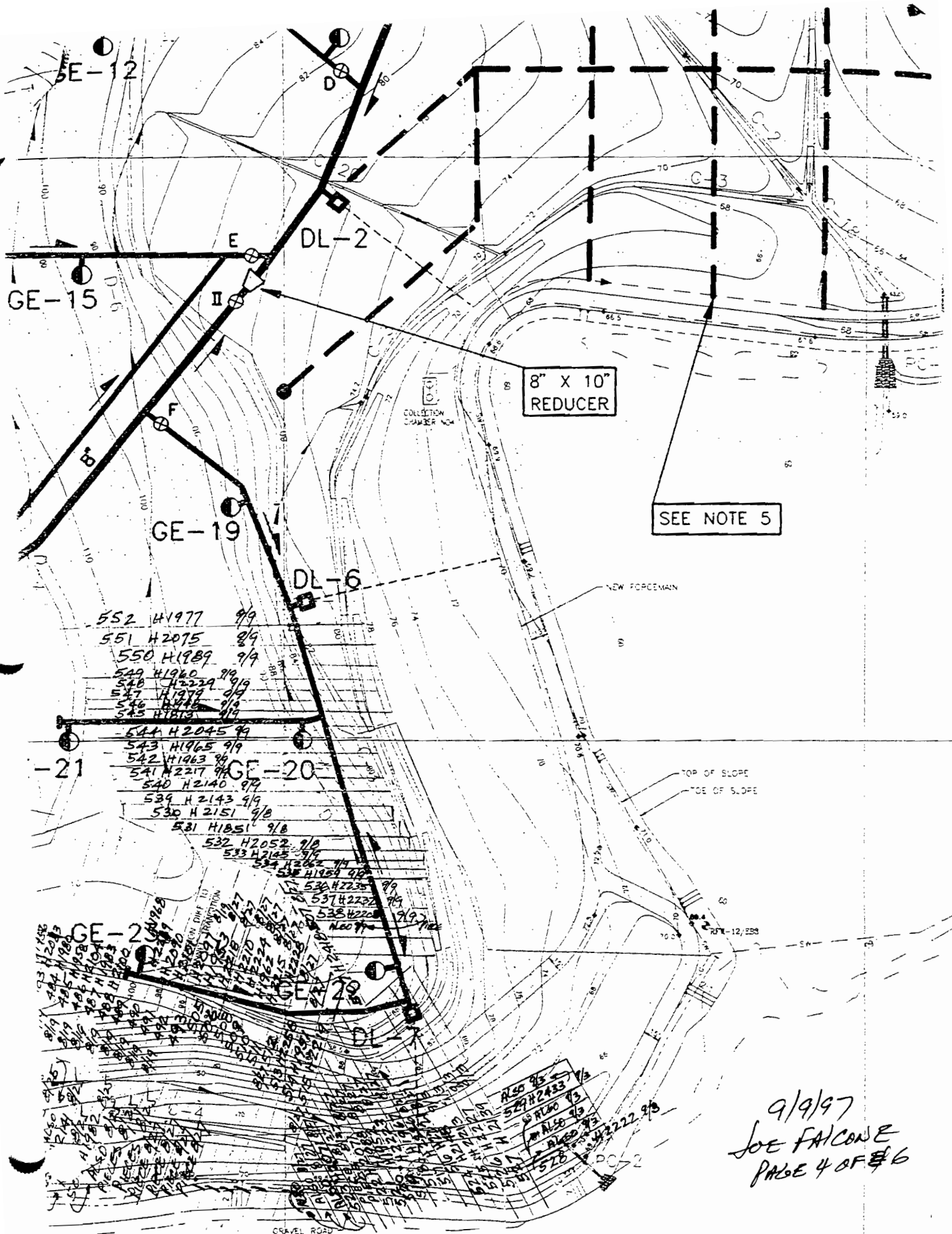
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 9/9/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER AM CLDY PM CLDY
TEMP DEG F HI 71 LO 60
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

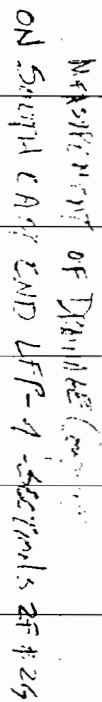
PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF/9=SY
# 2145	DRAINAGE Composite			NOT MEASURED
# 2062				
# 1959				
# 2235				
# 2232				
# 2208				
# 2143				
# 2140				
# 2217				
# 1963				
# 1965				
# 2045				
# 1813				
# 1948				
# 1979				
# 2229				
# 1960				
# 1989				
# 2075				
# 1977				

COMMENTS: _____



9/9/97
JOE FALCONE
PAGE 4 OF 6

Tuesday 2/9/97



App. Div. 5. 911.

Excludi-	25	4x	15.5	-	393.1
----------	----	----	------	---	-------

9170.26×9.17
 $= 1019.29425$

1

Wednesday 9/10/97

COPIES (GAS-BUREAU) AT D.S. 79-~~101~~ 101-101-101 (74)

~~0408~~ ~~Don't lose it~~ 7th & 6th Nov at 18 (at)

~~FROM MEMBERS OF THE BY THE OFFICE OF THE ATTORNEY GENERAL~~

~~with respect to (Klein)~~ $\tau \in \mathbb{R}^n$

12:23 PM ~~Went to place for~~ 602. GTR. 157 by 505

4611

9/9/97
Joe FALONE
Pg. 6 of 6

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 9/18/97

IDR #: 365

Description of work performed and inspected

Weather	High	Low
CLOUDY/CLOUDY	72	60

[illegible]

Remarks: OBSERVED PLACEMENT OF 10 ROLLS DRAINAGE COMPOSITES - LFP-4 SECTIONS 3F & 4F
ALSO 5 ROLLS 60Z GEOTEXTILE ON TOP SECTION (SOUTH END) LFP-4 SECTIONS 3E & 4E
MEASUREMENTS OF DRAINAGE COMPOSITES WITH MIKE DRAIN SOUTH EAST END LFP-4 SECTS 2E, 2F, 2G & 3F

Equipment & Labor Record

[illegible]

2. ...inish time: 0700 1/600

ge / of ~~3~~ 4 pages
clarktwidformsldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 9/10/97
INSPECTOR: JOSEPH L. FALCONE
LINER TECHNICIAN: _____

WEATHER	AM <u>CLDY</u>	PM <u>CLDY</u>
TEMP DEG F	HI <u>72</u>	LO <u>60</u>
WIND	AM _____	PM _____
PRECIPITATION	AM _____	PM _____

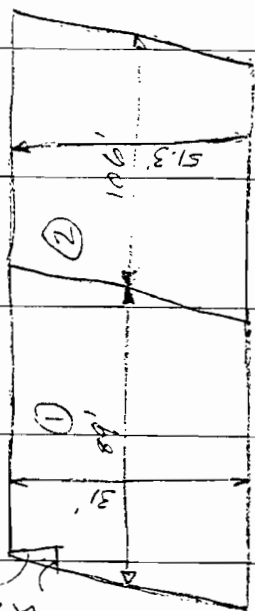
[illegible]

COMMENTS:

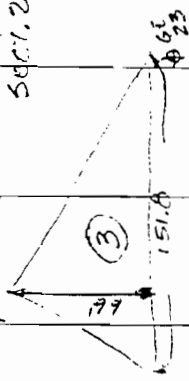
WEDNESDAY 9/10/97

WATER

Excludes
12.5'



ΦGE (DRAINAGE) MEASUREMENTS TAKEN 11:00 AM BY
WAVE D'ARNE - LFP-4 (CONTINUED TOP SIDE)
SECT. 2 E & 2 F



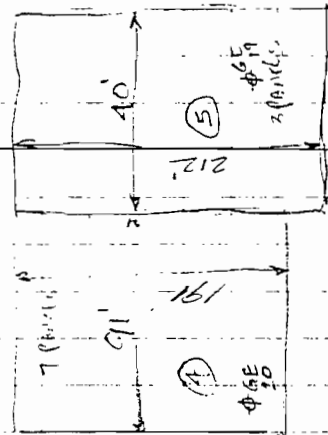
DRAINAGE COMPOSITE QUANTITIES

AREA	Dim. 1	Dim. 2	QTY.
1	31 X 89 - 12.5 x 11 ÷ 2	—	2690.25
2	106 X 51.3	—	5437.8
3	151.8 X 66 ÷ 2	—	5009.4
4	91 X 191	—	17381.0
5	40 X 212	—	8480.0
6	48 X 23.3 ÷ 2	—	559.2
7	137 X 117.5	—	1609.75
8	43.5 X 12.4 ÷ 2	—	269.7
9	43.5 X 40 ÷ 2	—	870.0
			42307.1 sq. FT
			4701 sq. YDS.

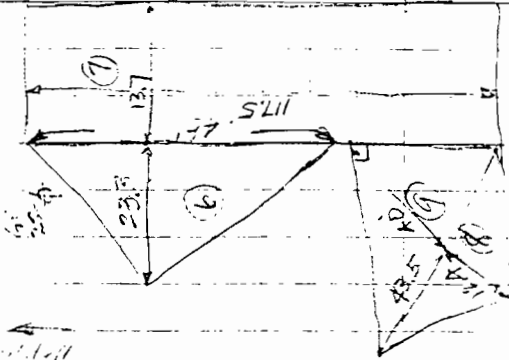
(NEXT)

WEDNESDAY 9/10/97

WATER



1400 PM
MEASUREMENTS TAKEN BY
LFP-4 - SECT. 2 F & 3 F (DRAINAGE COMPOSITE)



LFP-4 SECT. 2 G
(DRAINAGE COMPOSITE)

9/10/97
JOE FALCONE
Pg 4 of 4

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 9/15/97

IDR #: 370

Weather

High

Low

PTM Clay/PTM Clay	85	56
-------------------	----	----

Description of work performed and inspected

[illegible]

Remarks: OBSERVED LINER CREW ON TOP SOUTH END. 6002 GEO. ~~WAS~~ THAT WAS PLACED FRIDAY, WAS CUT & ROLLED BACK TO ALLOW ROLLER OVER ~~SUB~~ SOIL DUE TO TIRE TRACKS PENETRATING THE GEO, LEAVING DEEP TIRE TRACKS. AT 0800 LINER CREW MOVED TO NORTH END TOP & NORTH WEST END TOP TO PLACE & REPAIR FLAP. (1) PARTIAL ROLL OF 6002 GEO. WAS USED.

Equipment & Labor Record

[illegible]

start/finish time: 0700, 1600

Page 1 of 2 pages
clarktwm\idforms\ldr.xls

Joseph J. Falcone
Inspector's signature
JOSEPH J. FALCONE
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 9/15/97
INSPECTOR: DE FALCONE
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloud AM / PM	Overcast AM / PM	Rain AM / PM
AM	56		PM 85
Silly AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

WESTON

S M A W TH F S

Date: 9/16/97

IDR #: 371

Weather	High	Low
ptly clry/CLR	86	60

[illegible]

Remarks: LINER CREW PLACED (3) LINER BLANKETS ON TOP SOUTH EAST END. LFP-4 SECTIONS 3E & 4E. OBSERVED LINER CREW ON NORTH WEST TOP END ~~WAS~~ PLACING & REPAIRING FLAP - (1) ROLL DRAINAGE NET

[illegible]

start/finish time: 0700 / 1600

page 1 of 3 pages

\\clarktwm\fdforms\ldr.xls

Joseph L. Falcone
Inspector's signature
JOSEPH L. FALCONE
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 9/16/97
INSPECTOR: JEFFALCONE
LINER TECHNICIAN: _____

TEMP. DEG F

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	60		PM 86
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 9/16/97
INSPECTOR: JOE FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	PM
TEMP DEG F	HI 86	LO 60
WIND	AM	PM
PRECIPITATION	AM	PM

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: September 16, 19

IDR #:

Weather	High	Low
ptly cldy	86	70

Description of work performed and inspected

[illegible]

Remarks: Observed EL place ~~APUC~~ blankets B196, 195, 191 in southeast corner (p2)
In P.M. they extended Flap 6 on west side. Observed BET extend gas pipe ~~to~~ 65' from 80
above GE20. Observed ORSC excavate SB-3 using PC400LC excavator, and trucking material
to WA-2.

Equipment & Labor Record

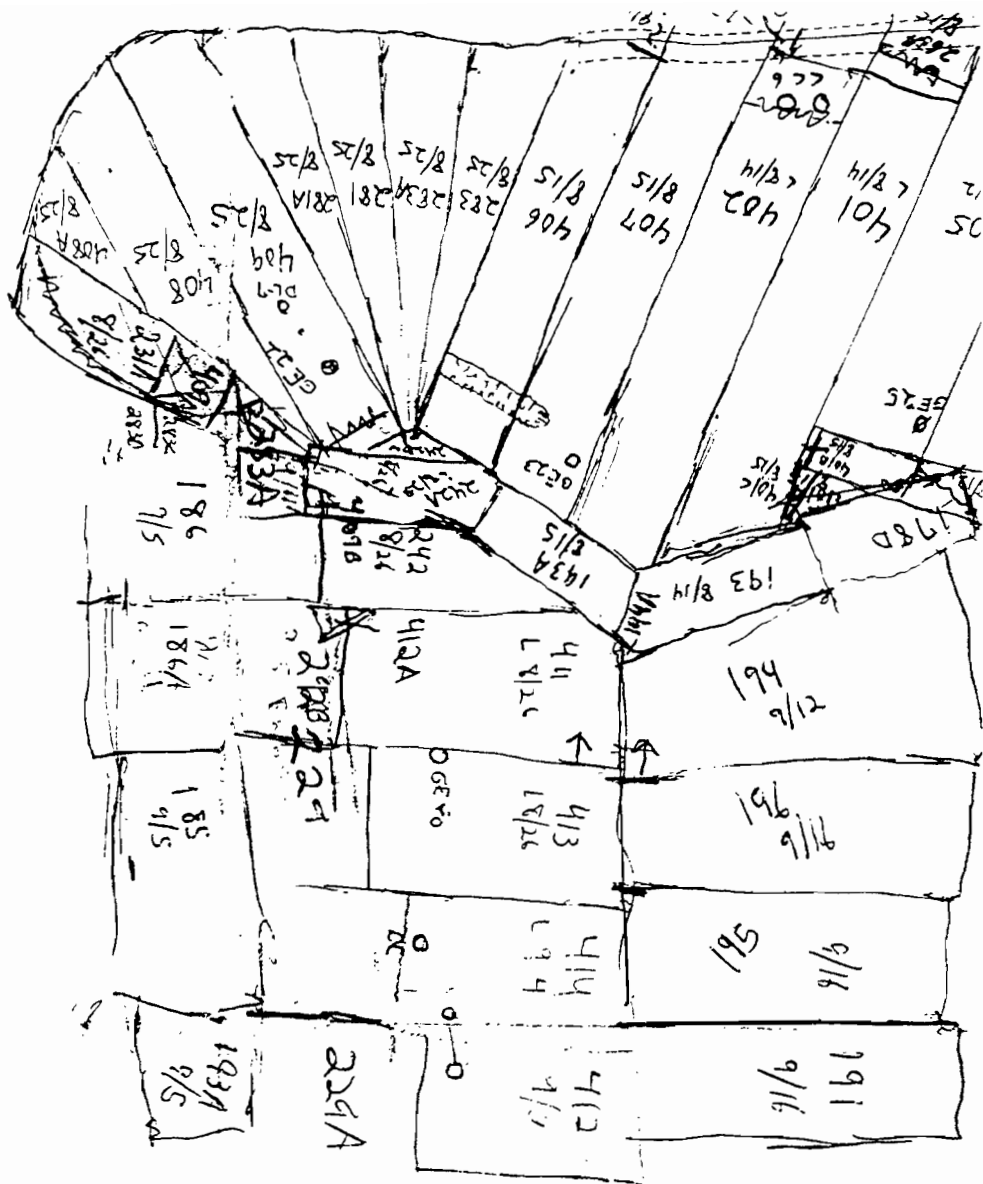
[illegible]

Start/finish time: 0700 / 1530

Page 1 of 2 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Inspector's name



P2 of 2

22

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: September 18, 1997

IDR #: 373

Weather	High	Low
cloudy / partly cloudy	80	64

Description of work performed and inspected

[illegible]

Remarks: observed EL place and seam smooth PVC panels B184A, B153A, B153B, B187, B187A, B188, B188A, B188B, B189B (seep. 2). All seams were not wedged except seams against existing liner which were girded. Observed ORSC excavate sediment from JB-3 with Graball.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 2 pages

s:\clarktw\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: September 19, 19

Consultant: Roy F. Weston of New York, Inc.

IDR #: 374

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
clear	85	54

Description of work performed and inspected

[illegible]

Remarks: Observed ORSC place flag at Southeast corner
Observed EL place DN at southwest corner
Measured PVC with Mike Orsola (see p. 2)
Airtight panels in southeast corner (see p. 3)

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1630

Page 1 of 1 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Robert Cunningham
Inspector's name

204

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 19, 1991
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 54			PM 85
Sill AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B194/194A	same	OK	(224.5 (18 x	73.9) 7.6 x .5)		16,659sf 1,851sy
B196			224	75.25		16,856sf 1,872.9sy
B195			220	75.5		16,610sf 1,845.6sy
B191			221	75		16,575sf 1,841.7sy
B186/186A			223	73.7		16,435.1sf 1,826.1sy
B184/184A			221	75.7		16,773.9sf 1,863.8sy
B150/150A			222.2	76.65		17,031.6sf 1,892.4sy
B153/153A			196.3	76.55		15,026.8sf 1,667.6sy
B187/187A			176	76		13,376.3sf 1,486.2sy
B179			(75 x (84.3 x (132.8 x (144.6 x	(64.5) 30) 21) 24)		13,625.9sf 1,518sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

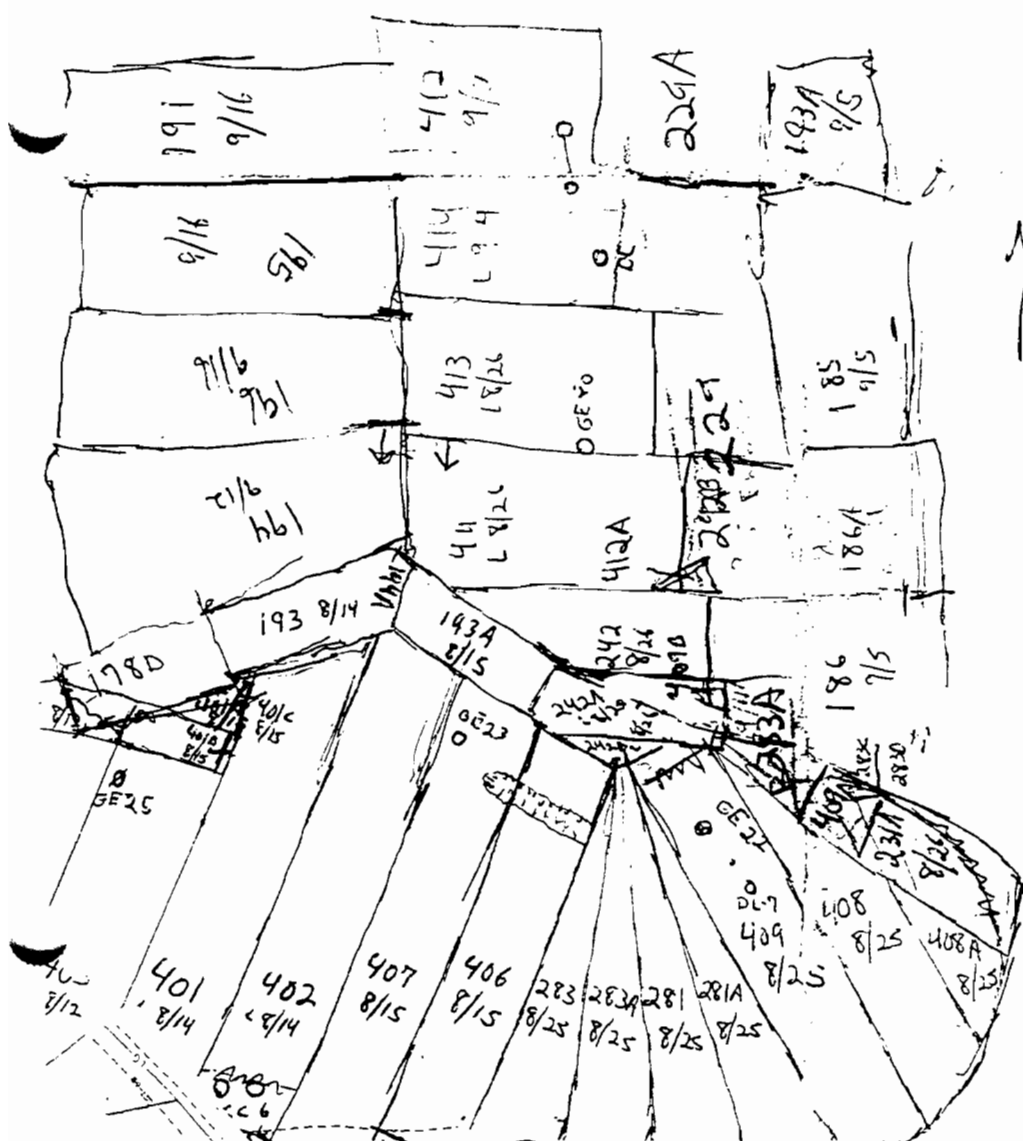
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: September 19, 1991
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 54			PM 85
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S **M** T W TH F S

Date: September 22, 1961

IDR #: 377

Weather	High	Low
clear	72	42

Description of work performed and inspected

[illegible]

Remarks: Airlanced North end with Grant Morgan (p.3) measured PVC at North end with Mike Olana (p.2). Checked bottom flap at southeast corner and brought M. Droha to conclude it is a bottom-of-slope flap.
observed EL rolling off box on north end

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1515

Page 1 of 4 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature

Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

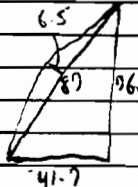
CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 22, 1997
INSPECTOR: BC
LINER TECHNICIAN: JG

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 42		92 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B188/188A	same	OK	193	75.8		14,629.45F 1,625.55y
B188B			73	43		3,139.5F 348.85y
B188B			(76.2 x 87 x	(41.7 x .5) 6.5 x .5)		1,871.65F 208.5y
						B188B 
ON for type 1 at south end	294		193			56,742.5F 6,304.75y
602 for type 1 at south end	294		193			56,742.5F 6,304.75y

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: September 22, 1999
INSPECTOR: B C
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
179/102A	same	120	30	passed w/ minor imperfections
179/102			20	
179/101A			50	
179/101			100	
179/180			223	
180/101			223 100	
180/109			100 50	
180/180A			75	
180A/109			100	
153/150			100	
153/103			85	
153/153A			75	
153A/150A			120	
153A/87			75	
180/184			170	
180/184A			75	
180A/184A			170	
188/103			80	
188/153			30	
188/188A			77	
188A/153A			180	
188B/188A			70	
188B/103			90	
188B/188B			41	
188B/188A			23	
188B/108A			90	

GE 43 9/18/97 cont 1 GE 44 40F4

B176	B179 9/17	B180 9/17	B180A
B150	B150A	B184 9/17	B184A 9/18
B153	B153A	B187 GE 39	B187A
B188	B188A	B188B	
1888	1187B		

- welder #9 Take 5 650°-80°
- " " 8 Jarvis D 650°-70°

9/19/97 pth cldy 55°

55 BC on-site

0 trailer meeting

5 on LF 5th green

- preparing to put mud flap around -
- got J. Bates to have tarp surface nailed out
- air lanced seams on south end of G/M

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: September 23, 2011

IDR #: 378

Weather	High	Low
cldy	62	55

Description of work performed and inspected

[illegible]

Remarks: Observed EL roll out 6oz fabric at north east corner of LFP6
Observed EL place geo composite on Flap on East slope
Observed ORSC construct weirs on SB S and cut out low channels
Observed ORSC place cover soil on LFP7

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 1 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T (W) TH F S

Date: September 24, 1999

IDR #: 379

Weather

High

Low

Weather	High	Low
clear / partly cloudy	64	44

Description of work performed and inspected

[illegible]

Remarks: Observed EL perform destructive tests of DS P2, P3, P5, P6, P7. DS P7 failed and additional sample pulled out to P7 and P3. More testing tomorrow. Observed EL placing flap on south west slope. Measured mid slope flap on east side with Mike Diano.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 2 pages

s:\clarktwn\fidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 24, 1997
INSPECTOR: BC
LINER TECHNICIAN: SP

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
44 AM		64 PM	
Soil AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: September 25, 1997

IDR #: 380

Weather

High

Low

Material	High	Low
Clay	69	37

Description of work performed and inspected

[illegible]

Remarks: Observed EL place ^{upper} Flag on ~~top~~ South East corner, and place panels B172/172A, and B189/189A on top at north end. seams were glued.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 1 pages

s:\clarktwn\fldforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH (F) S

Job No: 03228-018-001-0003-00

Date: September 26, 1999

Consultant: Roy F. Weston of New York, Inc.

IDR #: 381

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
clr/p ^{ty} cld	77	50

Description of work performed and inspected

[illegible]

Remarks: Observed EL place small PVC panels B172, 172A, B189/189A, B190/190A, B195/195A, B176/176A/176B and unident. tree pc. (see p. 3)
Measured pvc with M. Diana. Made soil density measurements in LFP (1/4 m x 1/4 m x 1/4 m) as structure P11 (cover soil), and WD2 Lake Lucille -

Equipment & Labor Record

[illegible]

Start/finish time: 0708 / 1530

Robert Cunningham
Inspector's signature

Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 26, 1997

INSPECTOR: BZ

LINER TECHNICIAN: J6, JL

WEATHER

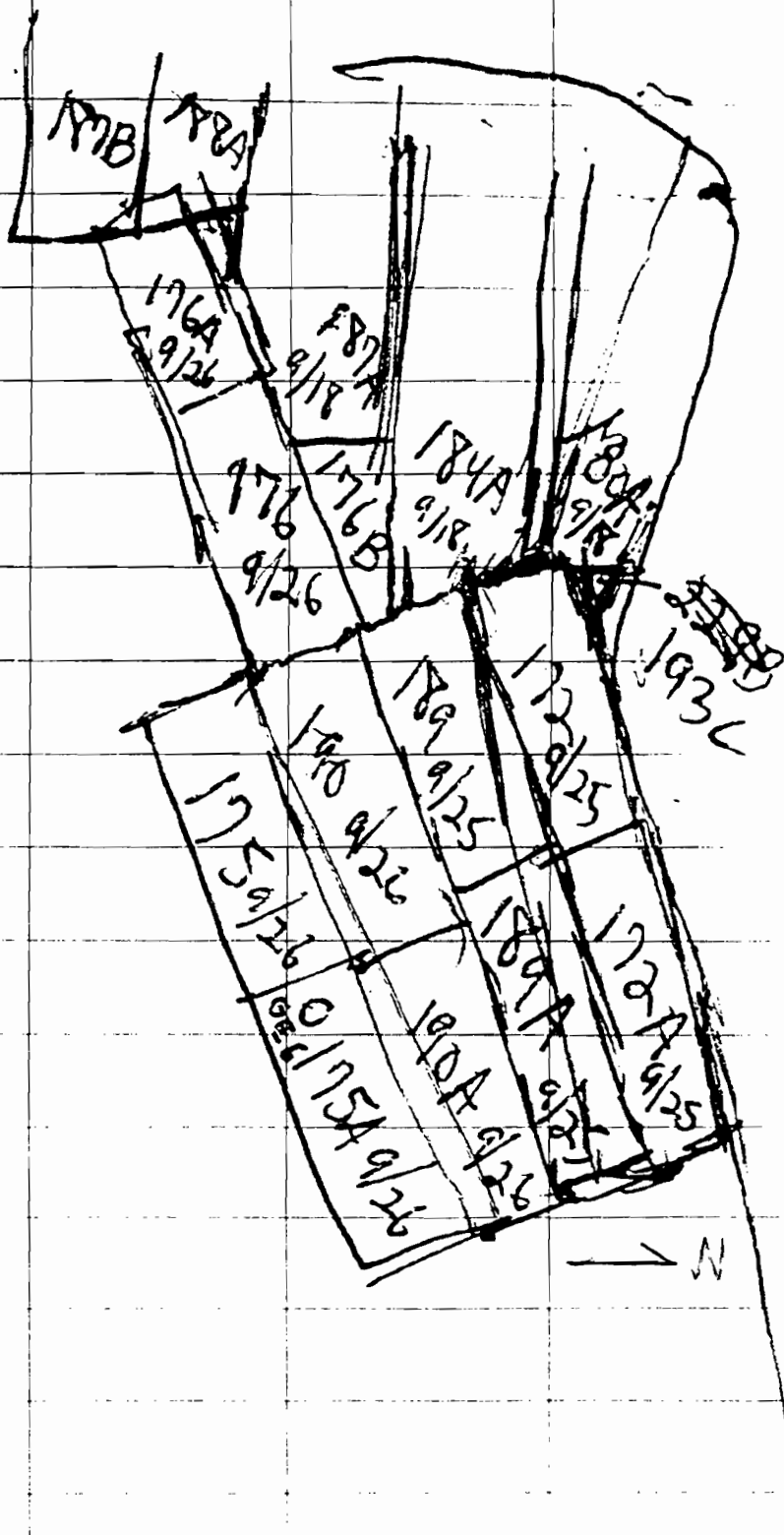
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
50 AM		77 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S (M) T W TH F S

Date: September 29, 1997

IDR #: 384

Weather	High	Low
rain / ptly cldy	74	63

Description of work performed and inspected

[illegible]

Remarks: Observed ORSC place topsoil on slope between road and L.G on LFP 3 south from SBY
Observed ORSC place earth mat on dikes on southwest corner (LFP 4). Observed ORSC plug like
incile on choking material at WD-2. Observed ORSC broadcast grass seed on 50' x 50' test patch
on ball field area. Discussed light loads of choking material from town + cover soil with J. Baks who
said whatever Glenn said load sizes are will be the number. Discussed details of top soil placement between
toe stone and limit of work with J. Baks who agreed to cut 6" soil below GDS to allow proper soil placement
Observed ORSC shape dike on SW corner D7.
Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: September 30, 1961

IDR #: 385

Weather

High

Low

pty clay	75	58
----------	----	----

Description of work performed and inspected

[illegible]

Remarks: observed E.L. place ON on North end at top, Measured PVC w/ Mike Diana (p.2)
air lance d seams with Grant Morgan (p.3)

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Page 1 of 3 pages

s:\clarktwn\fidforms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: September 30, 1999

INSPECTOR: BC

LINER TECHNICIAN: JC, JB

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
58 AM		75 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B176/176A	Triangle		(185.2 x 7.5) +			
	Smooth		(26 x 12.5 x .5) -			
			(86.5 x 39.7 x .5) =			
					12,422.5 sf 1,380.2 sy	
B190/190A			215	74.4		15,996 sf 1,777.3 sy
Flap 1 upper north slope east of dike			67	10		670 sf 74.4 sy
Flap 1 From dike to west			250	10		2,500 sf 277.8 sy
Flap on west slope from NW corner toward south			(100' x 18') +			16,241 sf 1,804.6 sy
			(100' x 20') +			
			(100' x 22') +			
			(100' x 22.5) +			
			(100' x 22.3) +			
			(100' x 20.3) +			
			(100' x 21) +			
			(70' x 23.3) =			
DN+602 Flap 1 extension as above + dike area (33x10)						74.4 sy + 277.8 sy + 36.7 sy = 388.9 sy

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: September 30, 1997
INSPECTOR: ISC
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
58 AM		75 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
192/107	5th	120	45	
172/106			45	PASS w/ minor imperfections
172/172A			76	
172A/106			80	
172A/105			30	
172/193C			28	
193C/107			25	
193C/180A			12	
172/180A			57	
172/184A			19	
172/189			100	
172/189A			15	
172A/189A			95	
189/176B			25	
189/189A			76	
189/184A			50	
189A/190A			90	
189/190			110	
189/190A			20	
190/176			76	
190/175			120	
190A/175A			100	
175/175A			76	
176A/187A			90	
176/176B			35	
176/176A			76	
176A/187A			30	
176A/188A			60	
176A/187B			18	
3/176A			12	
3/187A			8	
3/187A			11	

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T **W** TH F S

Date: October 1, 1997

IDR #: 386

Weather

High

Low

pty clay	75	50
----------	----	----

Description of work performed and inspected

[illegible]

Remarks: Observed EL place GN and 602 Amaco 4506 on Liner at North End of CPP-7.
Checked repairs on seams at Liner on 9/30. Observed EL cap seam 153A/188 where DSF failed.
Checked subgrade on SE corner per T. Leonard (J. Wasky is absent). It is OK. EL will have 3 more laborers tomorrow. Measured Flats on west & east sides with M. Diana

Equipment & Labor Record

[illegible]

Start/finish time: 0700 1530

Page 1 of 2 pages

s:\clarktwn\fldforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 3, 1999

INSPECTOR: BC

LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
40 AM		65 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 23, 1991
INSPECTOR: BC
LINER TECHNICIAN: JLJG

WEATHER

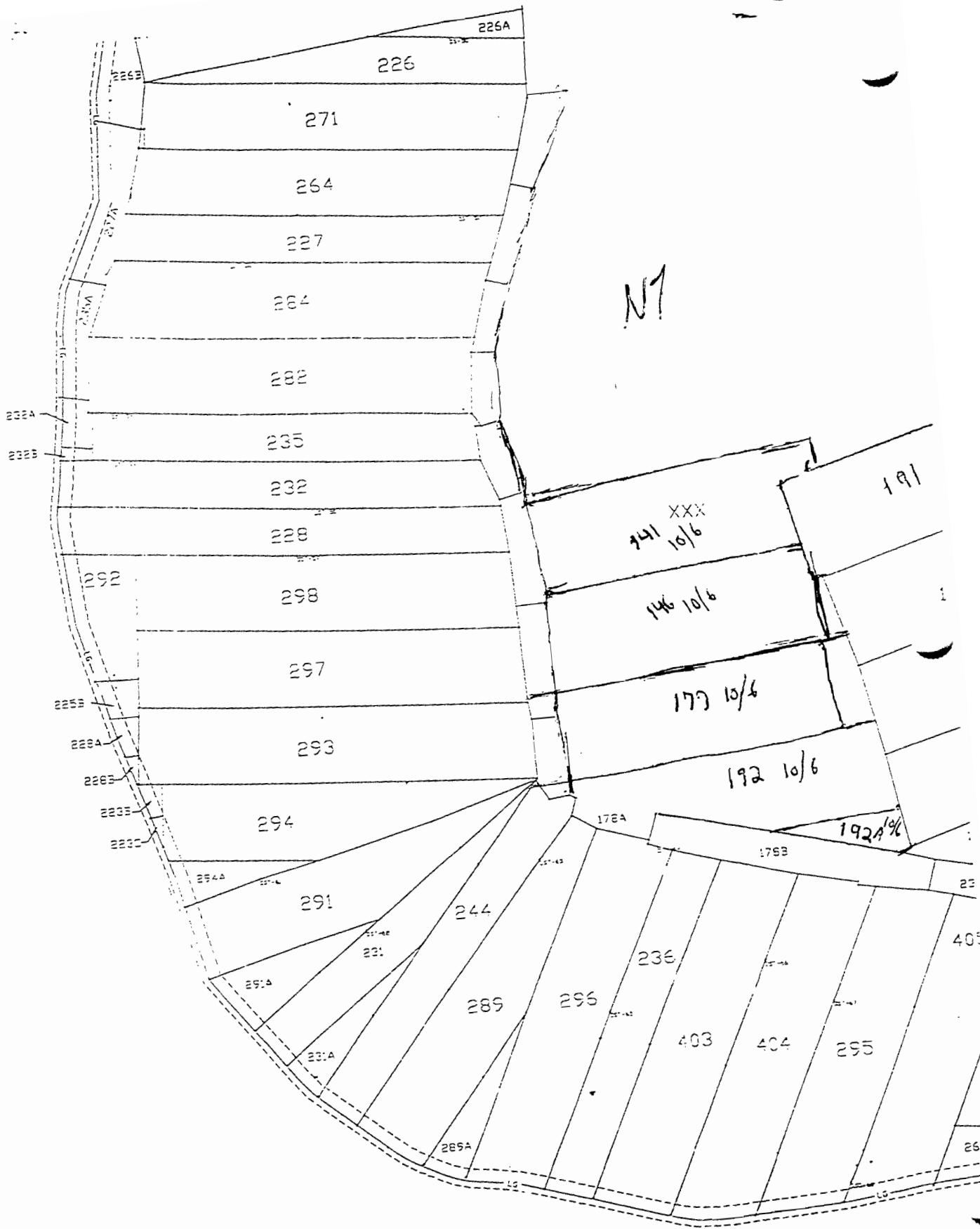
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
SS AM	Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 7, 1997

INSPECTOR: BC.

LINER TECHNICIAN: JG, Jc

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
48 AM		87 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

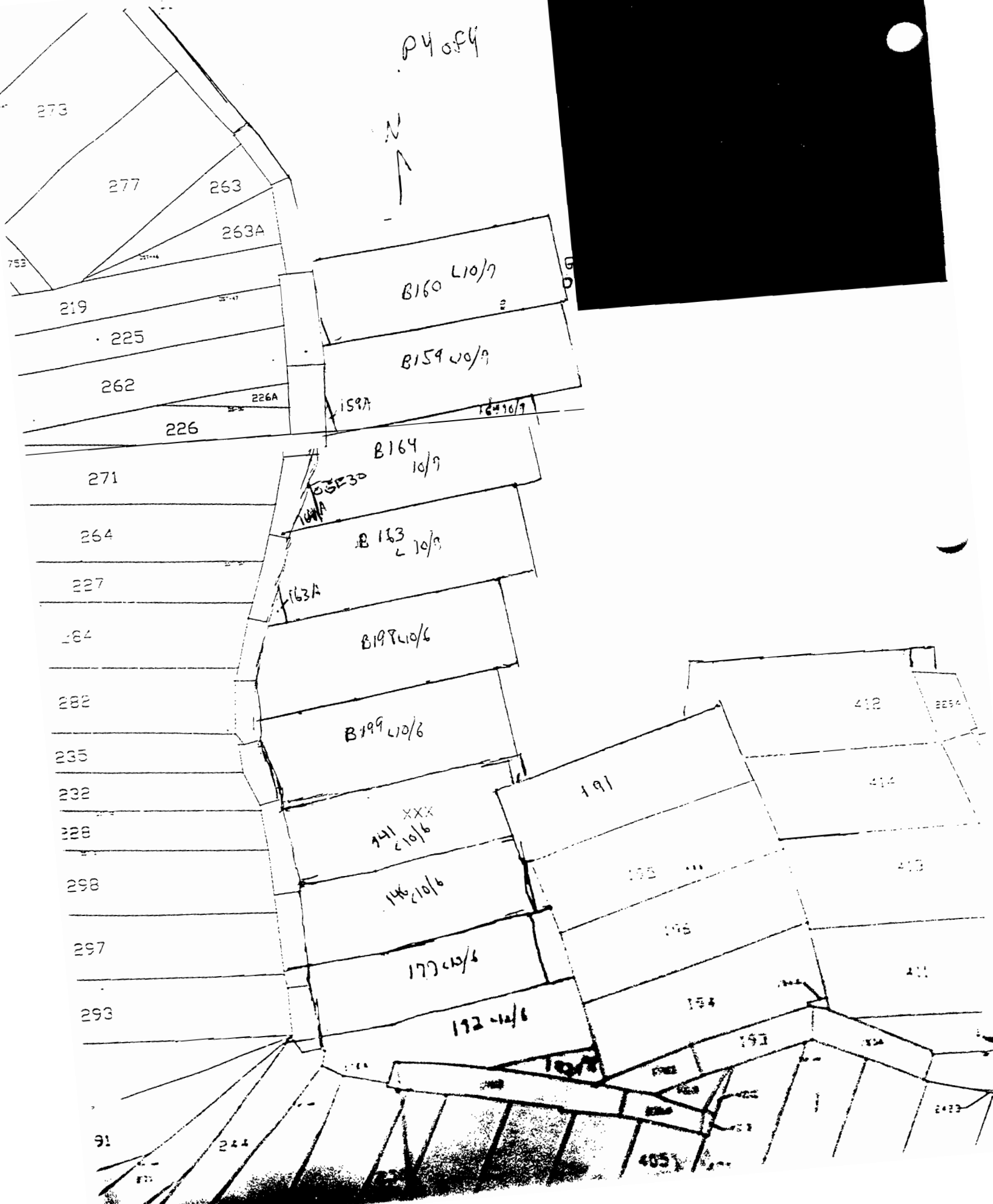
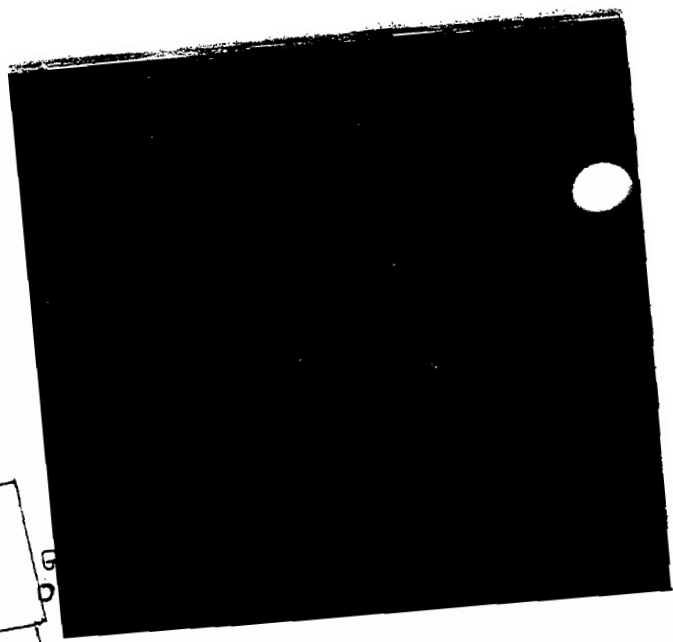
DATE: October 7, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

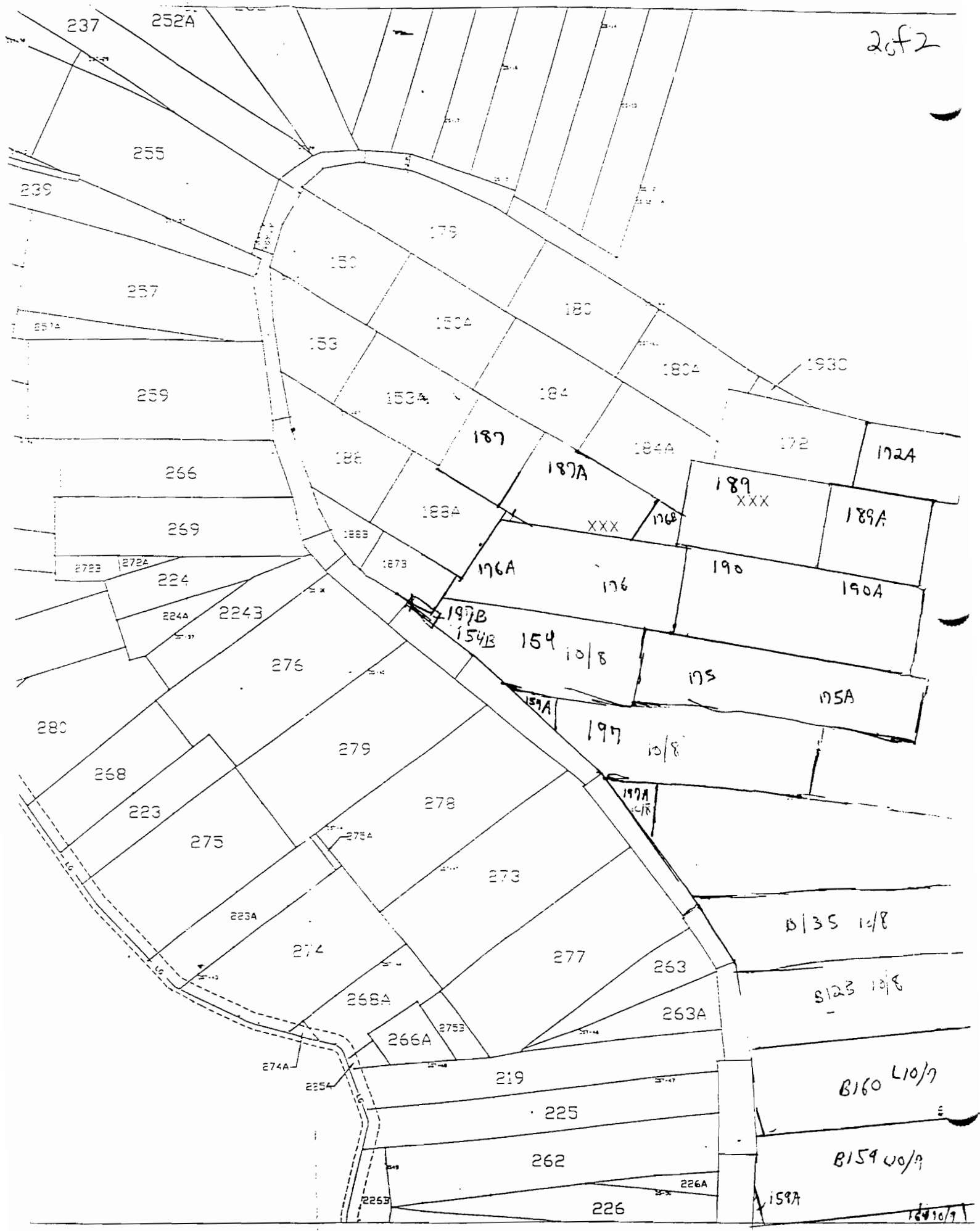
Clear AM / PM	Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
48 AM		89 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

P4 of 4



2 of 2



2095

ROY F. WESTON OF NEW YORK, INC. LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: Oct 6 - 9, 1999

INSPECTOR: BC

LINER TECHNICIAN: JL, JO

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
56 AM		80 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B199			221.5	76.55		16,884.85F 1,876.15y
B198			217	75.55		16,394.95F 1,821.65y
B165/163A			216.8	75.25		16,314.25F 1,812.75y
B164/164A			217	75.1		16,296.75F 1,810.75y
B159/159A			214.8	75.15		16,142.25F 1,793.65y
B160/160A			200	75.4		15,280.5F 1,675.65y
B125			214.25	75.9		16,218.75F 1,802.5y
B135			205	75.9		15,559.55F 1,728.85y
B154			(224.8 x 30) + (194 x 44) =			15,280.5F 1,697.8y
B197/154A			211	74.2		15,656.25F 1,739.65y
B175/175A			211	74.2		15,656.25F 1,739.65y

DN+6:2 on Flip from GE14 bound earth

23,808.85F
2,675.8y

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Oct 1, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

<u>Clear</u> AM / PM	P. Cloudy AM / PM	<u>Overcast</u> AM / PM	Rain AM / PM
AM <u>56</u>		80 PM	
<u>Still</u> AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
<u>Dry</u> AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
148/149	<u>same</u>	<u>118</u>	<u>200</u>	<u>passed w/ minor repairs</u>
149/183F			<u>60</u>	
148/183E			<u>75</u>	
148/163			<u>190</u>	
148/163A			<u>200</u>	
163A/163			<u>30</u>	
163A/183D			<u>35</u>	
163/164			<u>185</u>	
163/164A			<u>15</u>	
164/159			<u>190</u>	
164A/183B			<u>35</u>	
164/183B			<u>80</u>	
159/159A			<u>20</u>	
164/159A			<u>8</u>	
159A/183B			<u>30</u>	
159/183B			<u>35</u>	
159/160			<u>205</u>	
159/160A			<u>5</u>	
160A/183A			<u>20</u>	
160/183			<u>45</u>	
160/125			<u>200</u>	
125/114A			<u>75</u>	
125/135			<u>195</u>	
135/114			<u>75</u>	
154B/179B			<u>12</u>	
154B/154			<u>8</u>	
154B/111			<u>15</u>	
154/176A			<u>90</u>	
154/176			<u>60</u>	
154/175A			<u>75</u>	
154/184A			<u>35</u>	
154/191			<u>30</u>	
154A/111	<u>✓</u>	<u>✓</u>	<u>37</u>	<u>✓</u>

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Continued from previous page
INSPECTOR: _____
LINER TECHNICIAN: _____

WEATHER

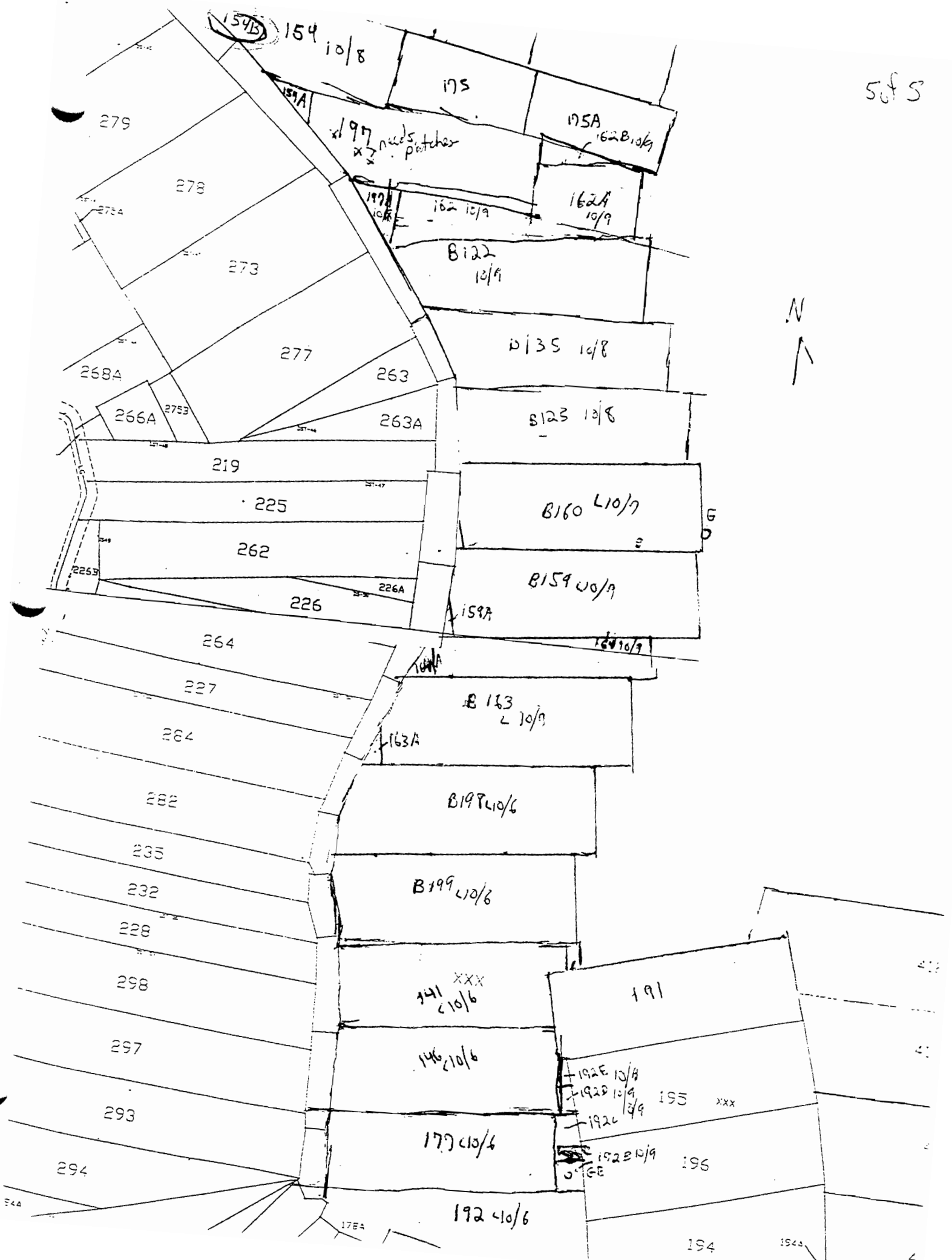
TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

5 of 5



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 10 1999

INSPECTOR: BCL

LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	PM	PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 10, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	6-7		PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 11, 1997
INSPECTOR: JL
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM			PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]



S M T W TH F S

Date: October 13, 194

IDR #: 398

Weather	High	Low
cloudy	67	49

[illegible]

Remarks: Observed EL place ON and 602 on liner in LCP6 completing work on west side of upper plateau. Observed EL cut 3 destructs and place bats on 2 main bore wells. Observed ORSC push out coversoil on south end placed in 2 Post lift and watched ORSC complete over-slowdown CIP and CIP.

[illegible]

Inspector's signature
Inspector's name

s:\clarktwn\fldforms\ldr.xls

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: October 14, 1999

IDR #: 399

Weather	High	Low
cloudy	69	59

Description of work performed and inspected

[illegible]

Remarks: Observed EL plate PVC panels B171, B181, B173 and B145 145A on eastern top plateau (p. 4). All seams were heat welded. Observed EL plate box on west end of LCP1 around Reverso property. Arranged today's seams with Grant Morgan (p. 3). Measured PVC panels with Mike Diana (p. 2).

Equipment & Labor Record

[illegible]

Start/finish time: 0700/1530

Page 1 of 4 pages
s:\clarktw\nfidforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

2 st y

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 14, 1997

INSPECTOR: BC

LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
54 AM		69 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

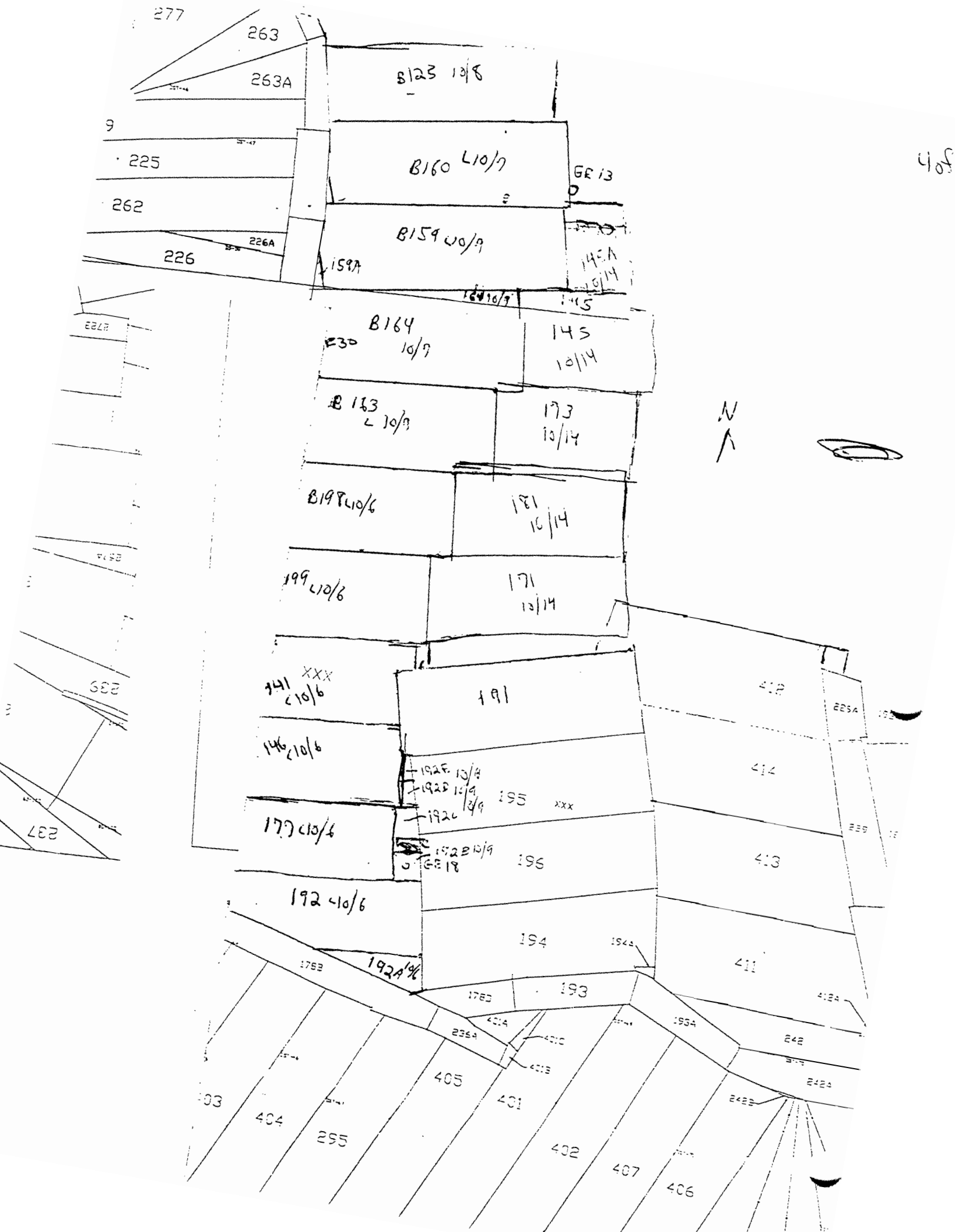
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 14, 1997
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
54 AM		69 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]





Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T (W) TH F S

Date: October 15, 1999

IDR #: 400

Weather	High	Low
<u>cldy/showers</u>		

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
	<u>No measurements today</u>		

Remarks: Observed EL place ON and 602 on panels placed on 10/14
Observed EL test detects DS 93 to DS 106, DS 81A, A2, B1

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700, 1200

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October-17, 1997

INSPECTOR: B C

LINER TECHNICIAN: JG

WEATHER

TEMP. DEG F

WIND

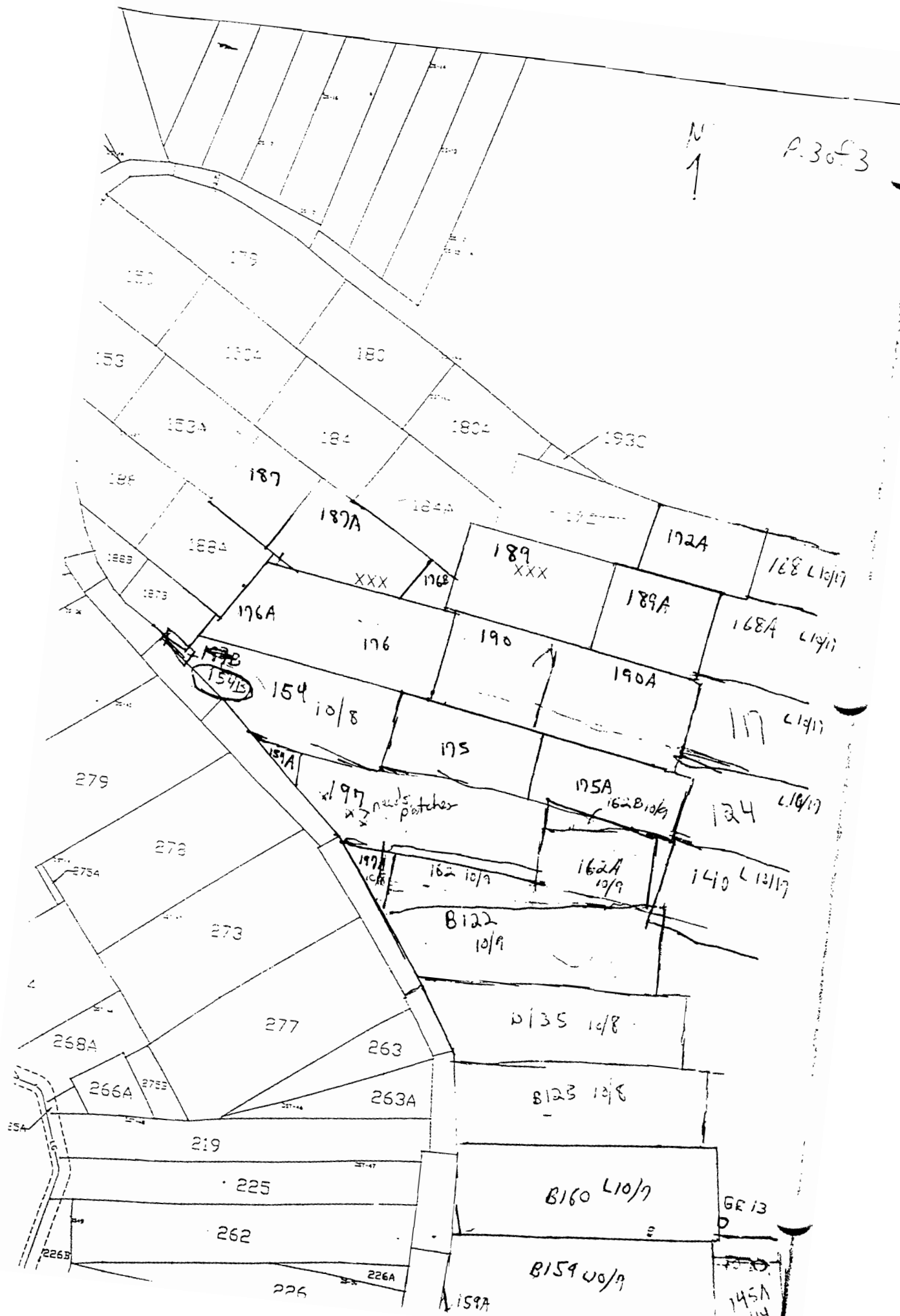
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
46 AM		73 PM	
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B168			93	71.8		6,677.4sf 741.9sy
B168A			136 136	75.5 75.5		10,268sf 1,140.9sy
B117/3			175	76		13,300sf 1,477.8sy
B124			124	76		9,424sf 1,047.1sy
B140/3			(108.3 33.6	x 75) - x 16.5) =		7,568.1sf 840.9sy
						16.5 ? exclusion 33.6 814 3
						75

N
1

A.3043



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S (M) T W TH F S

Date: October 20, 1999

IDR #: 403

Weather

High

Low

cm	58	48
----	----	----

Description of work performed and inspected

[illegible]

Remarks: Observed EL place and seam PVC em bossed panels B415 (40x225) B287 (61x150) B287A (61x150) B286 (61x135) B286A (61x145) B286B (61x25) (p-3)
Airlaneed Thursdays panels with Grant Morgan (p-2)

Equipment & Labor Record

[illegible]

Start/finish time: 0700:1430

Page 1 of 3 pages
s:\clark\tn\fidiforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

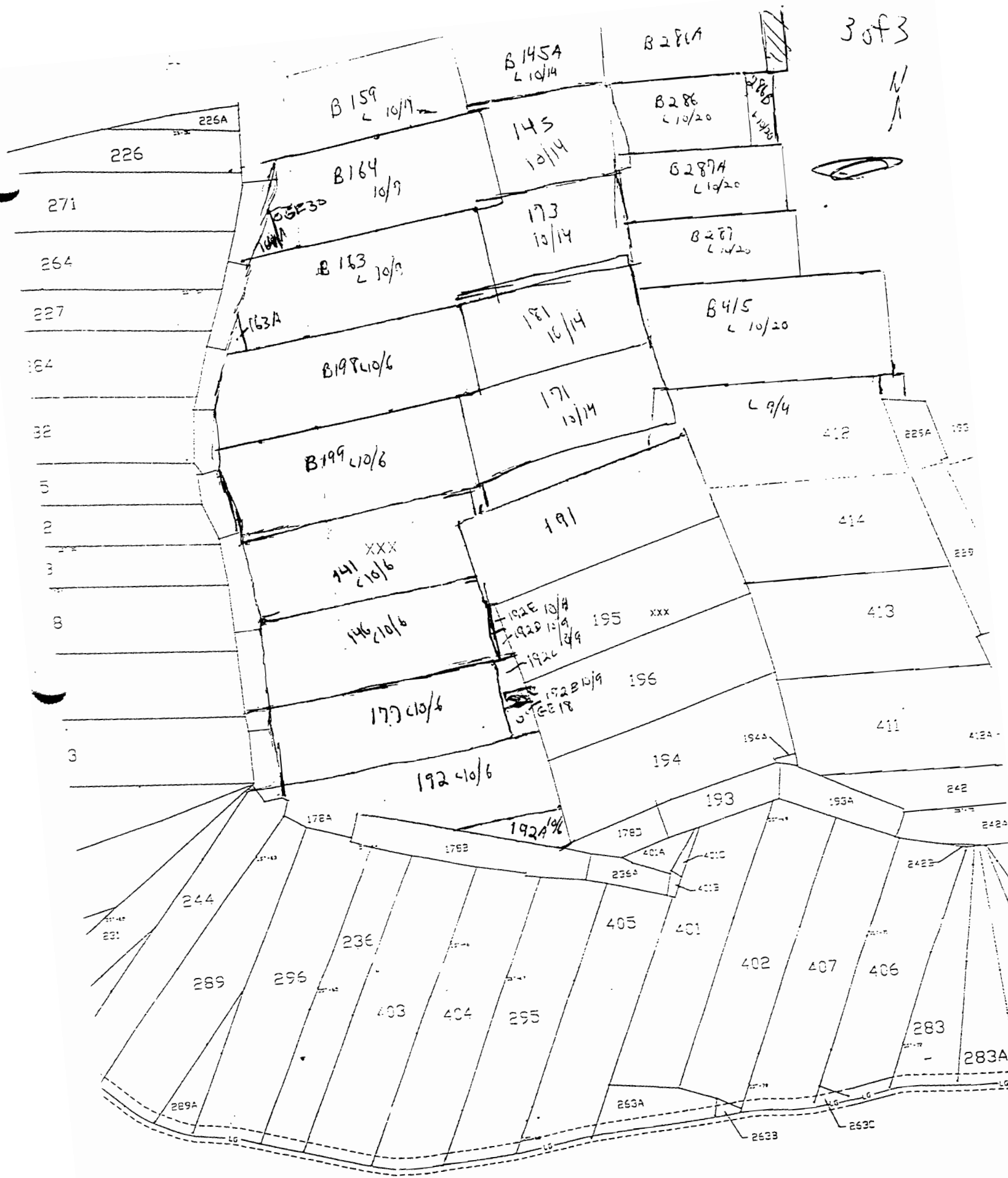
DATE: October 20, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

11/1



ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 21, 1997
INSPECTOR: BC
LINER TECHNICIAN: JE JC

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	44	65	PM
Sunny AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 21, 1999
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 44		65 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T (W) TH F S

Date: October 22, 1969

IDR #: 407

Weather	High	Low
clear	60	34

Description of work performed and inspected

[illegible]

Remarks: Observed EL place and glue PVC embossed panels B118, 118A, 118B, 285, 285A, 6248, 248A on east slope. Air-lanced seams with Grant Morgan.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Page 1 of 2 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 22, 1949
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 34			PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High > 20 MPH AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: October 23, 1991

IDR #: 408

Weather

High

Low

clr/ptly cldy	61	34
---------------	----	----

Description of work performed and inspected

[illegible]

Remarks: Observed EL nail cut 1 DN and 6 oz on NE corner. Observed EC plate and seam (hot wedge and glue) PVC panels B241, 241A, 246, 246A, and 410 (p. 3). Measured PVC with Mike Orena (p. 2)

Equipment & Labor Record

[illegible]

Start/finish time: 0900 / 1530

Page 1 of 3 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Inspector's name

2093

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 23, 1999

INSPECTOR: BC

LINER TECHNICIAN: IC, SG

WEATHER

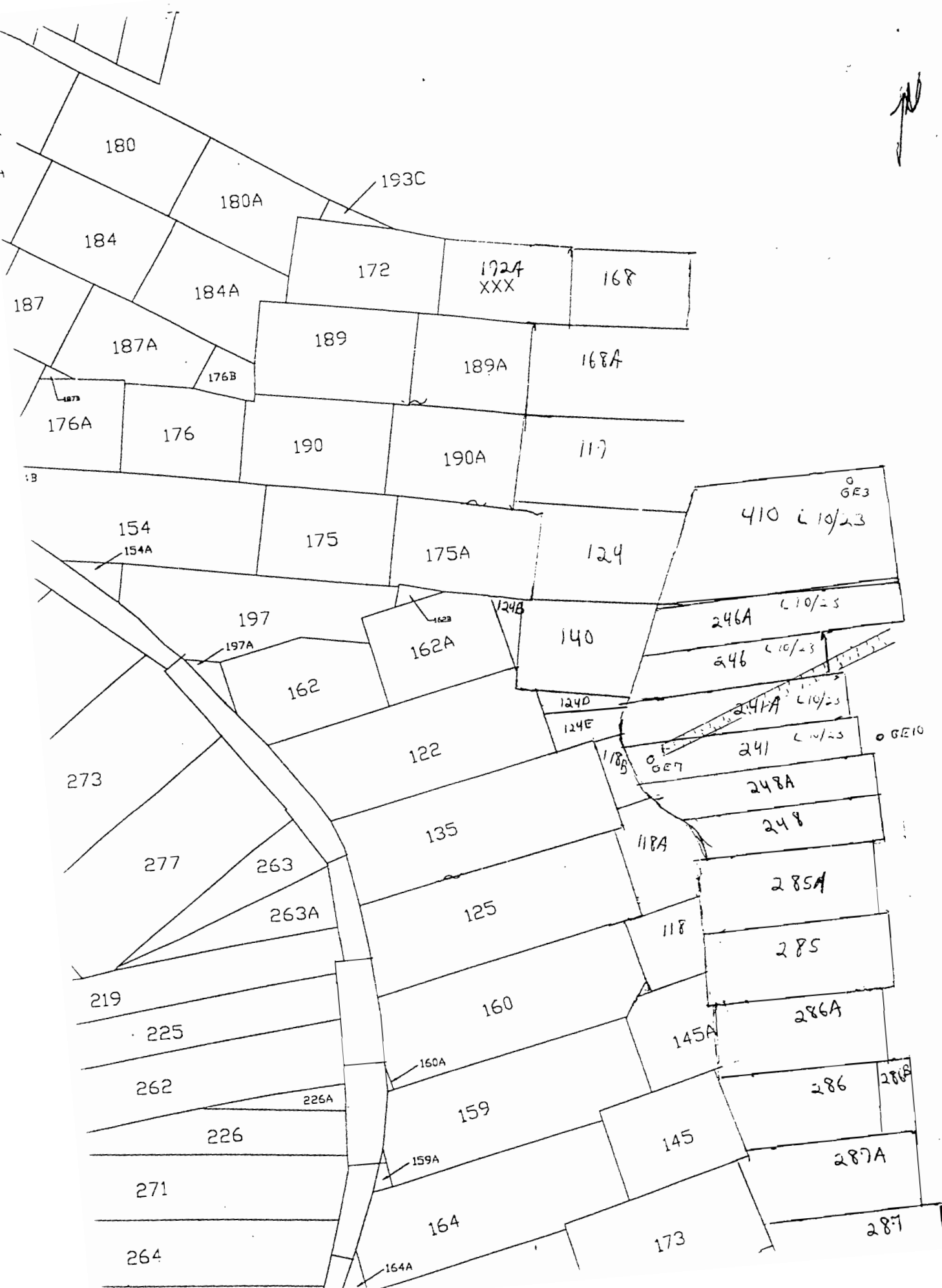
TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 34	PM 61		
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B118/160	embossed smooth		76.6	75.5		5,783.35sf 642.65sy
B118B/135	smooth		76.2	33.2		2,529.85sf 281.15sy
B118A/125	smooth		(72 x 37) + (57.1 x 38.65) =		4,870.9sf 541.2sy	B118A 157.1 72 38.65 37
B1240/124E+res.	smooth		47.2	26.4		1,246.15sf 94.4sy 138.5sy
B286A	embossed		137.1	60		8,226.5sf 914sy
B285	embossed		143.4	60.4		8,641.45sf 962.4sy 543.6sy
B275A	embossed		127	60.5		7,683.5sf 853.7sy
B298	embossed		(138.5 x 37.2) + (29.5 x 22 x .5)			5,476.75sf 608.5sy
B298A	embossed		182.8	37.5		6,855.5sf 761.7sy





Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W T H (F) S

Date: October 24, 1999

IDR #: 409

Weather	High	Low
<u>cldy</u>	<u>57</u>	<u>42</u>

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
	<u>No movement today</u>		

Remarks: Observed major soil failure cracks around JFH cover soil stockpile at south west corner of (FP) - cracks to 12" wide x 50' long x 5' (visible) deep. Observed EC roll out box fabric on North East corner, and observed Hen-gle seams and make repairs on panels 124A, C, D, 3A. Air-lanced seams with Grant Morgan (p-2,3).

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700, 1530

Page 1 of 3 pages

s:\clarktown\ldforms\ldr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
 WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
 GENERAL CONTRACTOR: Ogden
 LINER INSTALLER: Environmental Liners

DATE: October 24, 1999

INSPECTOR: BC

LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
42 AM		57 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
124C/12	SAME	80	30	passed w/ minor repairs
124C/171			20	
124C/191			20	
124C/2			30	
2/171			20	
2/191			20	
2/124A			30	
124A/171			50	
124A/191			50	
124A/173A			30	
173A/171			30	
173A/191			60	
173A/141			30	
173A/199			50	
248A/241			190	
241/118B			38	
241/241A			175	
241A/124E			10	
241A/124D			5	
241A/246			170	
246/140			38	
246/246A			150	
246A/140			40	
246A/410			220	
410/124			75	
410/119			15	
145A/118			75	
118/160			75	
118/125			10	
286A/285			135	
286A/145A			60	
285/145A			40	
285/118			30	

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 24, 1999 continued
INSPECTOR: BC
LINER TECHNICIAN: GM

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S (M) T W TH F S

Date: October 27, 1991

IDR #: 4/2

Weather	High	Low
rain/pthly cldy	62	48

Description of work performed and inspected

[illegible]

Remarks: EC did not work today due to rain. Walked site in AM inspecting for rain damage. Found little. Soil failure from Friday by cover soil (JFK) stockpile continues to increase. Measured PVC with Mike Diana (2) caught up on paper work.

Equipment & Labor Record

[illegible]

Start/finish time: 0900, 1500

Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 27, 1999

INSPECTOR: BC

LINER TECHNICIAN: 22

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
48 AM		62 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M (T) W TH F S

Date: Oct 28, 1999

IDR #: 413

Weather

High

Low

Weather	High	Low
ptly cldy	60	41

Description of work performed and inspected

[illegible]

Remarks. EL began compacts on each slope - rollers put down. Winds too high to safely install measured pipe for BET (p. 2, 3) Observed over soil placement.

Equipment & Labor Record

[illegible]

Start/finish time: 0755 / 1530

Inspector's signature

Page 1 of 1 pages

Inspector's name

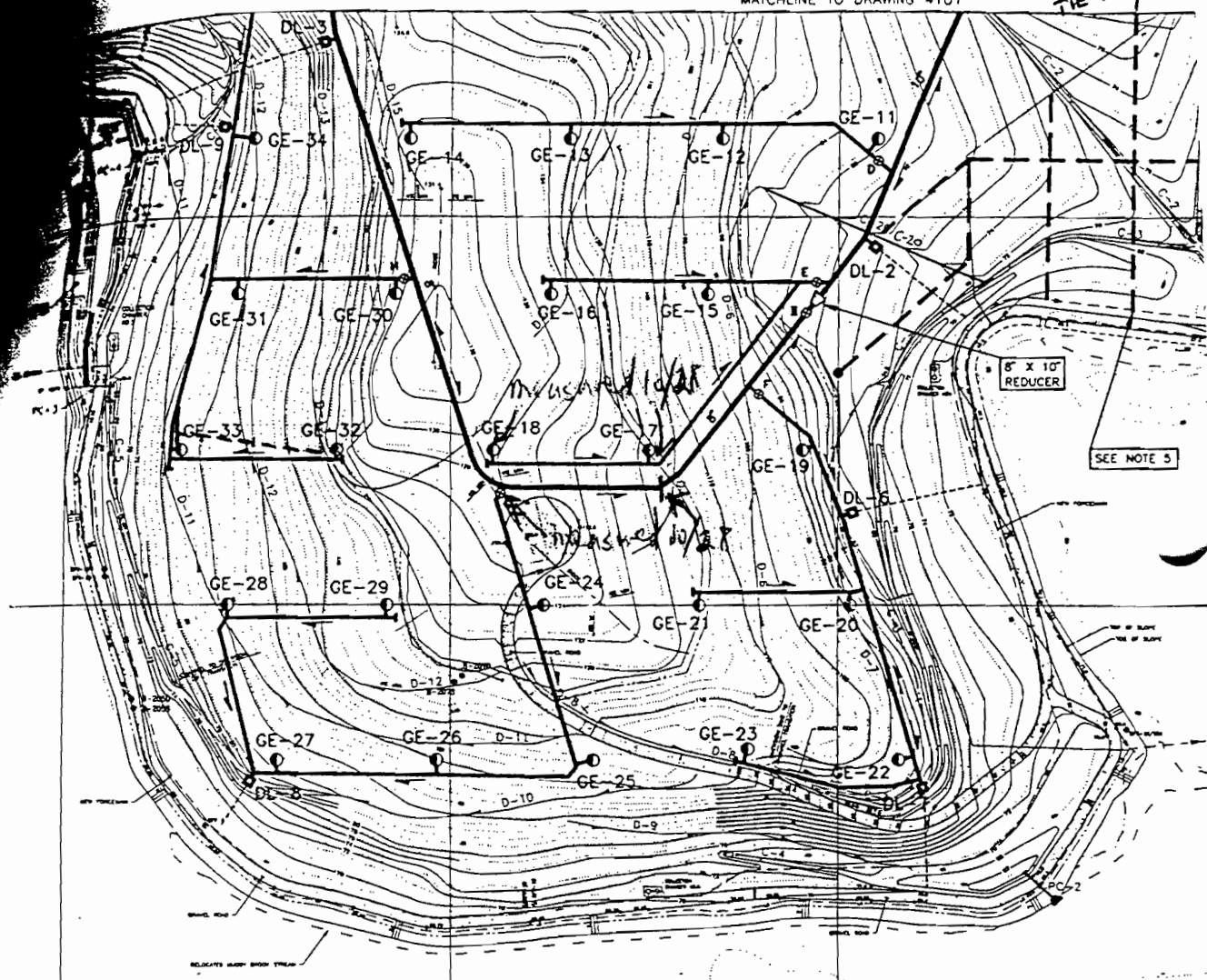
s:\clarktwn\fidforms\idr.xls

3063

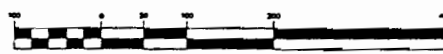
TERMINATE SURFACE COL
10'± BEYOND MATCH

MATCHLINE TO DRAWING 4101

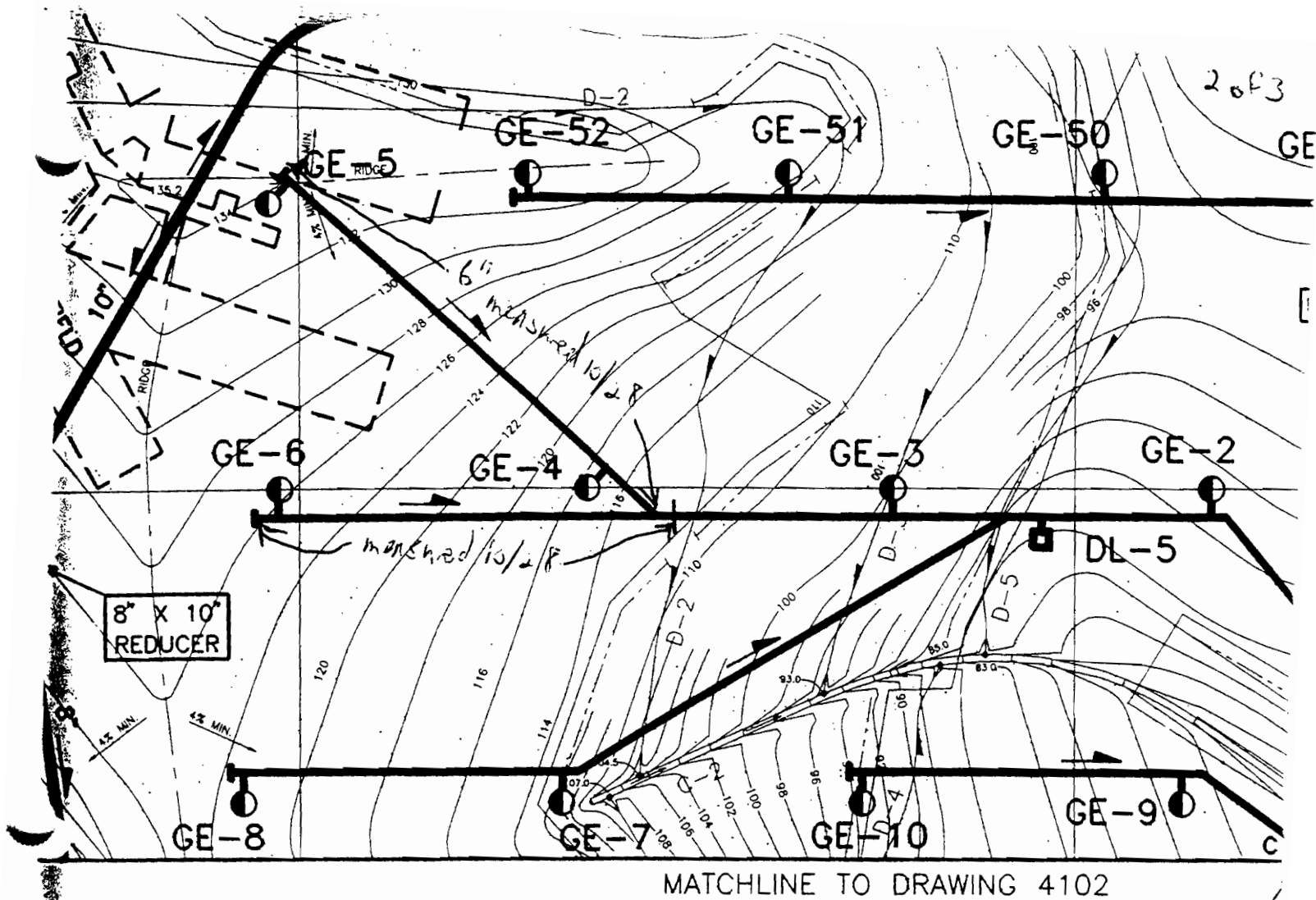
TO C.S.
TIE-IN



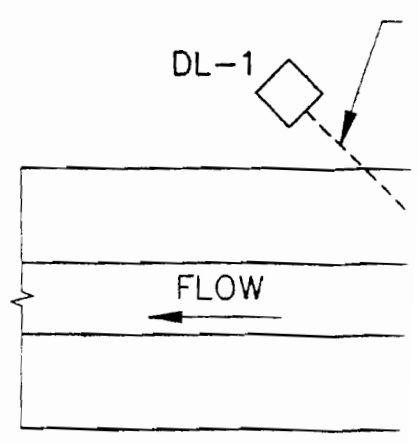
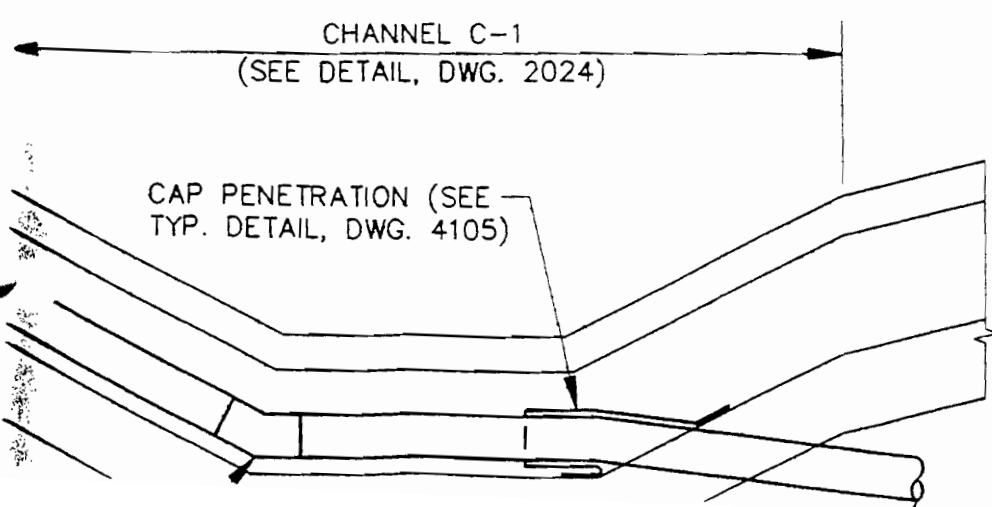
GRAPHIC SCALE



(IN FEET)
1 inch = 100 ft.



LFG PIPE INV. = 72.0±
 @ CHANNEL C-2 (SEE
 DETAIL 2, THIS DWG.)



CAP PENETRATION



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: October 29, 1999

IDR #: 414

Weather	High	Low
<u>clr/clr</u>	<u>58</u>	<u>30</u>

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
	<u>No measurements today</u>		

Remarks: Observed EL place DN and 602 on west side of LFP-1 in AM and 602 on
subgrade at North East corner of LFP 6/LFP 2. Identified 5 holes in liner needing repair - 2 of
which are buried with ORSC. Observed EL straight on PVC damaged by Tuesday's wind

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 0700/1630

Page 1 of 1 pages

s:\clarktown\fid\forms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W (TH) F S

Date: October 30, 1997

IDR #: 415

Weather

High

Low

clr

23

49

Description of work performed and inspected

[illegible]

Remarks: Observed EL plate + seam PVC panels B243, B290, B288 on east slope (p.2)
Observed EL plate 16 rolls of gas composite on east slope (p.3) Measured gas vent pipe with
Tim Newell of BET on east slope (p.4)

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

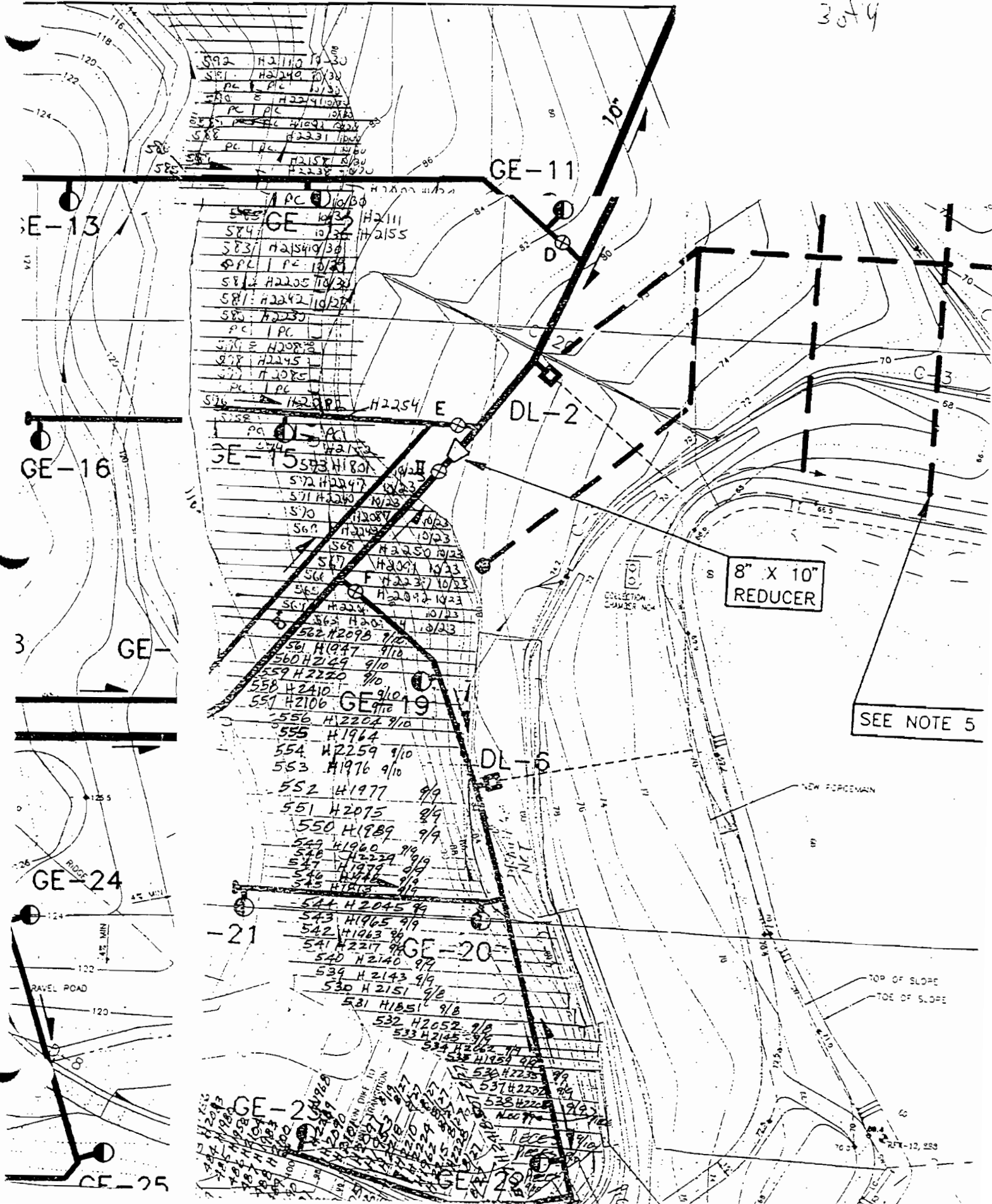
Page 1 of 3 pages

s:\clarktwn\fidforms\idr.xls

Inspector's signature
Robert Cunningham
Inspector's name

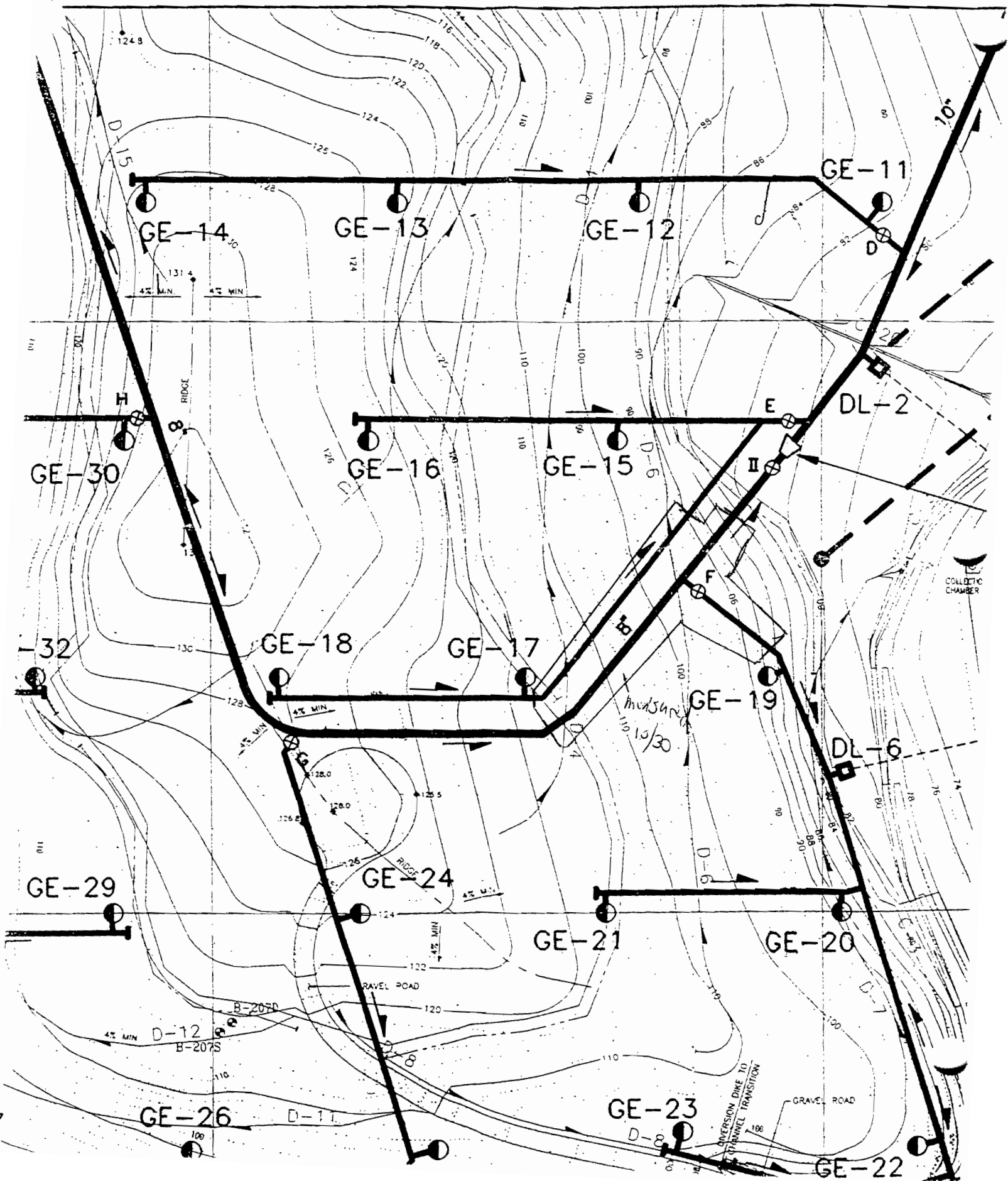
MATCHLINE TO DRAWING 4101

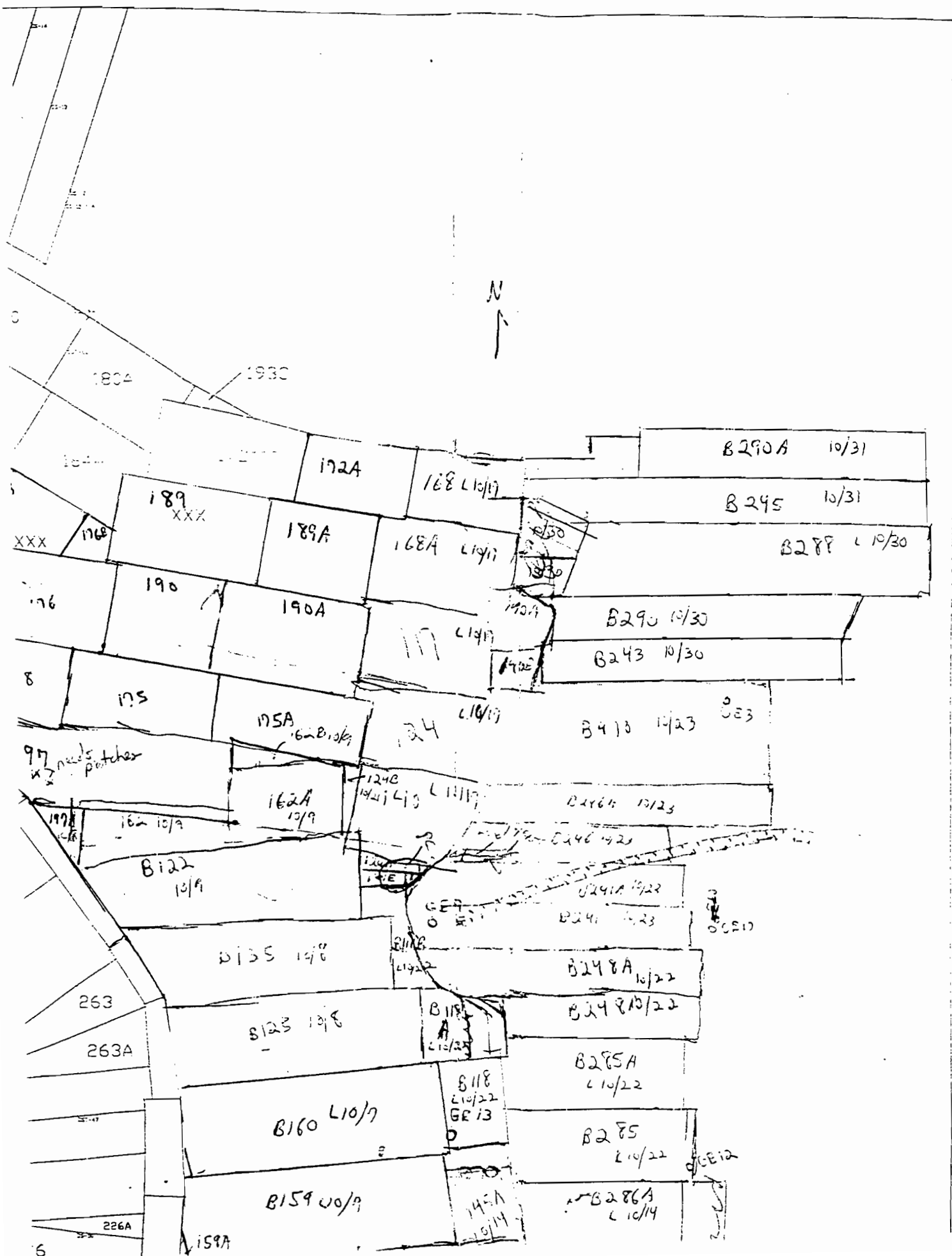
3049



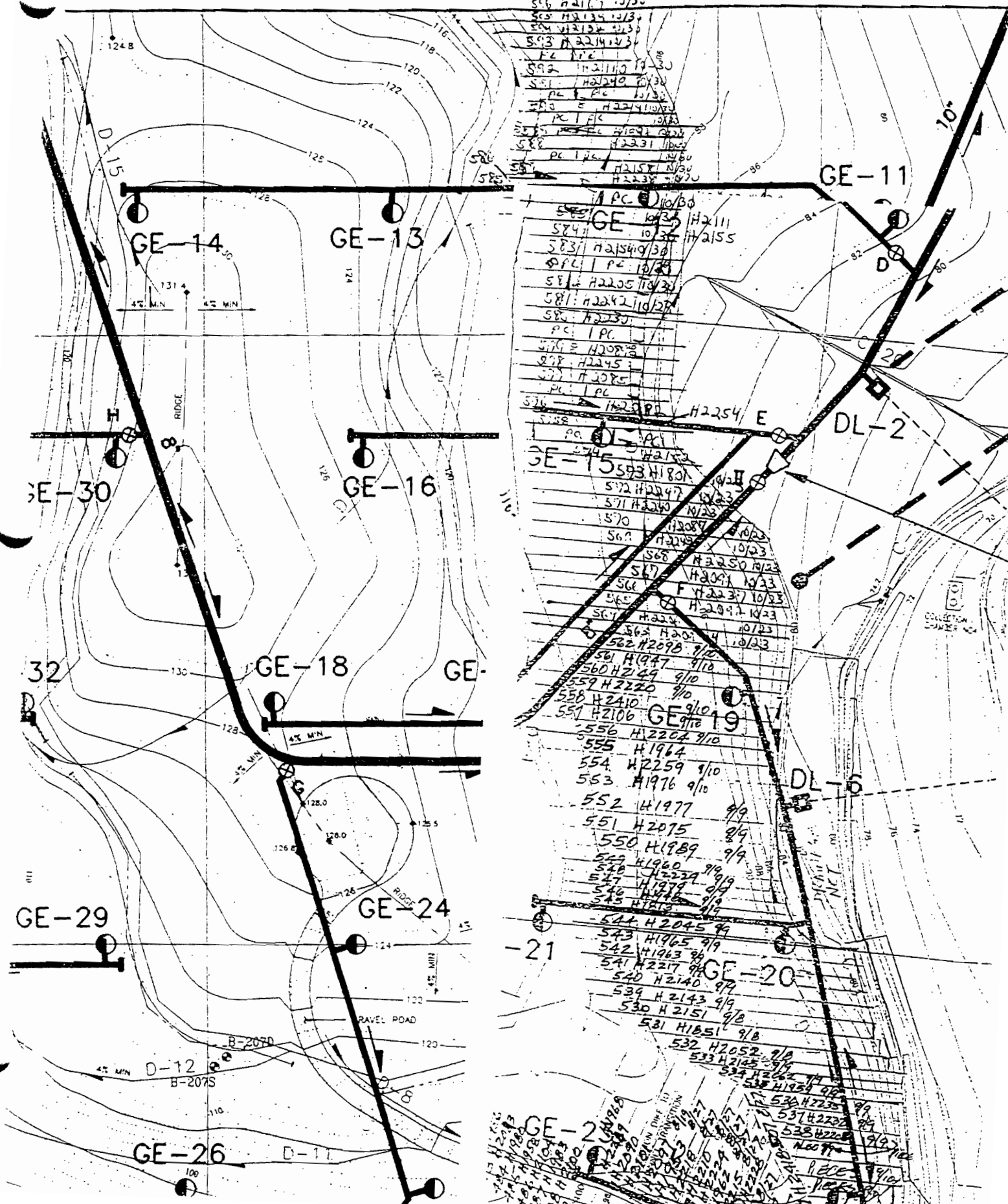
404

MATCHLINE TO DRAWING 4101





MATCHLINE TO DRAWING 4101



ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: October 31, 1999
INSPECTOR: DL
LINER TECHNICIAN: GM

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
4 AM			6 PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: October 31, 1990

INSPECTOR: BC

LINER TECHNICIAN: LL

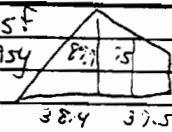
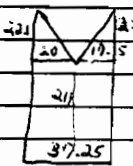
WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
34 AM		62 PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
B43A/168A/290	smooth		(89.7 x 75 x	384x.5) + 37.5) =		4,534.75sf 503.95y 
B243	embossed		118.8	37.5		4,455.5sf 495.5y
B290	embossed		(211 x 22.6 x 22.1 x	37.25)+ 17.5x.5)+ 20x.5)=		8,278.5sf 719.85y 
B288	embossed		269.4	60.7		16,352.6sf 1,817.5y
B245	embossed		300.8	37.6		11,310.1sf 1,256.75y

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

'o: 03228-018-001-0003-00

consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 11/3/97

IDR #: 419

description of work performed and inspected

Weather	High	Low
CLP/CLP	66	35

[illegible]

Remarks: OBSERVED PLACEMENT OF 23 ROLLS DRAINAGE COMPOSITE ON LFP-1

Shipment & Labor Record

[illegible]

turninsh time: 0700 / 1530

Page 1 of 3 pages
arktnvidformsldr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

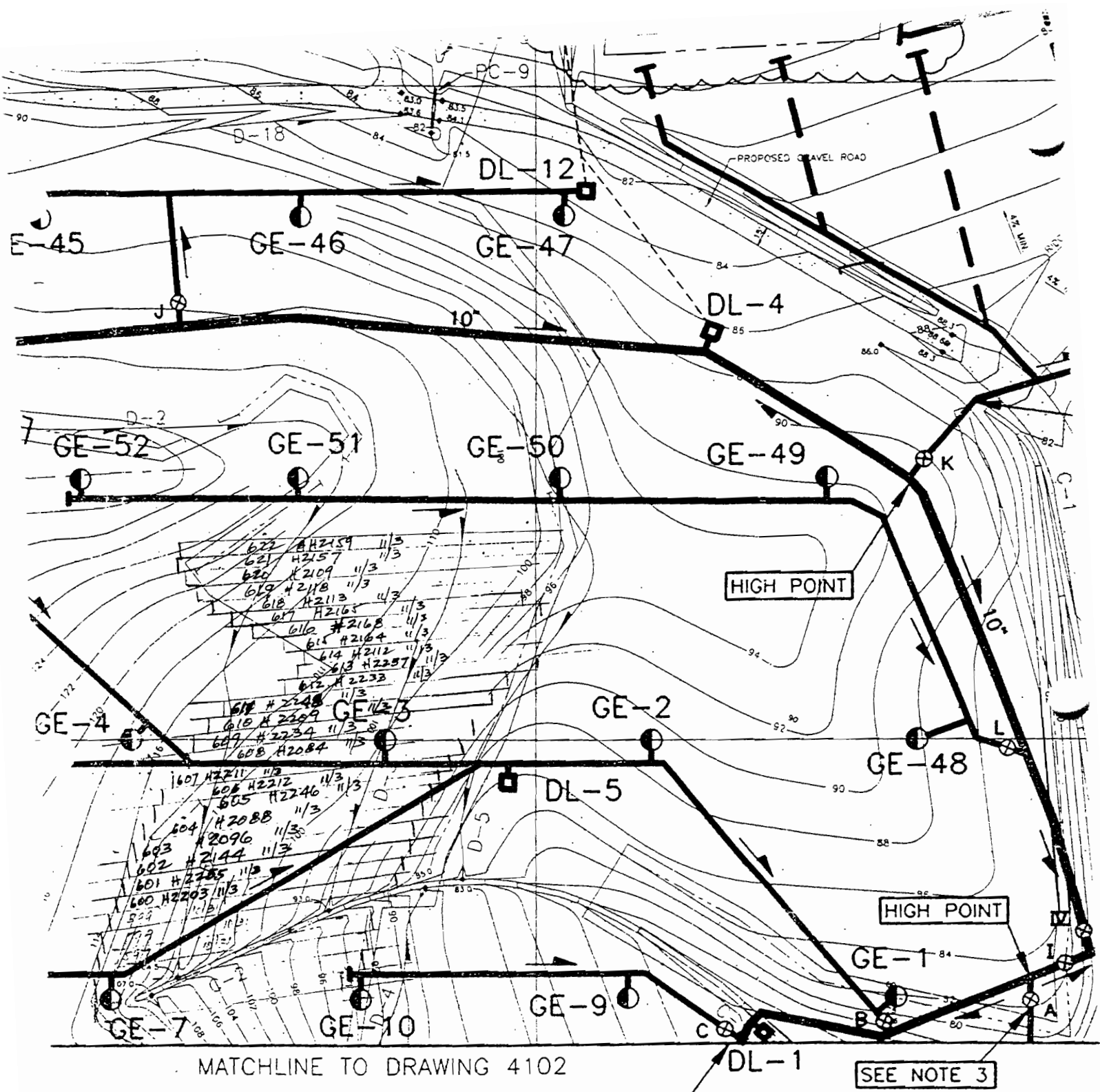
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 11/3/97
INSPECTOR: JOE FALCONE
LINER TECHNICIAN: _____

WEATHER AM CLR PM CLR
TEMP DEG F HI 66 LO 35
WIND AM _____ PM _____
PRECIPITATION AM _____ PM _____

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	DIMENSIONS L X W = SF / S = SY
H 2203	DRAINAGE COMPOSITES			NOT MEASURED
H 2255				
H 2144				
H 2096				
H 2088				
H 2240				
H 2212				
H 2211				
H 2084				
H 2234				
H 2209				
H 2248				
H 2233				
H 2257				
H 2112				
H 2164				
H 2168				
H 2165				
H 2113				
H 2118				
H 2109				
H 2157				
H 2159				

COMMENTS:



LFG PIPE INV.=72.0±
 ⊗ CHANNEL C-2 (SEE
 DETAIL 2, THIS DWG.)

LFG PIPE INV.=
 ⊗ CHANNEL C-
 DETAIL 1, THIS

JOE FALCONE
 11/3/97
 PAGE 3 OF 3

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S (M) T W TH F S

Job No: 03228-018-001-0003-00

Date: November 3, 1999

Consultant: Roy F. Weston of New York, Inc.

← IDR #: 419

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Clear	66	35

Description of work performed and inspected

[illegible]

Remarks: Observed damage from storm of 11-1, 11-2. Damage mostly confined to channels and embankments, plus washout of covers on east slope clogging D.V. that is not covered. Measured geomorphic with Mike Diana (p 2, 3). Attended meeting on problems filling LFP-1 with no resolution.

Equipment & Labor Record

[illegible]

Start/finish time: 0900 / 1530

Page 1 of 3 pages

s:\clarktwn\fidforms\idr.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: November 3, 1991

INSPECTOR: BC

LINER TECHNICIAN: MD

WEATHER

TEMP. DEG F

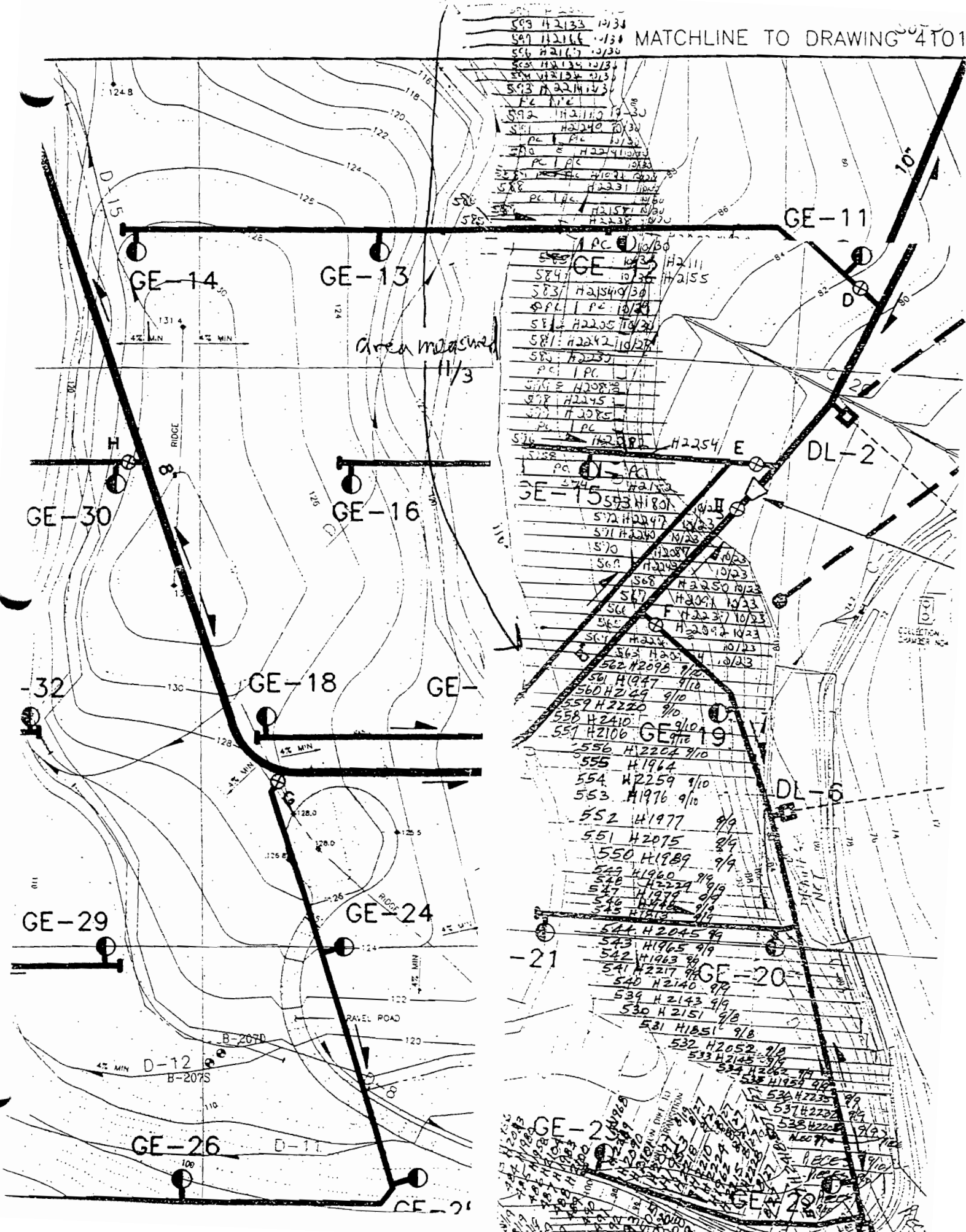
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	25	66	PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

MATCHLINE TO DRAWING 4T01



S M T W TH F S

Date: 11/4/97

IDR #: 420

Weather	High	Low
Partly CLDy / Partly CLDy	67	42

[illegible]

Remarks: MONITORED AIR LANCING BY LINER CREW ON LFP-5
OBSERVED LINER CREW CLEAN UP OF SOIL EROSION AT EAST SIDE (TOP)
OF LANDFILL FOR PREPARATION OF FLAP.

[illegible]

finish time: 0700, 1530

Page 1 of 2 pages
marktwidformsVdr.xls

Inspector's signature
JOSEPH L. FAICONE
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T (W) TH F S

Date: 11/5/91

IDR #: 921

Weather

High

Low

clear	69	33
-------	----	----

Description of work performed and inspected

[illegible]

Remarks: Spent day reconciling October's numbers with Ogden and updating paperwork such as as-built's and tables. T.S. Falcone observed E.C.'s work.

Equipment & Labor Record

[illegible]

Start/finish time: 0700, 1530

Inspector's signature
Robert Cunningham
Inspector's name

Inspector's Daily Report

S M T W TH F S

Date: 11/6/97

IDR #: 422

Weather	High	Low
clr/clr	63	37

[illegible]

Remarks: OBSERVED LINER CREW @ CHANNEL 7 - LFP-8 - CHANNEL CLEANED OF WET SOIL W/ GRADALL. - PIECES OF DRAINAGE GEOTEXTILE PLACED UNDER 6 OZ. GEO. - PLACEMENT OF (1) ROLL OF 6 OZ. GEOTEXT. PLACEMENT OF (3) LINER PANELS.

Shipment & Labor Record

[illegible]

finish time: 0700 / 1530

Page 1 of 3 pages
arktwmVidformsVdr.xls

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 11/16/97
INSPECTOR: JOE FALCONE
LINER TECHNICIAN: _____

WEATHER	AM	<u>CLR</u>	PM	<u>CLR</u>
TEMP DEG F	HI	<u>63</u>	LO	<u>37</u>
WIND	AM		PM	
PRECIPITATION	AM		PM	

[illegible]

COMMENTS: All .



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: November 6, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 422

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
<u>cl/r/pty cl'd</u>	<u>63</u>	<u>37</u>

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
	<u>No measurements today</u>		

Remarks: Observed ORSC reconstruction of channel C-2. Observed EL place 3 PVC panels in LFP8 (B166, B131, B165) (p 2). Began training Joe Schofield to replace me as liner inspector.

Equipment & Labor Record

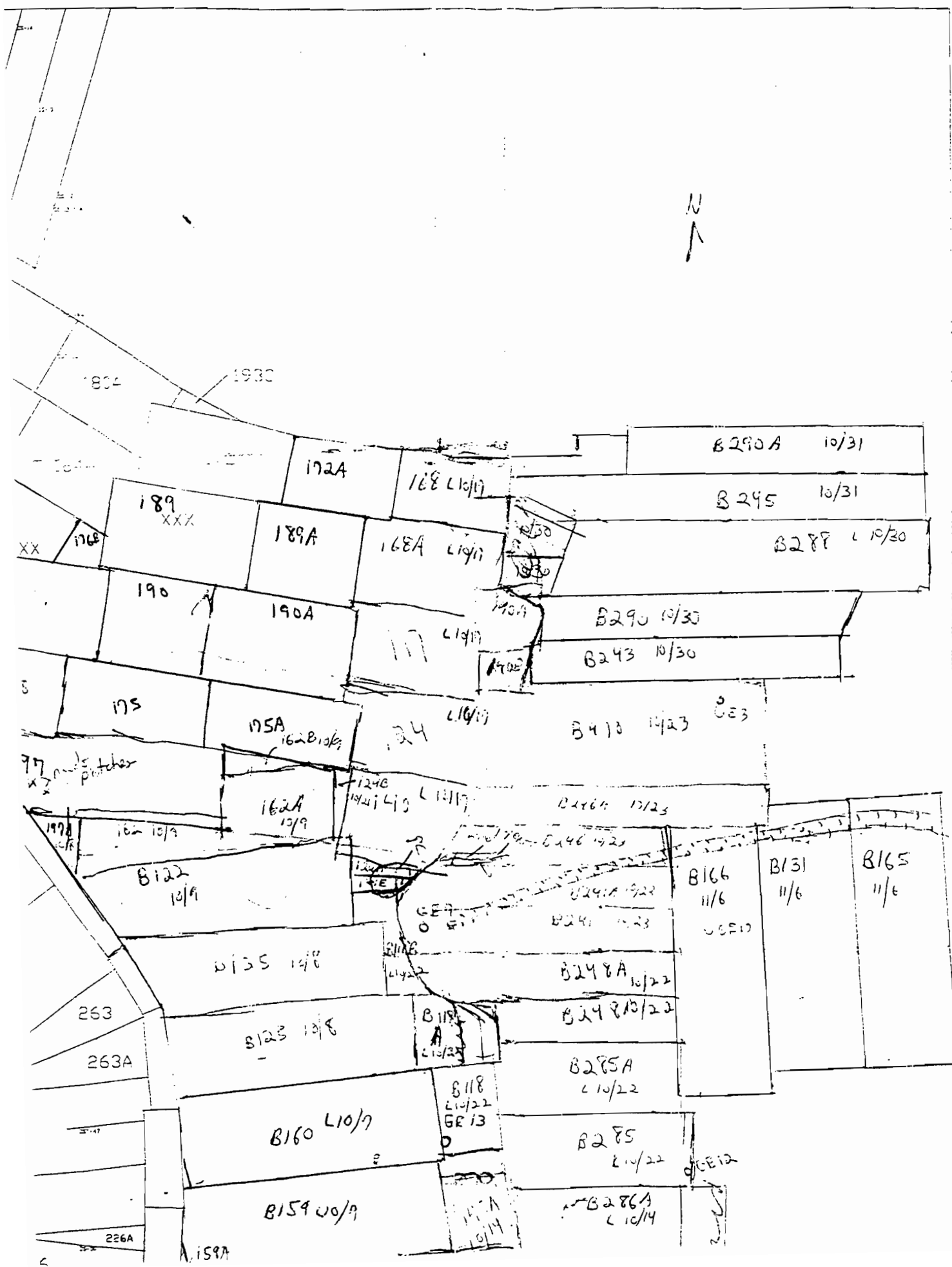
No. pieces	Type	Hours	Function

Start/finish time: 0700 / 1530

Page 1 of 2 pages

s:\clarktown\lfdforms\lfd.xls

Robert Cunningham
Inspector's signature
Robert Cunningham
Inspector's name



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH (F) S

Job No: 03228-018-001-0003-00

Date: November 7, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 423

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
cloudy/cloudy	60	49

Description of work performed and inspected

[illegible]

Remarks: Air landed yesterday, panel seems with Grant-Morgan, Joe Schofield.

Observed EC place DN over B166, B131, B165

EL left side at 1200.

Worked on October liner numbers during afternoon

Last day on-site for BC.

1530 to 1645 Attended meeting with JRSC to reconcile 501 & other numbers

Equipment & Labor Record

[illegible]

Start/finish time: 0900, 17 00

Page 1 of 2 pages

s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Robert Cunningham
Inspector's name



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S (M) T W T H F S

Job No: 03228-018-001-0003-00

Date: Nov. 10, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 426

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
PT. CLOUDY	65° PM	44° AM

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	LF P 8 FG	5475.3 YD ²	165, 131, 166
23 A	LF P 8 FG		16 TOTAL PANELS AS OF YET NO MEASUREMENTS
	LF P 8 C 7 - D 7		NO MEASUREMENT TODAY FOR FLAP

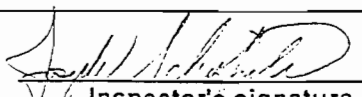
Remarks: MIKE DIANA AND MYSELF WHEELED OUT SMOOTH PVC PANELS B-166 - E-131 - B-16. WIDTH + LENGTH OF PVC PANELS ARE ON LINER INSPECTION FORM

PLACEMENT OF 60Z. FABRIC OVER DRAINAGE NET OVER SAID PVC PANELS (TOTAL OF 16 PANELS) WELDED PANELS 288A TO PANELS 29A-245-168-B105-218 AND 219
PLACEMENT OF SMOOTH PVC LINER FOR NORTH-EAST FLAP ≈ 1.5 SPICE FROM EAST END OF PANEL 191-124C-171-181 AND ≈ 20' FT WIDE

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 07:00/1530


Inspector's signature
Joseph Schaefer
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

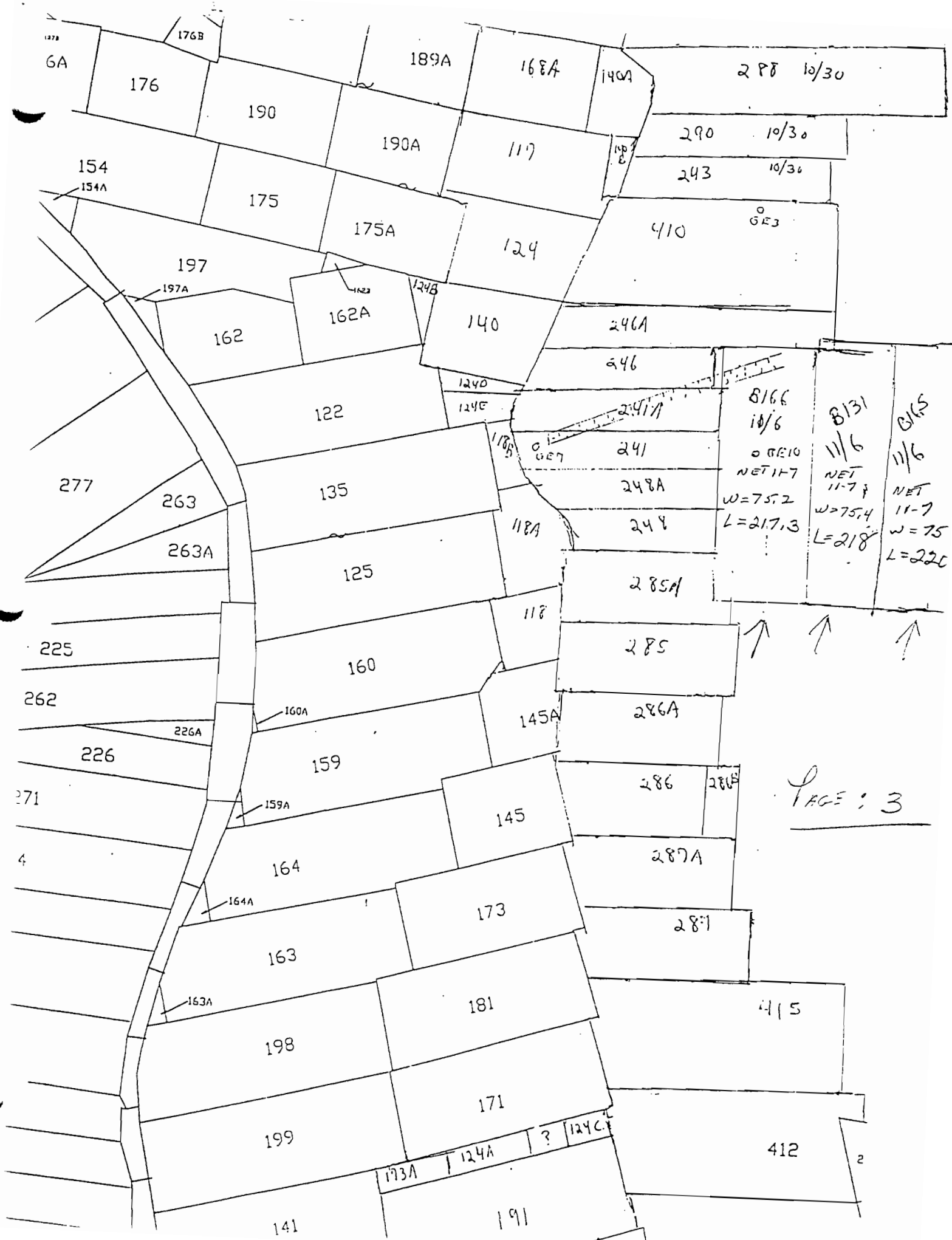
DATE: Nov. 10, 1997
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: _____

WEATHER	Clear AM / PM	<u>P. Cloudy</u> <u>AM / PM</u>	Overcast AM / PM	Rain AM / PM
TEMP. DEG F	44° AM		65° PM	
WIND	SE 11 AM / PM	<u>L. Breeze</u> <u>AM / PM</u>	Moderate AM / PM	High (> 20 MPH) AM / PM
HUMIDITY	Dry AM / PM	<u>Moderate</u> <u>AM / PM</u>	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	LENGTH	WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
165	SMOOTH	OK	220	75		16500 (SF) 1833.3 (SY)
131		OK	218	75.4		16437.2 (SF) 1826.3 (SY)
166	V	OK	217.3	75.2		16341 1815.6 (SY)
					TOTAL'S	49278.2 (SF)
					TOTAL	
						SY'S = 5475.3
						165
						↑
						220' FT
						↓
						131
						↑
						218' FT
						↓
						166
						↑
						217.3' FT
						↓

165.271

TODAY'S TOTAL SY'S = 5475.3



ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 11/11/97
INSPECTOR: Joe Falcone
LINER TECHNICIAN: _____

WEATHER	AM	PM
TEMP DEG F	HI <u>61</u>	LO <u>34</u>
WIND	AM	PM
PRECIPITATION	AM	PM

[illegible]

COMMENTS:

WESTERN

S M T W TH F S

Date: Nov. 11, 1997

IDR #: 427

Weather	High	Low
PT. Cloudy	61	34

[illegible]

LEFT SITE AT 9:00 AM TO WORK AT SULLIVAN CO LANDFILL

[illegible]

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 1/01. 11, 1997
INSPECTOR: JOSEPH SchoFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy (AM / PM)	Overcast AM / PM	Rain AM / PM
34 AM		61 PM	
Still AM / PM	L. Breeze (AM / PM)	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate (AM / PM)	Humid AM / PM	

[illegible]

1" = 100'

4 212 216 216 218 219
6/6 6/5

6/6

B

105

290A

10/31

168

→

290A

←

WELD 11-10

245

10/31

168A

140A

298

10/30

290

10/30

117

140A

243

10/30

410

0
GE3

124

30F3

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 11/12/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 428

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY/CLDY	52	36

Description of work performed and inspected

[illegible]

Remarks: OBSERVED TRUCK DELIVERIES TO STOCK PILE ON LFP-8 (NEAR GE-48)
(SEE GLEN I REPORT) OBSERVED CLEANUP OF AREA NORTH OF CHANNEL C-2 FOR PLACEMENT
OF 602. GEO. - OBSERVED COVER SAIL PLACEMENT BELOW GE-17 ON EAST SIDE
WHERE SAIL EROSION OCCURED. BUBBLES IN LINER EXPOSED AND MUST BE BONCED.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Inspector's signature
JOSEPH L. FALCONE
Inspector's name

S M T W TH F S

Date: Nov. 12-1997

IDR #: 428

Weather	High	Low
CLOUDY	52	36

[illegible]

Remarks: OBSERVED FLAP #9 PLACEMENT NORTH OF DIKE D-9
10 DESTRUCTIVE TEST WERE TAKEN FOR BOTH PEEL AND SHEAR
DESTRUCTIVE SEAM LOG ON FOLLOWING PAGE
DEPLOYMENT THEN HAND STITCHED 602. NON WOVEN FABRIC IN AREA 7G AND THE
TOP GRID OF 6G A TOTAL OF 18 PANEL WIDTH WERE PLACED

[illegible]

Inspector's signature
JOSEPH SCHOFIELD
Inspector's name

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

ENVIRONMENTAL LINERS, INC.

Trial Seam Sample Log

Date:

☒ Destructive Seam Log[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: NOV. 12, 1997
INSPECTOR: JOSEPH SchoFIELD
LINER TECHNICIAN:

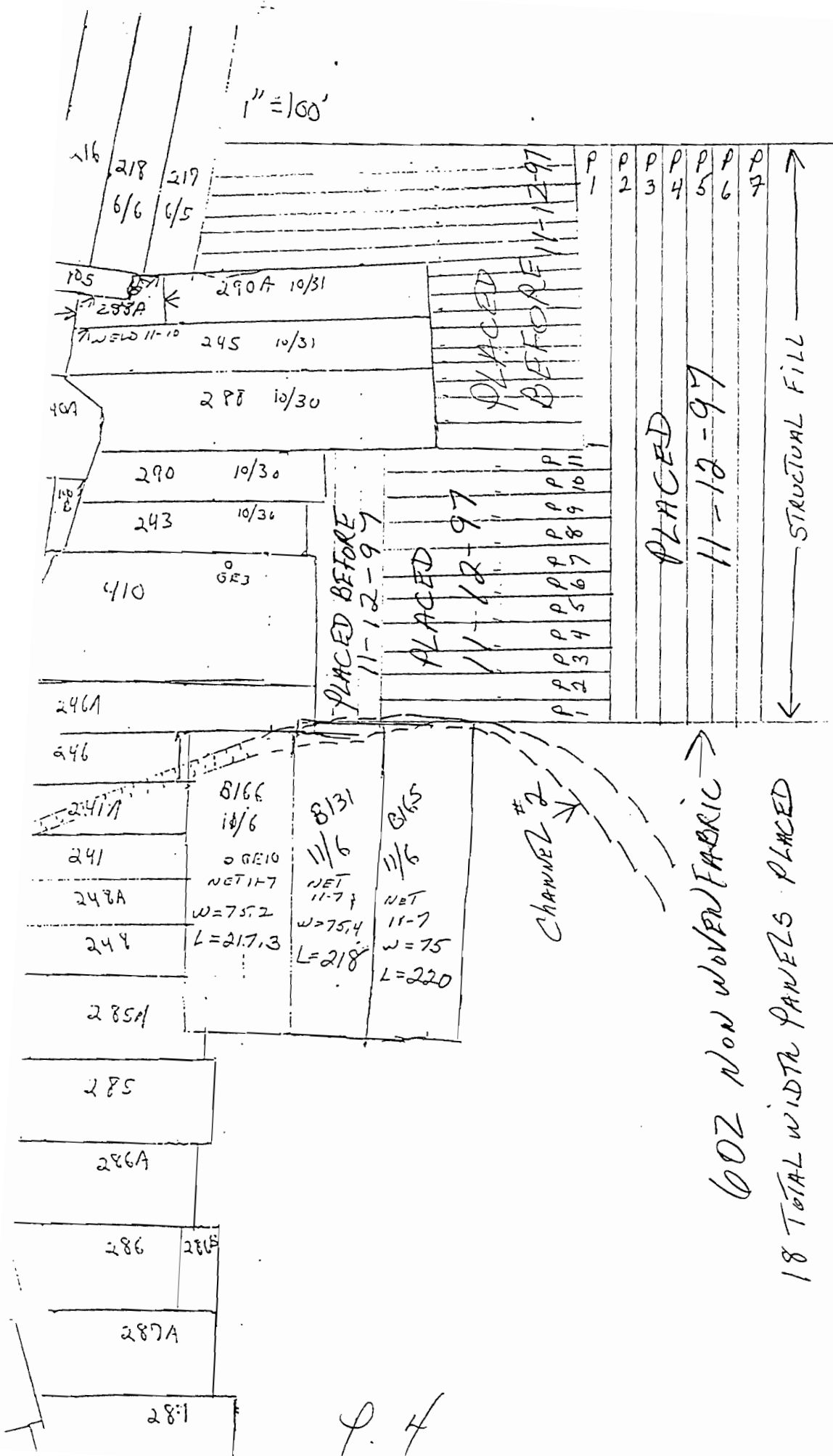
WEATHER	AM <u>Mt. Cloudy</u>	PM <u>Mt. Cloudy</u>
TEMP DEG F	HI <u>52</u>	LO <u>36</u>
WIND	AM <u>10</u>	PM <u>12</u>
PRECIPITATION	AM	PM

602. NON WOVEN GEOTEXTILE

[illegible]

COMMENTS: VISUALLY OBSERVED THE HAND STICKING
AND WAS TO SPECIFICATIONS
SUB GRADE WAS ACCEPTABLE

1" = 100'



* NOT IN SCALE
MEASUREMENT AS OF YET

60Z NON WOVEN FABRIC

18 TOTAL WIDTH PANELS PLACED

ROLL # 102284408
109468777
102284453
102299744
102299554

P. 4

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 11/13/97

Consultant: Roy F. Weston of New York, Inc.

IDR #: 429

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Partly cloudy / cloudy	55	26

Description of work performed and inspected

[illegible]

Remarks: LINER CREW PLACED 602 GEC NORTH OF CHANNEL C-2 (AT GE 2)
 ✓ BLANKET LINERS PLACED. OBSERVED PLACEMENT OF SOIL IN ERODED AREAS DOWNHILL (EAST)
 OF GE-17 & DOWN TO GE+19. BUBBLES OF GAS (UNDER LINER) WERE TAKEN FOR GAS TO ESCAPE.
 CHANNEL C-20 WIDENED AND TEMPORARILY LINED FOR POSSIBLE INCLEMENT WEATHER.

Equipment & Labor Record

[illegible]

Start/finish time: 0700 / 1530

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 11/13/97
INSPECTOR: JOE FALCONE
LINER TECHNICIAN: _____

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P/Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM		PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Page 2 of 2

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: Nov. 13, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 429

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
PT. CLDY / MT. CLDY	55°	26°

Description of work performed and inspected

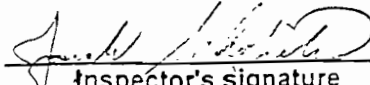
ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 S	288 A LFP 1	195.3 SY ²	} TOTAL = 1025.7 AS-BUILT PAGE 2
	290 A LFP 1	830.4 SY ²	
22 E	142 LFP 8	TO DATE	
	142 A	NO MEASUREMENT	
	143		
	127		
	127 A ↓		
23 A	(3) PANEL WIDTHS OF 60Z NON WOVEN GEOTEXTILE LFP 8 G-6 AREA	TO DATE NO MEASUREMENT	
23 A	(3) PANEL WIDTHS OF 60Z. NON WOVEN GEOTEXTILE LFP 8 G-5 AREA	TO DATE NO MEASUREMENT	

Remarks: PLACEMENT OF (3) PANEL WIDTH OF 60Z. NON WOVEN FABRIC DEPLOYED EAST FROM G-6 AREA LFP-8 PLACEMENT OF GEOTEXT OVER PVC LINER DRAINAGE FLAPS FROM LFP 7 TO LFP-6 FLAP #9 DIKE #9 SPlicing AND PLASTIC TIES ARE OF SPECIFICATION LFP 8 PLACEMENT OF (5) SMOOTH PVC BLANKETS LFP 8 AT G-6 AREA PLACEMENT OF (3) PANELS OF 60Z. NON WOVEN FABRIC DEPLOYED BETWEEN BLANKETS # 415 TO B166 IN F5 AREA TEMPORARY PLACEMENT OF BLANKETS INSIDE CHANNEL # 20 BECAUSE OF FUTURE FORECAST

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 700 14:30


Inspector's signature
JOSEPH SCHOFIELD
Inspector's name

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

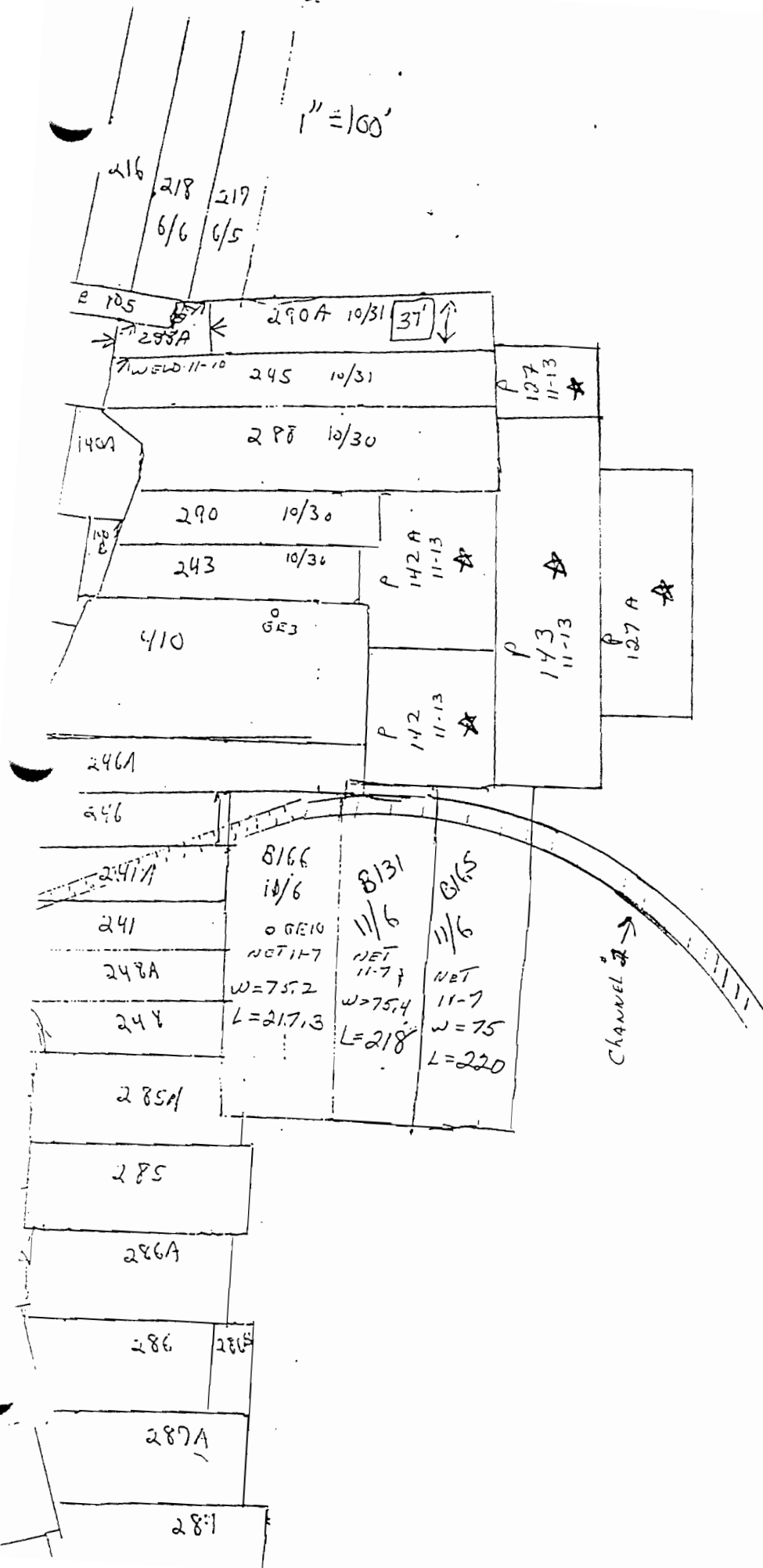
Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
26 AM			55 PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

HUMIDITY

PAGE 2



1" = 100'



PLACED = ★
11-13-97
NOT TO SCALE

DATE
MAY 16 50
SHEET 70° OF 100
100' WIDE

SWING P. 142
75.91 X 225

LYLE
NET 5.5 } 1 FISTER
11.1 } 14 X 3

PEEL 45 + 50 } TRAIL
SHEET 86 + 87 } START UP

S M T W TH F S

Date: Nov. 14, 19

IDR #: 430

Weather	High	Low
OVERCAST-SNOW		30°

[illegible]

Remarks: RAIN AND SNOW SHOWERS SHUT DOWN THE JOB
TODAY.

[illegible]

Inspector's Signature
JOSEPH SCHOFIELD
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

No: 03228-018-001-0003-00

consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 11/17/97

IDR #: 433

Description of work performed and inspected

Weather	High	Low
CLEAR	50	25

[illegible]

Remarks: OBSERVED LINER CREW PLACE 6 02. GEO. ON FLAT AREA SOUTH OF CHANNEL C-20. TIRE RUTS & WET AREAS DUG OUT & FILLED WITH DRY SPIL. LINER CREW MOVED TO FLAT AREA SOUTH OF CHANNEL C-2 TO PLACE DRAINAGE NETTING OVER BLANKET. ON TOP NORTHEAST CORNER OF LFP-10, COVER SOIL WAS PLACED OVER DRAINAGE NETTING & 6.02. GEO. - SOIL COVERED PIECES OF SCRAP LINER & NETTING - OGDEN NOTIFIED & THEY (PROGRESS SLOW ALTHOUGH FAVORABLE WEATHER) ARE TO REMOVE SOIL & DISCARD SCRAP PIECES.

Equipment & Labor Record

[illegible]

finish time: 0700 11530

Page 1 of 1 pages
arktownvidformsldr.xls

Joseph L. Gleason

Inspector's signature
JOSEPH L. FALCONE

Inspector's name

WOLFE
BOOKS & PAPERS

S M T W TH F S

Date: Nov. 17, 1997

IDR #: 433

Weather	High	Low
PT. CLDY	59	25

[illegible]

Remarks: PLACEMENT OF 60Z, NON WOVEN GEOTEXTILE AT LFP-8 CHANNEL #20
AREA (16) PANEL WIDTHS WERE DEPLOYED.
PLACEMENT OF STRUCTURAL FILL AT LFP-10 AREA
AIR LANCE PVC LINER FROM PANEL PLACEMENT ON 11-13 PANEL INCLUDES #142 -
142A - 143-127 AND 127A

[illegible]

Inspector's signature
SOE Schofield
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Nov. 17, 1997
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

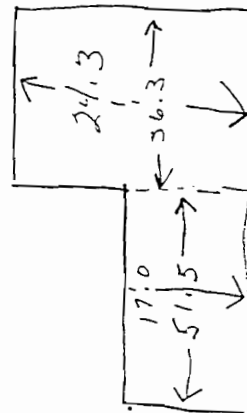
WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
25 AM			59 PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
288A	290 A	80	24.3 (FT)	
	218		36.3	
	105 B		15	NORTH AND SOUTH
	105 B		51.5	EAST AND WEST
	168		17	
	245		88	
142	246A	80	50 (FT)	
142	410		25	
142	142A		104	
142	143		75	
142	131 B		95.5	
	165B		75.5	
142 A	290	80	36.5	NORTH AND SOUTH
142A	243		39	NORTH AND SOUTH
142A	243		28	EAST AND WEST
142A	288		78	EAST AND WEST
142 A	143		74	
143	165B	80	50.5	
143	288		67	
143	127		77	
143	127 A		129	
127	290A		67	
	245		67	
	288			

AIR LANCE

1" = 100'



212 216 216 218 217
6/6 6/5

6/6 B 105 36.3 290A 10/31 37' ↑
168 170 → 288A 24.3 202 ↓
89.0

WELD 11-10-97 245 10/31
AIR LANCE 11-11-97

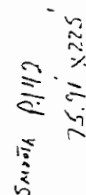
168A 140A 288 10/30

290 10/30

243 10/30

410 0 613

24



800
" 21014 1000 100
001 10 0 0 1 1000000
000 1 1000000
21014

LYLE

WENT 5.5	}	1015 STEP.
WENT 3.4		

PEEL 15 + 50	}	TPAIL
SAND 86 + 67		

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

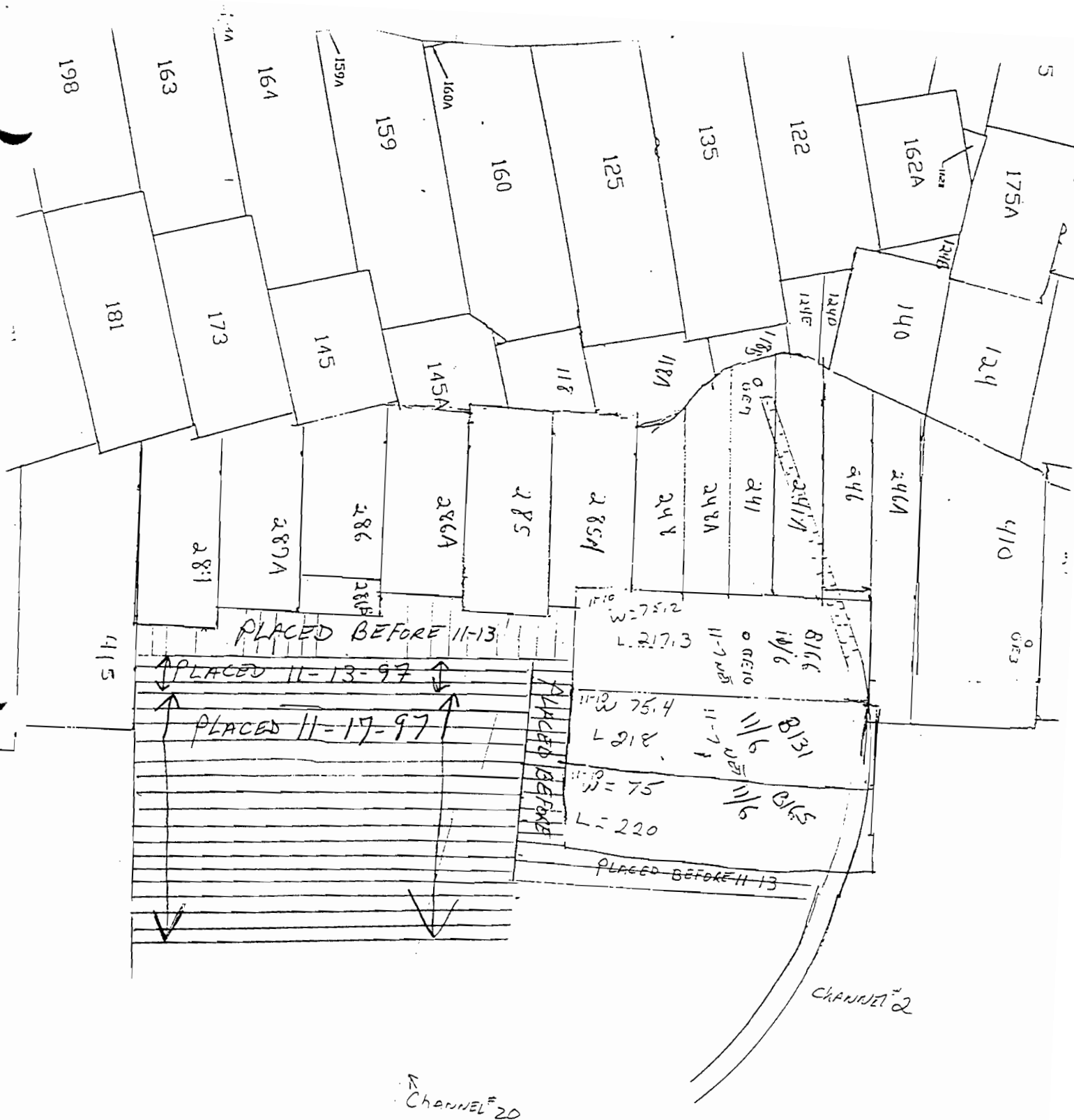
CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Nov. 17, 1997
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: _____

WEATHER	AM	<u>PT. CLDY</u>	PM	<u>PT. CLDY</u>
TEMP DEG F	HI	<u>59</u>	LO	<u>25</u>
WIND	AM	<u>10</u>	PM	<u>10</u>
PRECIPITATION	AM		PM	

[illegible]

COMMENTS: (4) ROLLS WERE USED AND LINER JOSEMAN
RECEIVED ALL THE ROLL TAGS



Inspector's Daily Report

S M T W TH F S

Date: 11/18/97

IDR #: 434

Weather	High	Low
CLR/CLR	50	23

[illegible]

Remarks: LINER CREW PLACED 10 ROLLS OF DRAINAGE NETTING NORTH OF CHANNEL C-2
FLAT SIDE - LFP-8 - ALSO PLACED 2 BLANKETS ACROSS AREA OF CHANNEL C-2D.
(1) BLANKET UNFOLDED (1) NOT. - PROGRESS VERY SLOW ALTHOUGH WEATHER
WAS VERY FAVORABLE.

[illegible]

Joseph L. Falsone

Inspector's signature

JOSEPH L. FALCONE

Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: Nov. 18, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 434

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLEAR	50	23

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	PVC BLANKETS PLACED 11-13-97	811.48 SY ²	
	BLANKETS #142-142A-143-127+127A	551.08	
		1825.60	
	LFP8 AREA NORTH OF CHANNEL #2	713.55	
		1065.38	
		TOTAL= 4967.09	
22E	PVC BLANKET PLACED TODAY 11-18		TODAY NO MEASUREMENT
	SOUTH TIE-IN BLANKET B166 AT		
	CHANNEL #20 AREA		ALSO NO BLANKET #
24A	HDPE DRAINAGE-NET (10) PANEL		TODAY NO MEASUREMENT
	WIDTH WIDE OVER PVC BLANKETS		
	PLACED 11-13-97 LFP8 NORTH OF		
	CHANNEL #2 AREA		

Remarks: REPAIRS ON FAILED AIRLANCE INX-TEST YESTERDAY 5 OUT OF 6 WERE COMPLETED
PLACEMENT OF HDPE DRAINAGE-NET (10) PANELS WIDTH NORTH OF CHANNEL #2 OVER
PVC BLANKETS PLACED 11-13 RUNNING EAST
LABORERS FINISHED ROLLING OUT COMPOSITE-NET FROM TYPE II TO TYPE I LFP8 ARE,
FROM PVC BLANKETS PLACED 11-13-97
PLACEMENT THEN WELDING PLACE BLANKET TIE-IN SOUTH OF PANEL # B-166 ALONG CHAN #2

Equipment & Labor Record

No. pieces	Type	Hours	Function

start/finish time: 7:00 / 4:30

Joe Schofield
 Inspector's signature
JOE SCHOFIELD
 Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: Nov. 18 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER

TEMP. DEG F

WIND

HUMIDITY

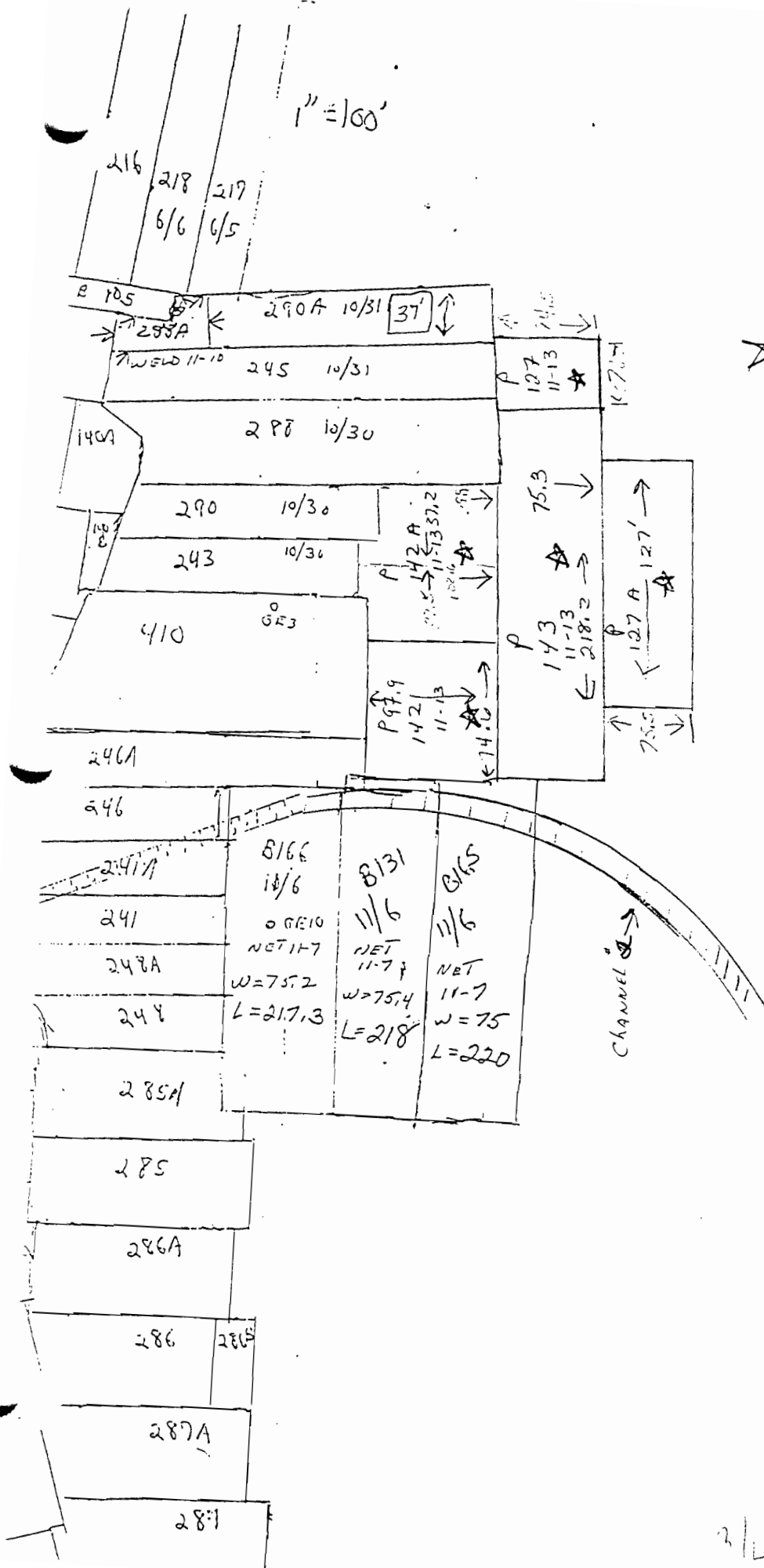
Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
	AM 23°		PM 50°
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

1" = 100'



★ = BLANKETS PLACED
11-13-97



16 E 105
 58 → 288A ← 290A 10/31
 7 WELD 11-10 245 10/31

140A 2 P8 10/30
 290 10/30
 243 10/30

410 GE3

246A
 246
 241A
 241
 248A
 248
 285A

8166 11/6 O GE10 NET 11-7 W=75.2 L=217.3	8131 11/6 NET 11-7 W=75.4 L=218	8165 11/6 NET 11-7 W=75 L=220
---	---	---

285
 286A
 286
 287A
 287

415
 1246

☆ = BLANKET PLACED
 11-18-97 NO BLANKET #

B
 ☆
 11-18
 P. 10-1
 NET

Channel 20

Machine #13
 11 welded B-1
 Temp 515
 5000 3.5
 net 6
 10/98

S M T (W) TH F S

Date: Nov. 19, 1997

IDR #: 435

Weather	High	Low
CLEAR	50	25

[illegible]

Remarks: DEPLOYMENT OF PVC BLANKETS #132-139 LFP-8 AREA OVER CHANNEL #20
PLACEMENT OF PVC BLANKET #123 NORTH OF CHANNEL #2 AND BLANKET #127A.
AT DAY'S END ALL NEWLY PLACED BLANKETS AND ALL SEAMS WERE AIR LANCE
FLAME TEST OF HDPE DRAINAGE NET (G) PANEL WIDTHS WERE DEPLOYED NORTH OF
CHANNEL #2. PLACEMENT OF HDPE DRAINAGE-NET FROM TYPE II TO TYPE I
TRANSITION OVER NEWLY DEPLOYED BLANKETS #B7-B-132-B139 TOTAL 8 PANEL WIDTHS

[illegible]

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

DATE: Nov. 19, 1997
INSPECTOR: Joe Schofield
LINER TECHNICIAN: L.L.

HUMIDITY

<u>Clear</u> AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	25°		PM 50°
Still AM / PM	<u>L. Breeze</u> (AM / PM)	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	(Moderate) (AM / PM)	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Nov. 19, 1997
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 25°		PM 50°	
Silly AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

E 105
 290A 10/31
 290A
 245 10/31
 290 10/30
 243 10/30

410
 246A
 246

241A	8166 11/6 0 0610 NET 11-7 W=75.2 L=21.7, 3	8131 11/6 NET 11-7 W=75.4 L=21.8	8165 11/6 NET 11-7 W=75 L=22.0
241			
248A			
248			
285A			

285	B 11-18 Place Weld	E 132 11-19 AL -	B 139 11-19 80 LBS.
286A			
286			
287A			

287
 415
 246

Channel #2

Channel #20

WOLFE

S M T W TH F S

Date: Nov. 20, 199

IDR #: 436

Weather	High	Low
CLEAR + CLEAR	52	29

[illegible]

Remarks: PLACEMENT OF DRAINAGE-NET (4) PANELS WIDE OVER NEWLY PLACED BLANKETS
LFP-8 CHANNEL #20 AREA PLACEMENT OF 6 OZ. NON WOVEN FABRIC (2) PANNEL WIDTHS
LFP-8 NORTH OF CHANNEL #2 AREA DEPLOYMENT OF (2) PVC BLANKETS NORTH OF
CHANNEL #2 LFP8 GE#49 AREA AIR LANCE WELDED SEAMS AT SAID AREA AND
WAS ACCEPTABLE AT 100 PSI PLACEMENT OF 6 OZ NON WOVEN FABRIC (19)
PANNEL WIDTH WERE HAND STICKED AT LFP-1 9H 10H 9I AND 10I AREAS

[illegible]

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: Nov. 20 1997
INSPECTOR: Joseph Schnitzler
LINER TECHNICIAN: LL

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	29°		PM 52°
Silly AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

$$1'' = 100'$$

BLANKETS
PLACED
WELDED
AND
AIR LANCED
TODAY

channel 29

4. 5. 6.

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Nov. 20, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: L.L. JIM BETES

WEATHER	AM <u>CLEAR</u>	PM <u>CLEAR</u>
TEMP DEG F	HI <u>52</u>	LO <u>29</u>
WIND	AM <u>57</u>	PM <u>107</u>
PRECIPITATION	AM _____	PM _____

[illegible]

COMMENTS:

WOLFE

S M T W TH **F** S

Date: Nov. 21, 1997

IDR #: 437

Weather	High	Low
OVERCAST		

[illegible][illegible]

Inspector's signature
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Nov. 21, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER	AM <u>OVERCAST</u>	PM <u>OVERCAST</u>
TEMP DEG F	HI <u> </u>	LO <u> </u>
WIND	AM <u>LIGHT</u>	PM <u>LIGHT</u>
PRECIPITATION	AM <u> </u>	PM <u> </u>

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S (M) T W T H F S

Job No: 03228-018-001-0003-00

Date: Nov. 24, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 440

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	42°	33°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	PVC BLANKETS NORTH OF CHANNEL #2 LFP-8 AREA	4513.2 (SY)	PVC BLANKETS = B-123 - B-138 AND B-129
	(3) TOTAL BLANKETS		
	PVC BLANKETS CHANNEL #20 AREA	5417.8 (SY)	PVC BLANKETS = B-132 AND B-139
	LFP-8 (3) TOTAL BLANKETS		
	PVC BLANKETS LFP-1 AREA	5271.3 (SY)	PVC BLANKETS = B-128 AND B-126
	(3) TOTAL BLANKETS		
24A	DRAINAGE NET NORTH OF CHANNEL #2	1854.9 (SY)	BLANKET = B-123
		1883.3 (SY)	B-138
		775 (SY)	B-129
	DRAINAGE NET CHANNEL #20 AREA	1689.1 (SY)	BLANKET = B-132
		1866.2 (SY)	B-139
	DRAINAGE NET LFP-1 AREA	1699 (SY)	BLANKET = B-128
		1828.1 (SY)	

Remarks: DEPLOYMENT OF DRAINAGE NET LFP-1, 76 AREA. PVC BLANKETS PLACED ON 11-21-97 LFP-1 AREA WERE AIR LANCE THEN DRAINAGE NET WAS PLACED OVER PVC BLANKET # B-133 - B-128 AND AT DAY'S END STARTED B-126. MIKE JIANE AND MYSELF WHEELED OUT TO AIR LANCE (9) PVC BLANKETS IN AREA'S NORTH OF CHANNEL #2 LFP-8, AREA CHANNEL #20 LFP-8 AND LFP-1

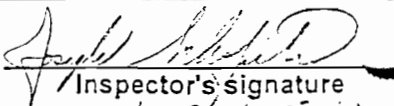
Equipment & Labor Record

No. pieces	Type	Hours	Function

start/finish time: 7:00 4:30

Page 1 of 6 pages

s:\clarktown\idforms\idr.xls


 Inspector's signature
JOSEPH SCHOFIELD
 Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: Nov. 24, 1997
INSPECTOR: JOSEPH SchoFIELD
LINER TECHNICIAN: LYLE L.

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 93°		PM 42°	
Sea AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPa) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

NORTH OF CHANNEL #2

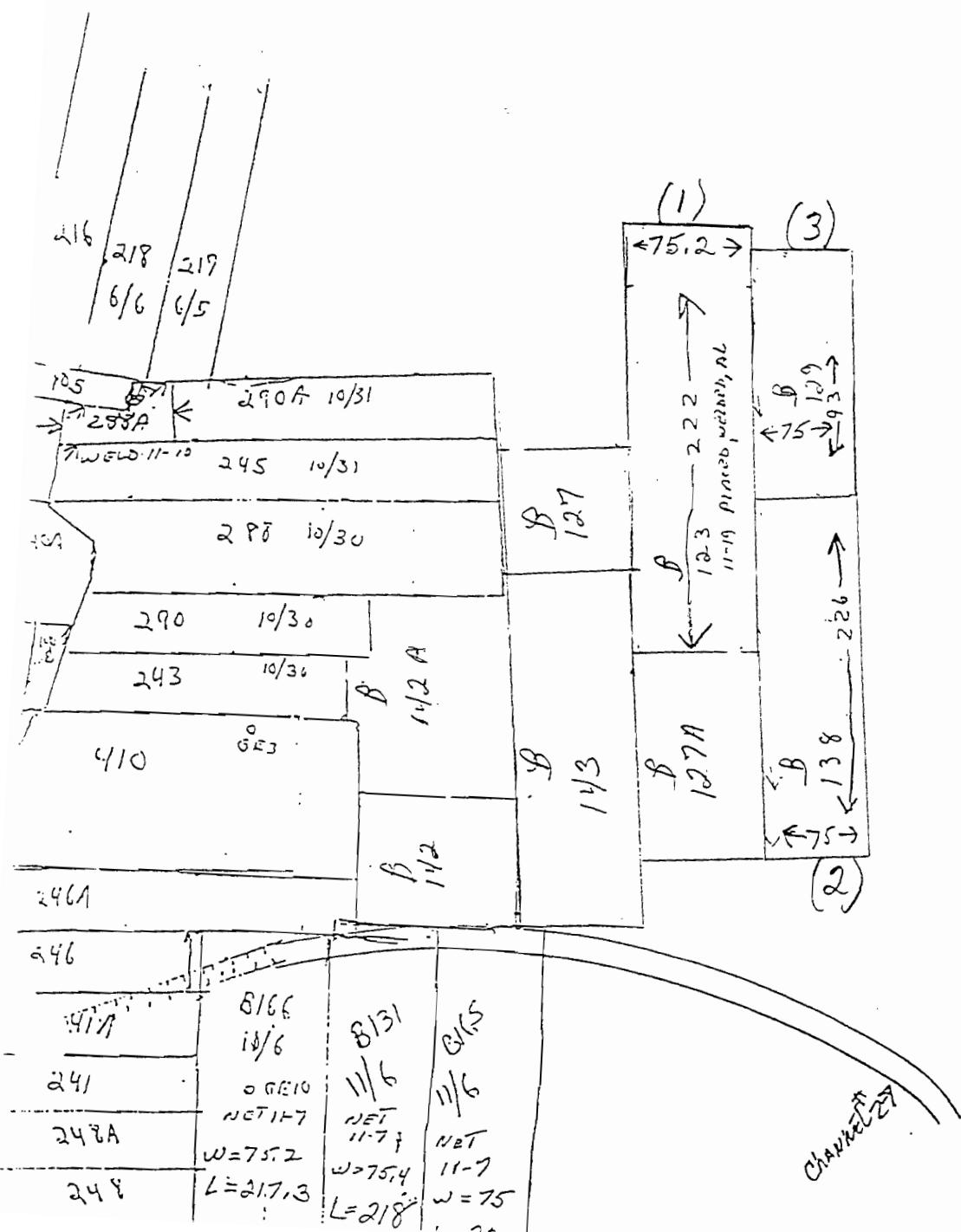
(3) PVC BLANKETS MEASURED

$$(1) \quad B-123 = 75,2 \times 222 = 16694,4 \text{ (SF)} = 1854,9 \text{ (SY)}$$

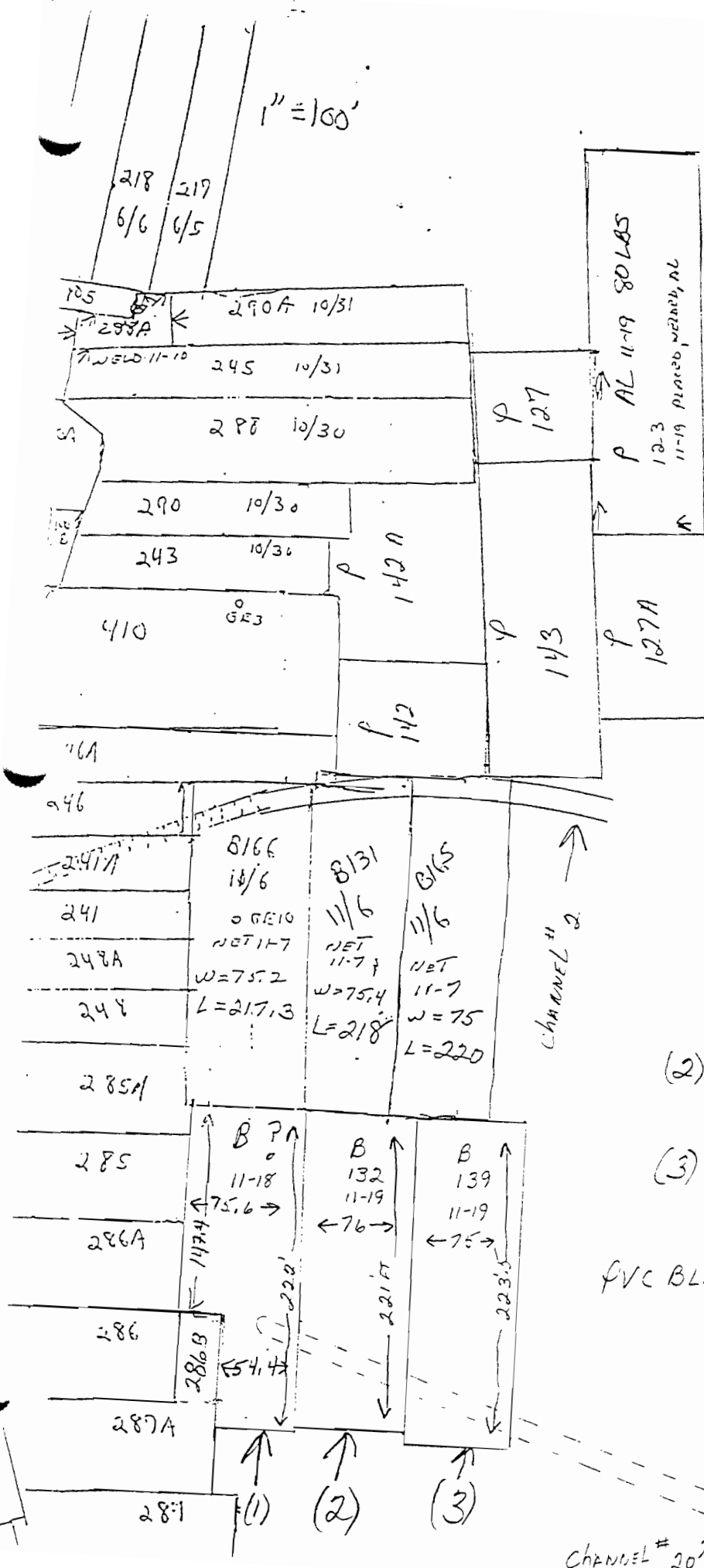
(2) $B-138 = 75 \times 226 = 16950 (SF) = 1883.3 (SY)$

(3) $B - 129 = 75 \times 93 = 6975 \text{ (SF)} = 775 \text{ (SV)}$

$$\text{TOTAL (SY)} = 4513.2$$



1" = 100'



(3) PVC BLANKETS MEASURED CHANNEL # 20 AREA

$$(1) B9 = 75.6 \times 147.4 = 11143.4 \text{ (SF)}$$

$$(A) 11143.4 \text{ (SF)} = 1238.2 \text{ (SY)}$$

$$(B) 54.4 \times 74.6 = 4058.2 \text{ (SF)}$$

$$4058.2 \text{ (SF)} = 450.9 \text{ (SY)}$$

$$(A) 1238.2 \text{ (SY)}$$

$$(B) 450.9 \text{ (SY)}$$

$$\text{TOTAL} = 1689.1 \text{ (SY)}$$

$$(2) B132 = 76 \times 221 = 16796 \text{ (SF)}$$

$$16796 \text{ (SF)} = 1866.2 \text{ (SY)}$$

$$(3) B139 = 75 \times 223.5 = 16762.5 \text{ (SF)}$$

$$16762.5 \text{ (SF)} = 1862.5 \text{ (SY)}$$

PVC BLANKETS (1) 1689.1 (SY)

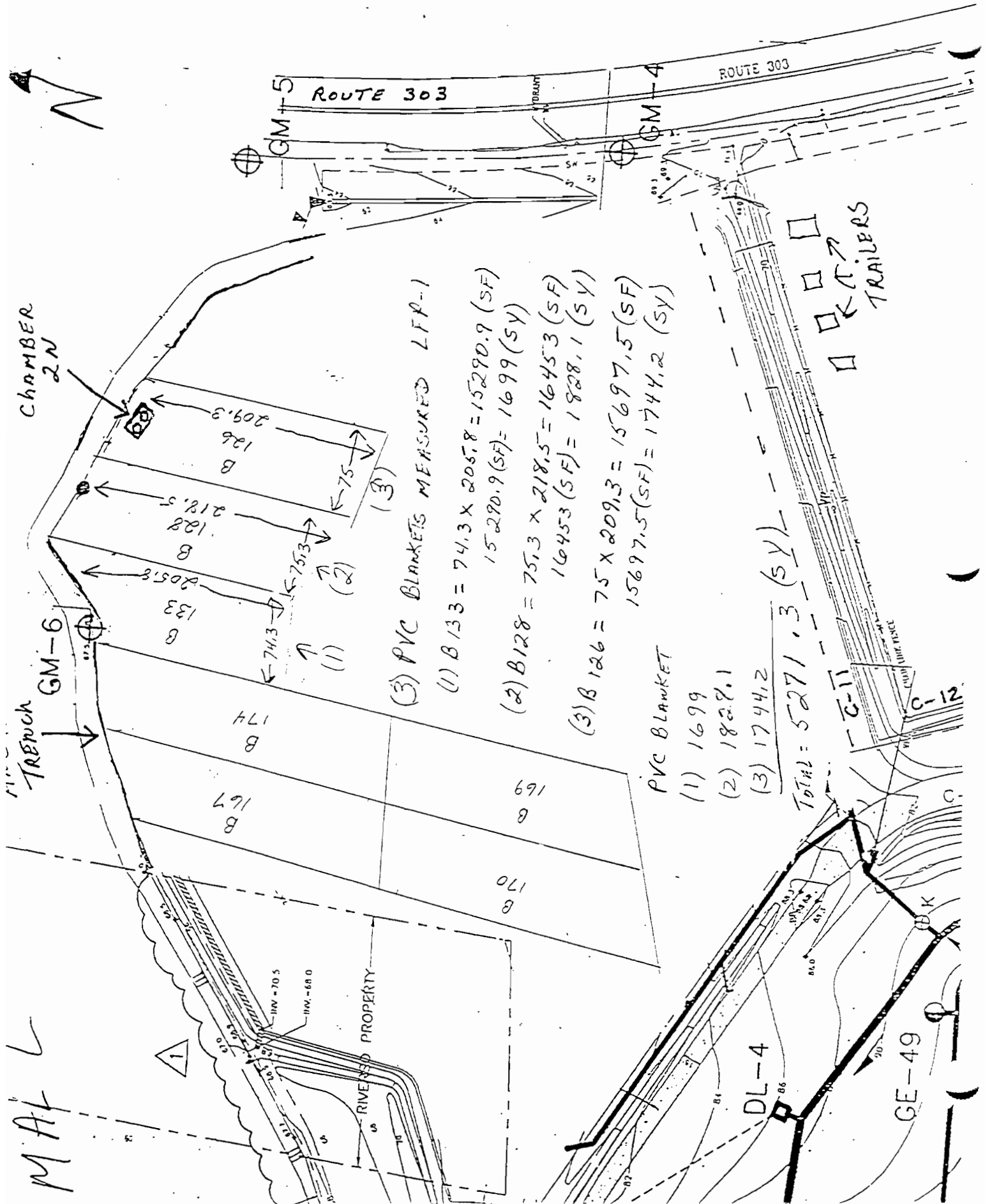
(2) 1866.2

(3) 1862.5

$$\text{TOTAL} = 5417.8 \text{ (SY)}$$

4 OF 6

CHANNEL # 20



ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: Nov. 24, 1997

INSPECTOR: JOSEPH SCHOFIELD

LINER TECHNICIAN: GM

WEATHER.

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 33°		PM 42°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
B 133	B 174	90 PSI	205.8	LFP-1 9H-9I
B 128	B 133	90 PSI	218.5	10H AND 10I AREA
B 126	B 128	90 PSI	209.3	

Diagram labels and dimensions:

- HULL TRENCH** (left side)
- GM-6** (point on the hull)
- CHAMBER 2N** (right side)
- Panel B 133:** Length 205.8, Width 74.3
- Panel B 128:** Length 218.5, Width 75.3
- Panel B 126:** Length 209.3, Width 75
- Each panel is labeled: **PLACED B AL** and **WELDED 11-21**

Inspector's Daily Report

W T U T N

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W T H F S

Job No: 03228-018-001-0003-00

Date: Nov. 25, 199

Consultant: Roy F. Weston of New York, Inc.

IDR #: 441

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	49°	24°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
23 A	TYPE 1 60Z NON WOVEN GEOTEXTILE	162.3 (SV)	B 142 = 811.5 (SV)
	NORTH OF CHANNEL #2 LFP-8		x 2
	OVER PVC BLANKETS # 142-142A-		162.3 (SV)
	147 AND 127		
		1102 (SV)	B 142A = 551 (SV)
	TYPE 1 = 2 LAYERS		x 2
			1102 (SV)
		3651.2 (SV)	B 143 = 1825.6 (SV)
			x 2
			3651.2 (SV)
		1427 (SV)	B 127 = 713.5 (SV)
			x 2
			1427 (SV)
		TOTAL = 7803.2	SV

Remarks: PLACEMENT OF 60Z, NON WOVEN GEOTEXTILE AT LFP-8
NORTH OF CHANNEL #2 AREA, DEPLOYED OVER PVC BLANKETS # 142-142A -
143 AND 127
DESTRUCTIVE TESTS WERE CUT THEN PATCHED ON SAID AREAS, A TOTAL
OF (3) TAKEN BUT NOT TESTED TODAY

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 7:00 / 4:30

Page 1 of 3 pages
s:\clarktown\idforms\idr.xls

Joseph Schofield
Inspector's signature
JOSEPH SCHOFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: NOV. 25, 1997
INSPECTOR: JOSEPH SchoFIELD
LINER TECHNICIAN: LYLE L.

WEATHER	AM	<u>CLR</u>	PM	<u>CLR</u>
TEMP DEG F	HI	<u>49°</u>	LO	<u>24°</u>
WIND	AM	<u>LIGHT</u>	PM	<u>LIGHT</u>
PRECIPITATION	AM		PM	

[illegible]

COMMENTS:

TYPE I = 602 NON WOVEN GEOTEXTILE
AT SUBGRADE AND OVER DRAINAGE NET
2 LAYERS

$$B 142 = 74.6 \times 97.9 = 7303.3 \text{ (SF)}$$

$$7303.3 \text{ (SF)} = 811.5 \text{ (SY)}$$

$$602 = \frac{811.5 \times 2}{1623} \text{ (SY)}$$

$$B 142A = A \quad 37.5 \times 102.6 = 3847.5 \text{ (SF)}$$

$$3847.5 \text{ (SF)} = 427.5 \text{ (SY)}$$

$$B \quad 29.9 \times 37.2 = 1112.3 \text{ (SF)}$$

$$1112.3 \text{ (SF)} = 123.5 \text{ (SY)}$$

$$A = 427.5 \text{ (SY)}$$

$$B = 123.5 \text{ (SY)}$$

$$\frac{551 \text{ (SY)}}{\times 2}$$

$$602 = 1102 \text{ (SY)}$$

$$B 143 = 75.3 \times 218.2 = 16430.4 \text{ (SF)}$$

$$16430.4 \text{ (SF)} = 1825.6 \text{ (SY)}$$

$$\frac{1825.6 \times 2}{602 = 3651.2 \text{ (SY)}}$$

$$B 127 = 76 \times 84.5 = 6422 \text{ (SF)}$$

$$6422 \text{ (SF)} = 713.5 \text{ (SY)}$$

$$\frac{713.5 \times 2}{602 = 1427 \text{ (SY)}}$$

$$B 142 \quad 602 = 1623 \text{ (SY)}$$

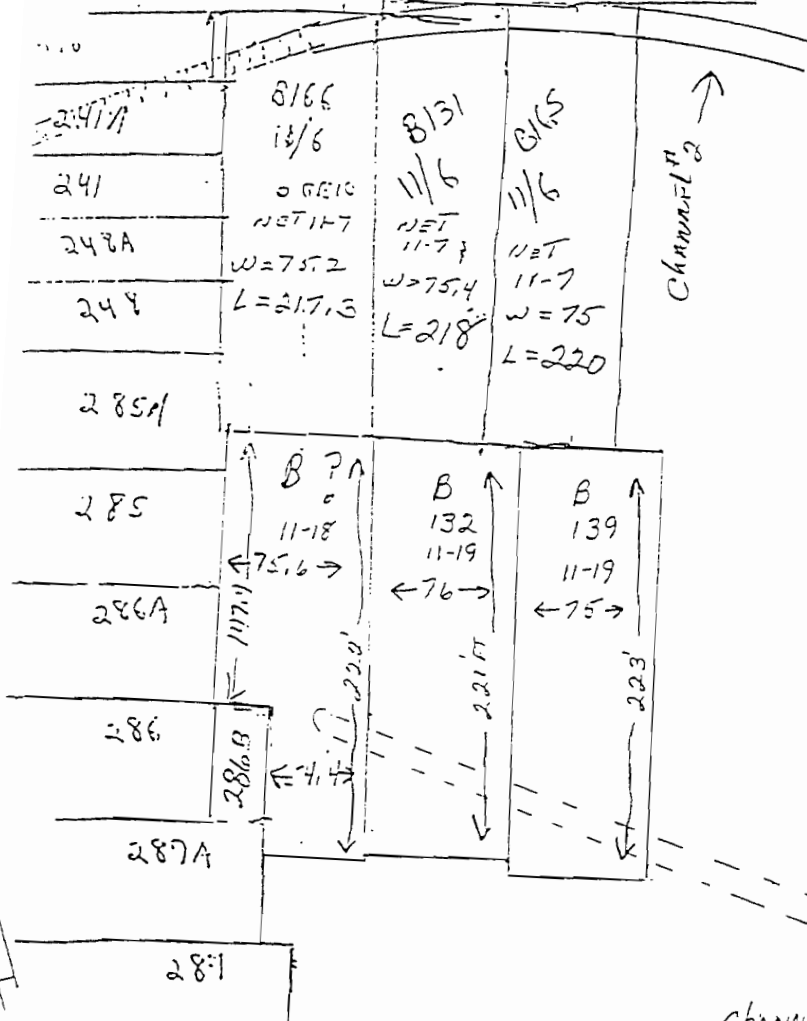
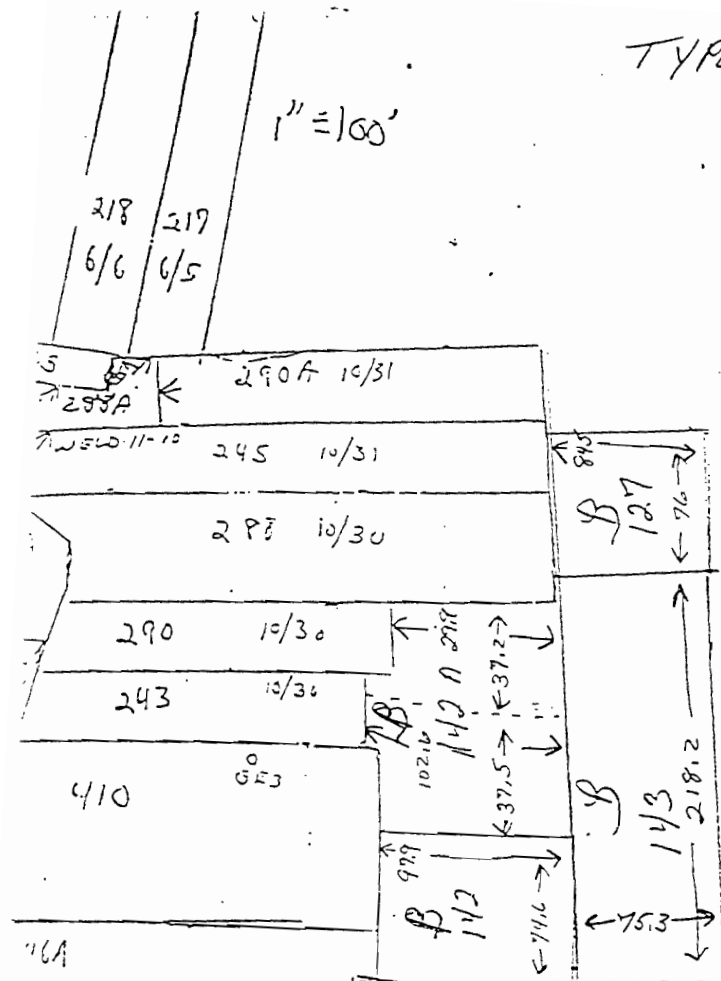
$$142A \quad 602 = 1102 \text{ (SY)}$$

$$143 \quad 602 = 3651.2 \text{ (SY)}$$

$$127 \quad 602 = 1427 \text{ (SY)}$$

$$\text{TOTAL } 602 = 7803.2$$

1" = 100'



3 OF 3

CHANNEL # 20

Inspector's Daily Report

W U S T R N

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W T H F S

Job No: 03228-018-001-0003-00

Date: Nov. 26, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 442

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	50°	25°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
23A	TYPE 1 602. NONWOVEN GEOTEXTILE	2130.8 (SY)	B127A = 1065.4 (SY)
	NORTH OF CHANNEL #2 LFP-8 AREA		X 2
	OVER PVC BLANKETS #B127A -		2130.8 (SY)
	B123 - B138 AND B129		
	TYPE 1 = 2 LAYERS	3709.8 (SY)	B123 = 1854.9 (SY)
			X 2
			3709.8 (SY)
		3766.6 (SY)	B138 = 1883.3 (SY)
			X 2
			3766.6 (SY)
		1550 (SY)	B129 = 775 (SY)
			X 2
		TOTAL = 11,157.2 (SY)	1550 (SY)

Remarks: WELDED PVC BOOT WRAP AROUND GE#49 AND GE#2 AT
LFP#8
PLACEMENT OF 602. NON WOVEN GEOTEXTILE AT LFP#8 OVER PVC BLANKETS
E127A - E123 - B138 AND B129
PLACEMENT OF 1.02 NON WOVEN GEOTEXTILE AT LFP-1 NO MEASUREMENT

Equipment & Labor Record

No. pieces	Type	Hours	Function

Start/finish time: 7:00 / 1:00

Joseph Schifano
 Inspector's signature
Joseph Schifano
 Inspector's name



TYPE 1 = 602 NON-WOVEN GEOTEXTILE AT SUBGRADE AND OVER DRAINAGE NET (2) LAYERS

$$B127A = 75.5 \times 127 = 9588.5 \text{ (SF)}$$

$$9588.5 \text{ (SF)} = 1065.3 \text{ (SY)}$$

$$602 = \frac{1065.3 \times 2}{1} = 2130.8 \text{ (SY)}$$

$$B123 = 75.2 \times 222 = 16694.4 \text{ (SF)}$$

$$16694.4 \text{ (SF)} = 1854.9 \text{ (SY)}$$

$$602 = \frac{1854.9 \times 2}{1} = 3709.8 \text{ (SY)}$$

$$B138 = 75 \times 226 = 16950 \text{ (SF)}$$

$$16950 \text{ (SF)} = 1883.3 \text{ (SY)}$$

$$602 = \frac{1883.3 \times 2}{1} = 3766.6 \text{ (SY)}$$

$$B129 = 75 \times 93 = 6975 \text{ (SF)}$$

$$6975 \text{ (SF)} = 775 \text{ (SY)}$$

$$602 = \frac{775 \times 2}{1} = 1550 \text{ (SY)}$$

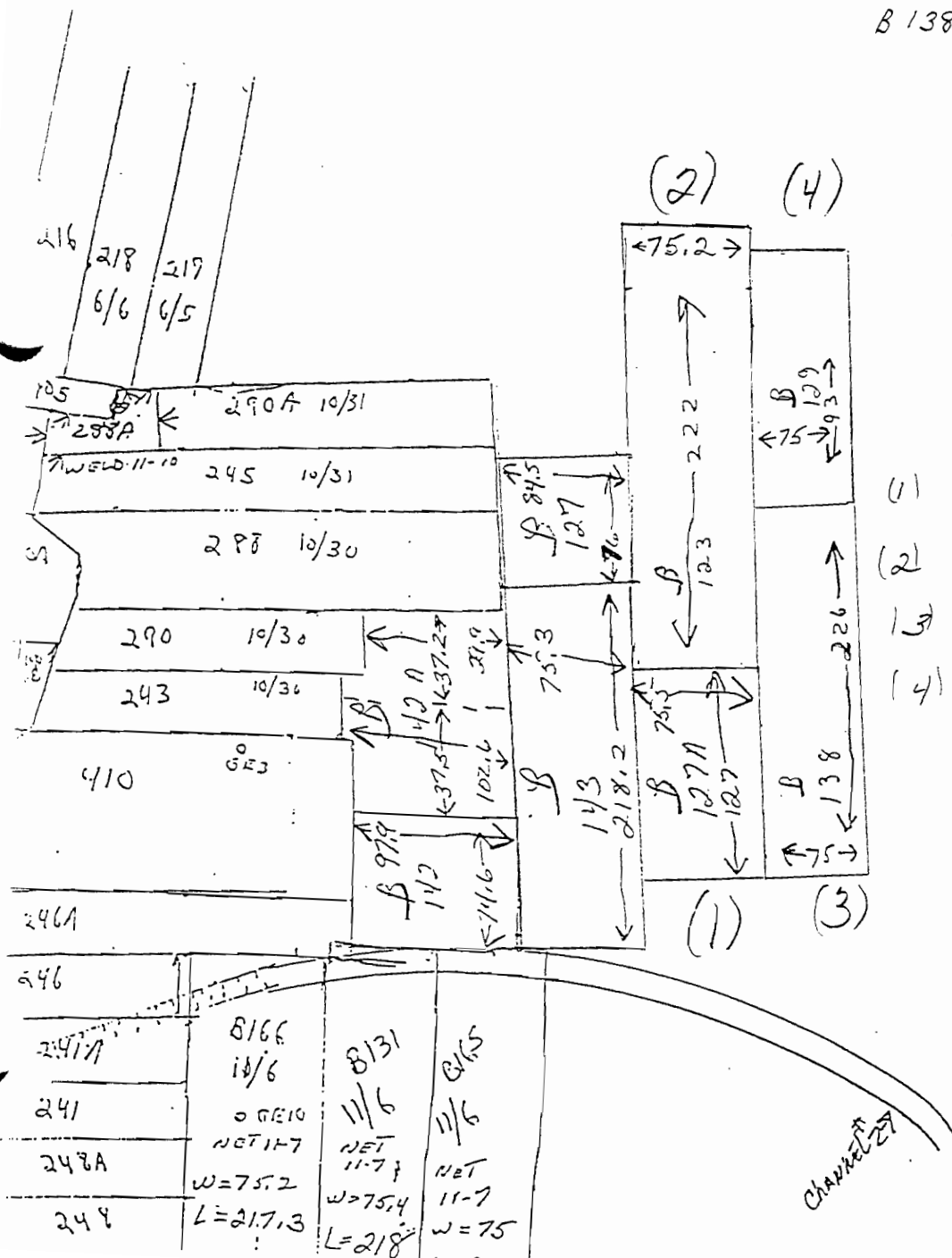
$$(1) \quad B127A \quad 602 = 2130.8$$

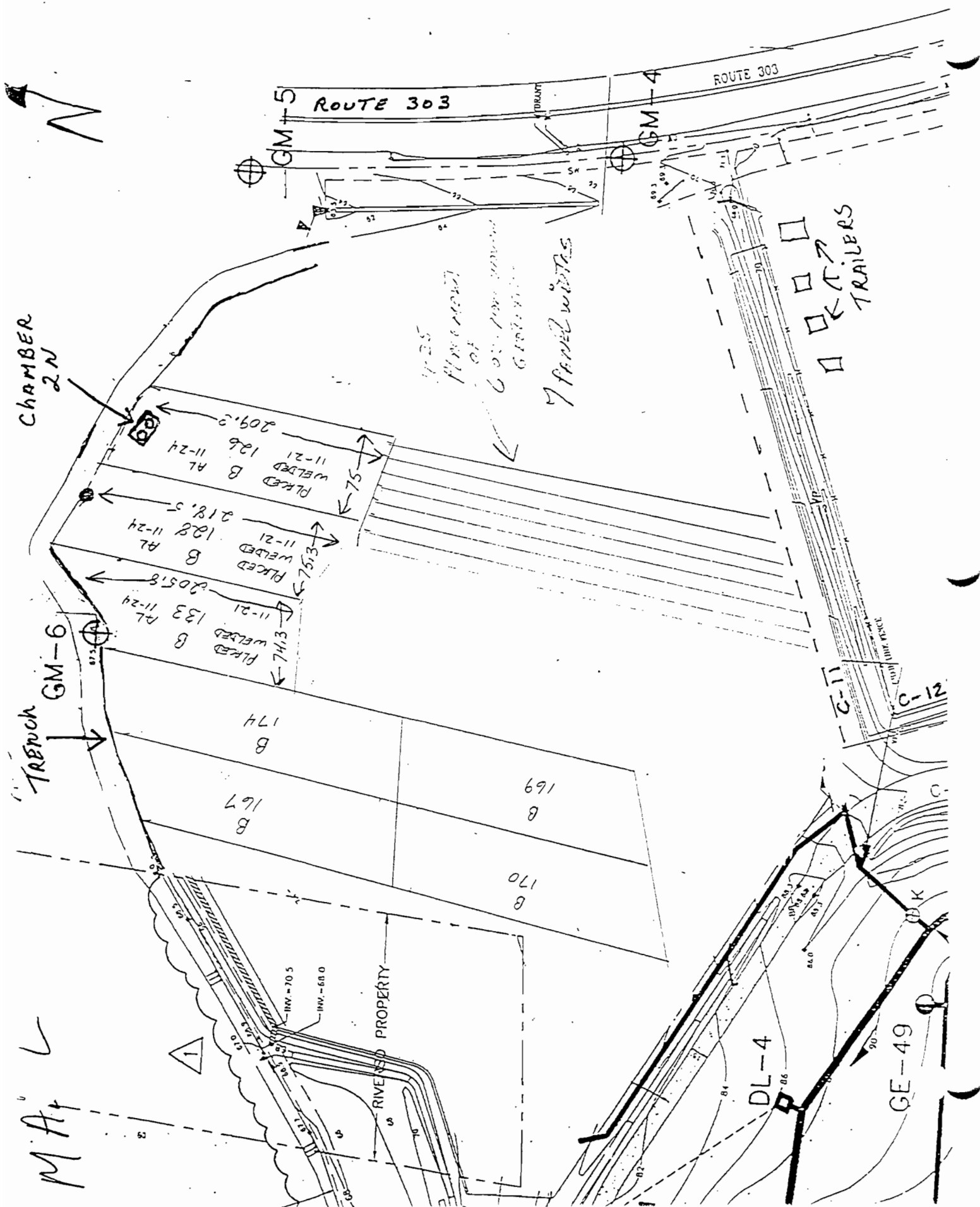
$$(2) \quad B123 \quad 602 = 3709.8$$

$$(3) \quad B138 \quad 602 = 3766.6$$

$$(4) \quad B129 \quad 602 = 1550$$

$$\text{Total } 602 = 11,157.2$$





S M T W TH F S

Date: DEC. 1, 1997

IDR #: 447

Weather	High	Low
CLR / CLR	40	23

[illegible]

Remarks: EXCESSIVE HIGH WINDS 35 TO 45 MPH. EL LINEAR CREW WENT HOME FOR THE DAY.
REVIEW ALL MY MONTHLY INSPECTOR'S DAILY REPORTS TO CORRECT MISTAKES ON MEASUREMENTS AND TO CORRECT THEM FOR BILLING
AT MON PUS END

[illegible]

Inspector's signature
Joseph Schaefer
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: DEC. 2, 1997

Consultant: Roy F. Weston of New York, Inc.

IDR #: 448

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	44	32

Description of work performed and inspected

[illegible]

Remarks: EXCESSIVE high winds AVE. 40 MPH EL THE LINER
CREW WENT HOME FOR THE DAY
REVIEW DATA ON THE MONTH OF NOV. AND MAY INSPECTOR'S REPORTS.
VISUAL OBSERVATION WITH JOHN WOOLLY, JASON COUSINS AND MYSELF
ON THE NORTH TO NORTH EAST SLOPES OF THE LANDFILL WAS UNACCEPTABLE
AS FAR AS THE PEELED BACK 602 FABRIC $\approx$ 30 FT EXPOSED TO THE SUBGRADE

Equipment & Labor Record

[illegible]

Start/finish time: 7:40 / 4:30

Inspector's signature
JOSEPH SchoFIELD
Inspector's name

S M T W TH F S

Date: DEC. 3, 1997

IDR #: 449

Weather	High	Low
CLR / CLR	53°	32°

[illegible]

Remarks: PLACEMENT OF 1,02 NOW WOVEN GEOTEXTILE OVER SUBGRADE SOUTH OF PVC BLANKET
128 AND 133 TO CHANNEL #11 A TOTAL OF 14 PANEL WIDTH PLACED TO EXISTING 602 FT
BLANKET-B-169 PLACEMENT OF DRAINAGE NET (5) PANELS WIDE FROM CHAMBER 2N
LFP-1 AREA OVER BLANKET-126 PLACEMENT OF PVC BLANKETS TO TIE-IN
BLANKET-B-126 EAST OF CHAMBER 2N LFP-1 AREA BLANKETS 120 AND
120A VISUALLY OBSERVED DESTRUCTIVE TEST DS-123-124-125 ALL ACCEPTABLE

[illegible]

Inspector's signature
JOSEPH SchoFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 3, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER	AM <u>CLR</u>	PM <u>CLR</u>
TEMP DEG F	HI <u>32</u>	LO <u>53</u>
WIND	AM <u>LIGHT</u>	PM <u>LIGHT</u>
PRECIPITATION	AM	PM

[illegible]

COMMENTS:

TOWN OF CLARKSTOWN, WEST NYACK, NEW YORK

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111570
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 12-3-97

☐	Trial Seam Sample Log
☒	Destructive Seam Log

VISIBLE OBSERVED

SEAM #5

7
D. A. SIGN

[illegible]

WILSON

S M T W **TH** F S

Date: DEC. 4, 1997

IDR #: 450

Weather	High	Low
OVER CAST	55	40

[illegible]

Remarks: LYLE L. AND MYSELF WHEELED OUT WELD SEAMS ON B? - B-132 AND B-139
(2) DESTRUCTIVE TEST REQUIRED ALSO (3) PATCH REPAIRS NEEDED. PLACEMENT OF
1.62. NON WOVEN GEOTEXTILE OVER DRAINAGE NET ON PVC BLANKETS B? - B132 - AND
B139 A TOTAL OF (16) PANEL WIDTHS WERE PLACED THEN HAND STICKED TOGETHER.
THE LINER CREW KNOCKED OFF AT 12:00 BECAUSE NO AREA'S READY FOR SUBGRADE
COVER AND LFP-1 AREA TO WET FOR BLANKET DEPLOYMENT

[illegible]

start/finish time: 7:00, 4:00

Page 1 of 3 pages
s:\clarktwn\idforms\idr.xls

Inspector's signature
Inspector's name

[illegible]

(3) PVC BLANKETS MEASURE'S
CHANNEL-20 AREA

(1) $E_T = 75.6 \times 147.4 = 1114.4 \text{ (SF)}$
 (A) $1114.4 \text{ (SF)} = 1238.2 \text{ (SY)}$
 (B) $54.4 \times 74.6 = 4058.2 \text{ (SF)}$
 $4058.2 \text{ (SF)} = 450.9 \text{ (SY)}$
 (A) 1238.2 (SY)
 (B) 450.9

 $T_{\text{TOTAL}} = 1689.1 \text{ (SY)}$

$$(2) B132 = 76 \times 221 = 16796 \text{ (SF)}$$

$$16796 \text{ (SF)} = 1766.2 \text{ (SY)}$$

$$(3) B139 = 75 \times 223.5 = 16762.5 (SF)$$

$$16762.5 (SF) = 1862.5 (SY)$$

PVC BLANKETS

$$\begin{array}{r} (1) \quad 1689.1 \\ (2) \quad 1866.2 \\ (3) \quad 1862.5 \\ \hline \text{Total} = 5417.8 (\text{sy}) \end{array}$$

channel # 20 $\nearrow$

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
VESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 4, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER	AM	<u>OVER</u> <u>CAST</u>	PM	<u>OVER</u> <u>CAST</u>
TEMP DEG F	HI	<u>55</u>	LO	<u>40</u>
WIND	AM	<u>LIGHT</u>	PM	<u>LIGHT</u>
PRECIPITATION	AM		PM	

[illegible]

COMMENTS: TOTAL 602 NON WOVEN GEOTEXTILE PLACED = 5417.8 (SY)

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH (F) S

Job No: 03228-018-001-0003-00

Date: Dec. 5, 1992

Consultant: Roy F. Weston of New York, Inc.

IDR #: 451

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
RAIN / RAIN	41	36

Description of work performed and inspected

[illegible]

Remarks: RAIN ALL DAY, LINER CREW WENT HOME.
REVIEW ALL DATA FOR NOVEMBER, FOR RECONCILIATION MEETING
DUE MONDAY 12-8-97.

Equipment & Labor Record

[illegible]

Start/finish time: 7:00, 5:30

Inspector's signature
JOSEPH SCHOFIELD
Inspector's name

WESTERN

S M T W TH F S

Date: DEC. 8, 1995

IDR #: 454

Weather	High	Low
PT. CLY / PT. CLD	51	40

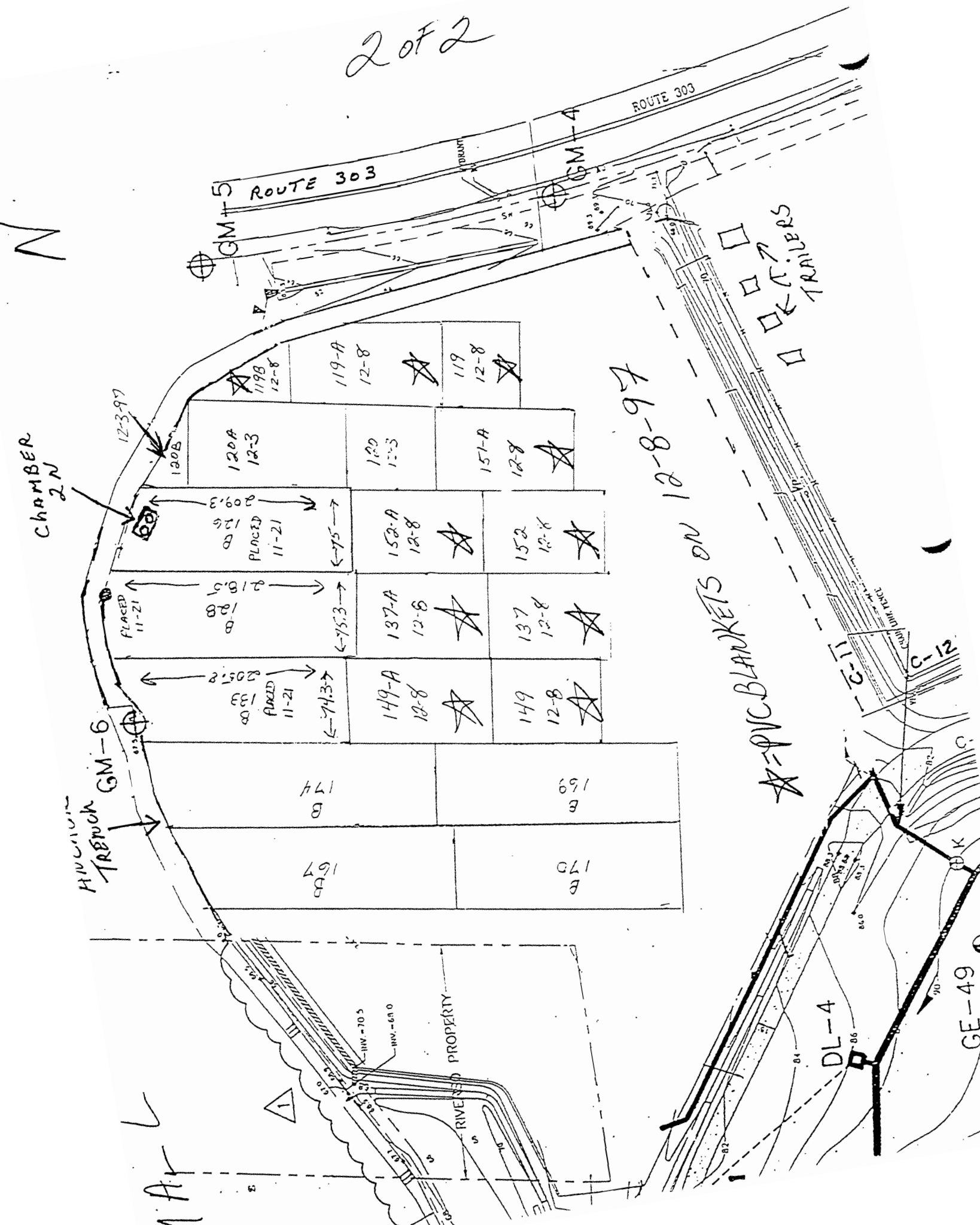
[illegible]

PVC BLANKETS AT DAY'S END WAS WELDED AND TIED-IN ALSO BLANKETS WERE OVER 602 NON-WOVEN GEOTEXTILE

[illegible]

Inspector's signature
JOSEPH SCHAEFER
Inspector's name

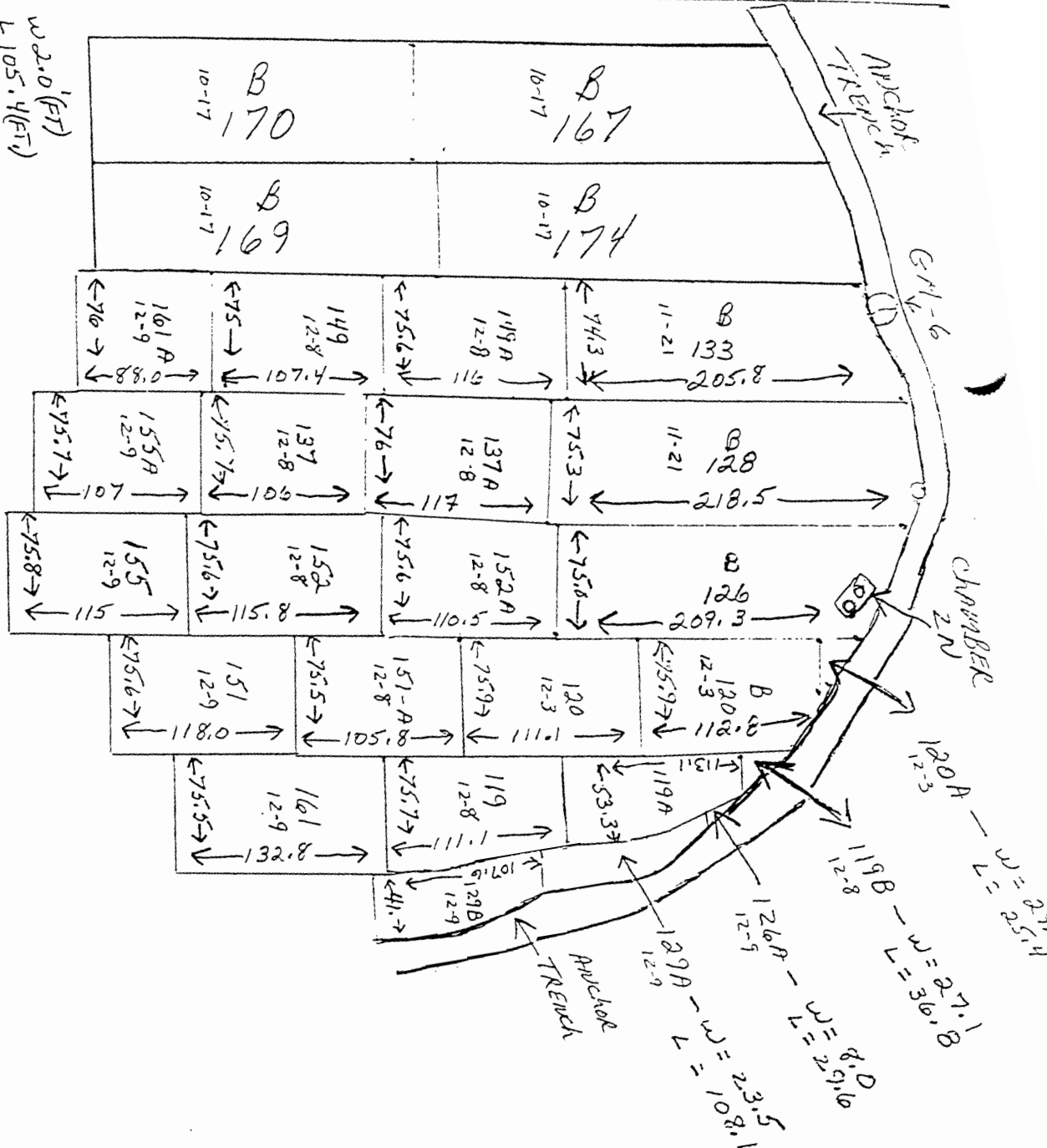
2 of 2



Inspector's signature
Inspector's name

LF-1

OLD SEAM CRP

$$51A - 152A - 152 = L105.4(FT)$$
$$11-152-155 = 3.1(FT)$$


ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

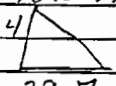
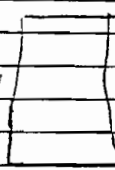
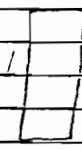
CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: DEC. 9, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 31°		PM 44°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	FT. LENGTH	FT. WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
149 A	S	OK	116	75.6	P	
137 A			117	76		
137			106	75.7		
152 A			110.5	75.6		
120 A	V	V	25.4	29.7		25.4 29.7 
120 B	S	OK	112.8	75.9		
120			111.1	75.9		
119 B	V	V	36.8	27.1		36.8 27.1 
119 A	S	OK	113.1	53.3		
						113.1 53.3 
119	S	OK	111.1	75.7		
161			132.8	75.5		
121 A	V	V	29.6	8		29.6 8 
						8.0
129 A	S	OK	108.1	23.5		
						108.1 23.5 

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION DEC. 9, 1997 PVC BLANKET (SY) TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

PVC
BLANKET

$$(149A) \quad 116 \times 75.6 = 8769.6 \text{ (SF)} \quad SY = 974.4$$

$$(137A) \quad 117 \times 76 = 8892 \text{ (SF)} \quad SY = 988$$

$$(137) \quad 106 \times 75.7 = 8024.2 \text{ (SF)} \quad SY = 891.6$$

$$(152A) \quad 110.5 \times 75.6 = 8353.8 \text{ (SF)} \quad SY = 928.2$$

$$(120A) \quad 25.4 \times 29.7 = 754.3 \text{ (SF)} \quad SY = 83.8 \div 2 = SY \ 41.9$$

$$(120B) \quad 112.8 \times 75.9 = 8561.5 \text{ (SF)} \quad SY = 951.3$$

$$(120) \quad 111.1 \times 75.9 = 8432.4 \text{ (SF)} \quad SY = 936.9$$

$$(119E) \quad 36.8 \times 27.1 = 997.2 \text{ (SF)} \quad SY = 110.8 \div 2 = SY \ 55.4$$

$$(119A) \quad 113.1 \times 53.3 = 6028.2 \text{ (SF)} \quad SY = 669.8$$

$$(119) \quad 111.1 \times 75.5 = 8410.2 \text{ (SF)} \quad SY = 934.5$$

$$(161) \quad 132.8 \times 75.5 = 10026.4 \text{ (SF)} \quad SY = 1114.0$$

$$(126A) \quad 29.6 \times 8 = 236.8 \text{ (SF)} \quad SY = 26.3 \div 2 = SY \ 13.1$$

$$(129A) \quad 108.1 \times 23.5 = 2540.3 \text{ (SF)} \quad SY = 282.3$$

$$PVC \text{ BLANKET TOTAL (SY)} = 8,781.4$$

$$602. \text{ NON-WOVEN GEOTEXTILE (SY)} = 8781.4$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 9, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy / AM / PM	Overcast AM / PM	Rain AM / PM
31° AM		44° PM	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	FT. LENGTH	COMMENTS
149 A	B 133	90	74.3	
	B 174		90.5	SOUTH EAST END
	B 169		25.5	NORTHEAST END
	149		75.6	
	137 A	↓	116.0	
137 A	B 128	90	75.3	
	149 A		116.0	
	137		76	
	152 A	↓	110.5	
137	137 A	90	75.7	
	149		106	
	155 A	↓	75.7	
	152	↓	106	
152 A	B 126	90	75	
	137 A		110.5	
	152		75.6	
	120	↓	60	
	151 A	↓	50.5	
120 A	B 126	90	25.4	
	120 E	↓	29.7	
120 B	B 126	90	112.8	
	120 A		29.7	
	120		75.9	
	119 B	↓	36.8	
	119 A	↓	76	

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 9, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	<u>P. Cloudy</u> <u>(AM / PM)</u>	Overcast AM / PM	Rain AM / PM
	AM <u>31°</u>		PM <u>44°</u>
Still AM / PM	L. Breeze AM / PM	<u>Moderate</u> <u>(AM / PM)</u>	High (>20 MPH) AM / PM
Dry AM / PM	<u>Moderate</u> <u>(AM / PM)</u>	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
120	120 B	90	75.9	
	B126	↓	55	
	152 A	↓	57.8	
	151 A	↓	75.9	
	119 A	↓	50	
	119	↓	61.1	
119 B	120 B	90	36.8	
	119 A	↓	27.1	
119 A	119 B	90	36.8	
	120 B	↓	60	
	120	↓	53.1	
	119	↓	53.3	
	126 A	↓	29.6	
	129 A	↓	83.5	
119	119 A	90	53.3	
	120	↓	60	
	151 A	↓	51.1	
	161	↓	75.7	
	129 B	↓	107.6	
	129 A	↓	3.5	
161	119	90	75.7	
	151 A	↓	55	
	151	↓	77.8	
	129 B	↓	10	
126 A	119 A	90	29.6	
	129 A	↓	8	

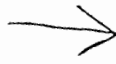
MALL



RIVERSO

← PROPERTY →

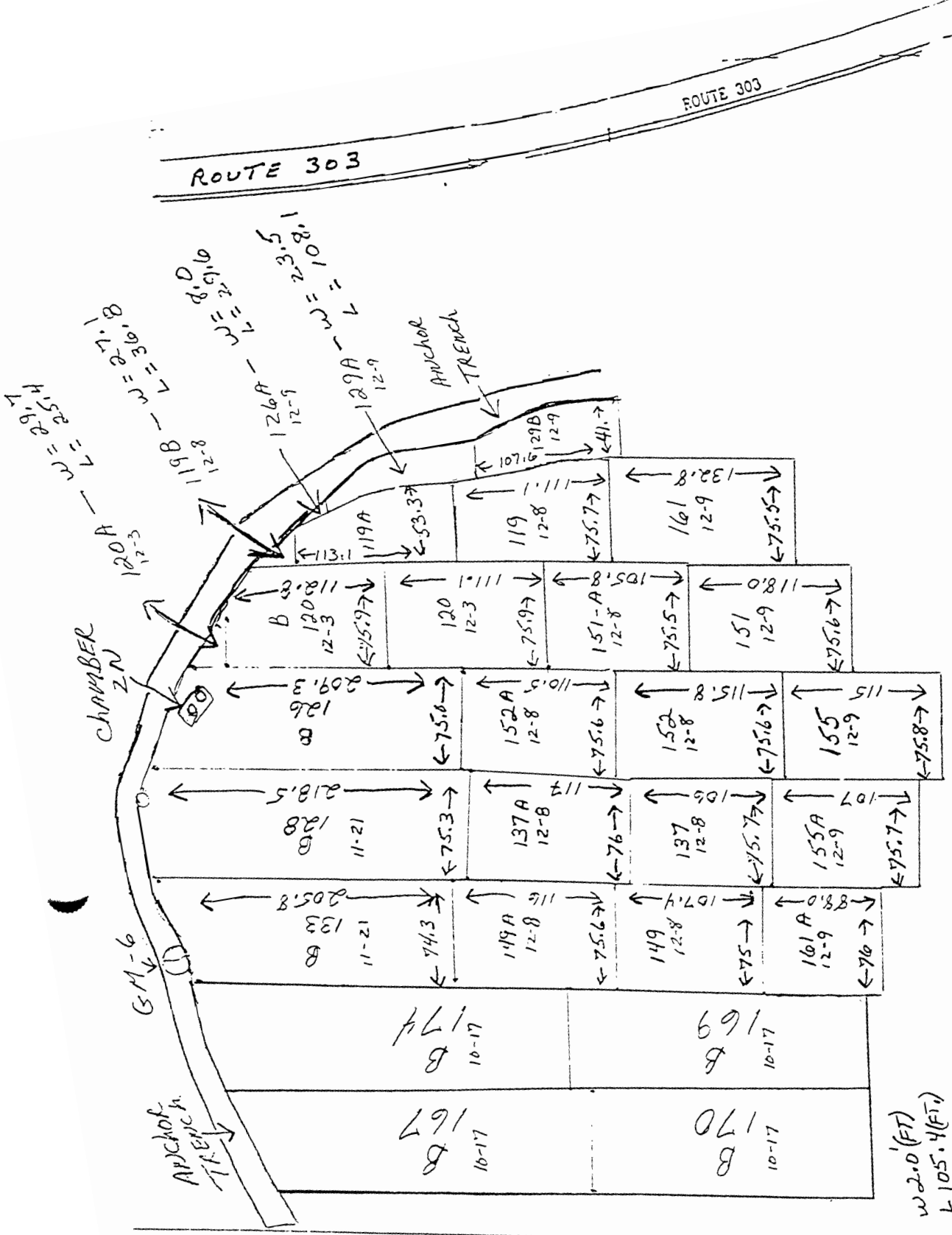
20F6



LFP-1

WELD SEAM CAP
 $151A - 152A - 152 = W 2.0 (FT)$
 $L 105.4 (FT)$

$151 - 152 - 155 = W 3.1 (FT)$
 $L 116 (FT)$



TRAILERS

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: DEC. 10, 1997
INSPECTOR: JOSEPH SchoFIELD
LINER TECHNICIAN: LYLE L

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy (AM / PM)	Overcast AM / PM	Rain AM / PM
AM	32°		PM 44
Sol AM / PM	L. Freeze (AM / PM)	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate (AM / PM)	Humid AM / PM	

SNOW PM

PANEL NO.	ROLL NO.	SUBGRADE CONDITION	FT. LENGTH	FT. WIDTH	VISUAL INSPECTION PASS/FAIL	COMMENTS
149	S	OK	107.4	75	P	
161 A			88.0	76		
155 A			107.0	75.7		
152			115.8	75.6		
155			115.0	75.8		
151 A			105.8	75.5		
151			118.0	75.6		
129 B			107.6	41.0		
151 A	S	OK	105.4	2		
151	↓	↓	116	3.1		

WELD SEAM CAP

151A - 152A - 152 = w 2.0'(FT)
L 105.4(FT) $105.4 \times 2 = 210.8(SF)$ $SY = 23.4$

151 - 152 - 155 = w 3.1(FT)
L 116(FT) $116 \times 3.1 = 359.6(SF)$ $SY = 40$

patch {

WELD SEAM CAP

WELDED SEAM CAP
151A - 152A - 152 =

W 2.0' (FT)
L 105.4' (FT)

$105.4 \times 2 = 210.8 \text{ (SF)}$

SV = 210.8

$151 - 152 - 155 =$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION DEC. 10, 1997 PVC BLANKETS (SY) TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

PVC BLANKET

$$(149) 107.4 \times 75 = 8055 (SF) \quad SY = 895$$

$$(155A) 107 \times 75.7 = 8099.9 (SF) \quad SY = 900$$

$$(161A) 88 \times 76 = 6688 (SF) \quad SY = 743.1$$

$$(152) 115.8 \times 75.6 = 8754.4 (SF) \quad SY = 972.7$$

$$(155) 115 \times 75.8 = 8717 (SF) \quad SY = 968.6$$

$$(151A) 105.4 \times 75.5 = 7987.9 (SF) \quad SY = 887.5$$

$$(151) 118 \times 75.6 = 8920.8 (SF) \quad SY = 991.2$$

$$(129E) 107.6 \times 41 = 4411.6 (SF) \quad SY = 490.2$$

$$\text{Patch? } (151A) 105.4 \times 2 = 210.8 (SF) \quad SY = 23.4$$

$$(151) 116 \times 3.1 = 359.6 (SF) \quad SY = 40$$

$$\text{TOTAL WITH PATCH} = 15,693.0 \quad (SY)$$

$$\text{WITHOUT PATCH} = 15,629.6$$

$$\text{PATCH} = 63.4 (SY)$$

$$\text{60Z. NON WOVEN GEOTEXTILE (SY)} = 15,693.03$$

$$(\text{DRAINAGE NET}) \text{ BLANKET B133} = 1699 \quad (SY)$$

$$B128 = 1828.1$$

$$B126 = 1744.2$$

$$\text{TOTAL} = 5271.3 (SY)$$

4 OF 6

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 10, 1997
INSPECTOR: JOSEPH SCHAFIELD
LINER TECHNICIAN: LYLE L

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	32°		PM 44
SEI AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SNOW PM

SEAM NO.	PANEL NO.	PRESSURE (PSI)	FT LENGTH	COMMENTS
149	149 A	95	75.6	
	B 169	↓	107.4	
	161 A	↓	75	
	137	↓	106	
	137 A	↓	1.4	
161 F	149	95	75	
	B 169	↓	80	
	155 A	↓	76	
	137	↓	2	
155 A	137	95	75.7	
	161 A	↓	86	
	155	↓	80	
	152	↓	27	
152	152 A	95	75.6	
	137 A	↓	10	
	137	↓	105.8	
	155	↓	75.6	
	151	↓	60	
	151 A	↓	55.8	
151 A	120	95	75.9	
	152 A	↓	50	
	152	↓	55.8	
	151	↓	75.5	
	161	↓	53	
	119	↓	52.8	

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 10, 1995
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 32°		PM 44	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

WESTERN

S M T W TH F S

Date: DEC. 11, 1999

IDR #: 457

Weather	High	Low
CLOUDY / CLOUDY	36	30

[illegible]

Remarks: SNOW ACCUMULATION ON PVC BLANKETS PREVENTED THE LINER CREW FROM WORKING. REVIEW, THEN DOCUMENT ALL DATA ON ALL MATERIAL PLACED ON 12-8-97 AND 12-9-97. OGDEN REPRESENTATIVE (ABE) AND MYSELF THEN REVIEWED OUR DATA ON (SY) AND THE RESULT WAS THE SAME.

[illegible]

Joseph Schifano
Inspector's signature
Joseph Schifano
Inspector's name

WESTERN

S M T W TH F S

Date: DEC. 12, 1997

IDR #: 458

Weather	High	Low
SNOW OVERCAST	37	31

[illegible]

Remarks: SNOW ACCUMULATION EARLY TODAY PREVENTED THE LINER CREW TO WORK TODAY. REVIEW ALL MISTAKES ON THE INSPECTOR'S DAILY REPORTS FROM NOV. 24, 1997 TO PRESENT.

[illegible]

Page of pages
s:\clarktw\ldforms\ldr.xls

Inspector's signature
Inspector's name

WOLFE

S M T W TH F S

Date: DEC. 15, 19

IDR #: 461

Weather	High	Low
Clear / Clear	50°	34

[illegible]

Remarks: SNOW AND ICE ACCUMULATION ON THE PVC LINER PREVENTED THE LINER CREW FROM WORK TODAY. REVIEW OGDEN'S DATA TOTAL OF (SY'S) TO DATE ON 40 MIL SMOOTH PVC LINER AND IT WAS ACCEPTABLE. DRESSED UP MY FILES AND ARRANGED THEM IN ORDER.

[illegible]

Inspector's signature
JOSEPH SCHOFIELD
Inspector's name

S M T W TH F S

Date: DEC. 18, 1997

IDR #: 464

Weather	High	Low
CLR/ CLR	58	33

Description of work performed and inspected[illegible]

Remarks: DEPLOYMENT OF DRAINAGE NET IN LFP-1 AREA OVER PVC BLANKETS. PAGE (2) WILL SHOW MX AS-BUILT.

LYLE L. EL LINER REPRESENTATIVE AND MYSELF WHEELED OUT SEAM LENGTHS FOR DESTRUCTIVE TESTING AND A TOTAL OF (8) ARE NEEDED, TODAY (5) WERE CUT, LINER REPAIRED AND TO DATE NO TESTS WERE DONE TODAY.

PLACEMENT OF A PVC BOOT WAS DONE ON MW#2.

PATCHES FOR REPAIRS WERE FINISHED TO SPECIFICATIONS TODAY
ON ALL HOLES OR T'S ON CROSS SEAMS.

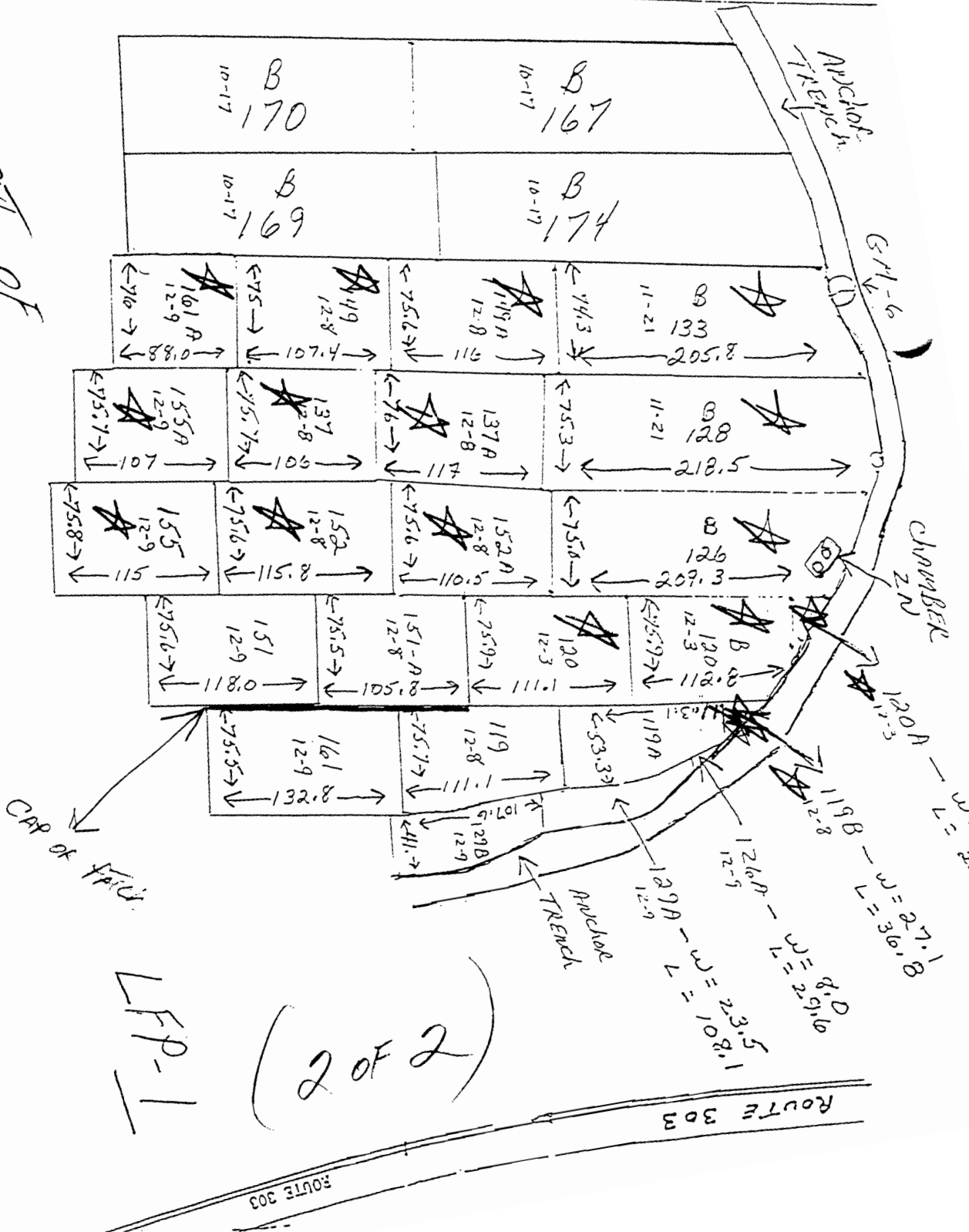
Start/finish time: 7:00 / 5:30

Page 1 of 3 pages
s:\clarktwm\fldforms\idr.xls

Inspector's signature
Inspector's name

LF-1

~~X~~ = PLACEMENT OF
DRAINAGE NET
12-18-97



2 of 2

7F9-1

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 18, 1997
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER	AM	<u>CLR</u>	PM	<u>CLR</u>
TEMP DEG F	HI	<u>58</u>	LO	<u>33</u>
WIND	AM	<u>LS</u>	PM	<u>LS</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

DRAINAGE NET

PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	(SY'S) DIMENSIONS L X W = SF/9=SY
B133	5	205.8	74.3	1699 (SV)
149A		116	75.6	974.4
149		107.4	75	895.0
161A		88	76	743.1
B128		218.5	75.3	1828.1
137A		117	76	988.0
137		106	75.7	891.6
155A		107	75.7	900.0
B126		209.3	75.0	1744.2
152A		110.5	75.6	928.2
152		115.8	75.6	972.7
155		115	75.8	968.6
120A		25.4	29.7	41.9
B120		112.8	75.9	951.3
120		111.1	75.9	936.9
119B		36.8	27.1	55.4
TOTAL (SY) =				15518.4 SY

COMMENTS: ALL (SYS) ARE AGREED WITH MY NUMBERS
AND ALSO OGDENS NUMBERS.

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 19, 1997
INSPECTOR: JOSEPH SchoFIELD
LINER TECHNICIAN: LYLE. L.

WEATHER	AM	<u>CLR.</u>	PM	<u>CLR.</u>
TEMP DEG F	HI	<u>50</u>	LO	<u>34</u>
WIND	AM	<u>LS</u>	PM	<u>LS</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

DRAINAGE NET

[illegible]

COMMENTS:

3 of 5

LF-1

PROPERTY
WELD SEAM CAP (MICH)

Wet

151-A	=	2 FT W
119		105.4 L
151	=	3.1 W
161		116 L

RIVERS

77611



ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: DEC. 19, 1997
INSPECTOR: JOSEPH SCHOFIELD
LINER TECHNICIAN: LYLE L.

WEATHER	AM <u>CLR.</u>	PM <u>CLR.</u>
TEMP DEG F	HI <u>50</u>	LO <u>34</u>
WIND	AM <u>25</u>	PM <u>25</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

TOP LAYER 60Z. NON-WOVEN FABRIC

[illegible]

COMMENTS: FOR PAYMENT DOUBLE THE NUMBER BECAUSE
OF (2) LAYERS BOTTOM + TOP

MAL L

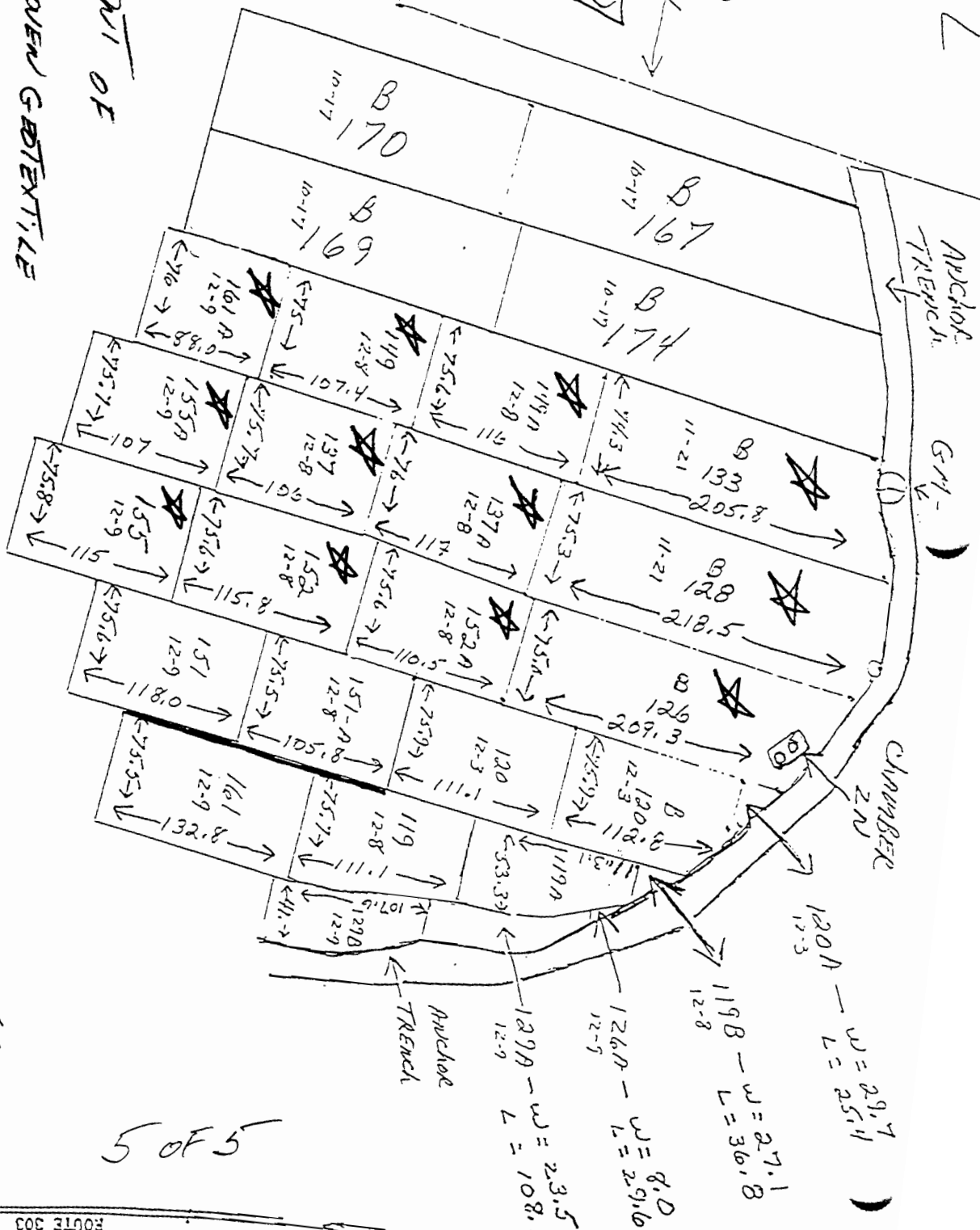
RIVERSIDE

PROPERTY

WELD SEAM CAP (MHC4)
151-A = 2.57' W
119 105.4' L
151 = 3.1' W
161 116' L

LFP-1

★ = PLACEMENT OF
602. NON-WOVEN GEOTEXTILE
TOP OF DRAINAGE NET



5 OF 5

LFP-1

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-C01-0003-00

Date: T: 1-20-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 497

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Ptly Cldy/Ptly Cldy	42	23

Description of work performed and inspected

[illegible]

Remarks: Ed Jonas, Brian, Bob Newman, and Steve were operators today. Equipment inventory taken. Jim of B.E.T. continuing 4" HDPE piping along outskirts of LFP1. Compost material arrived for first day today and placed in a stock pile near mechanic's yard. Measured geocomposite along East slope with Mike Diana and Abe of ORSC.

Start/finish time: 0700 / 1530

Page 1 of 2 pages

s:\clarktwn\fldforms\ldr.xls

Inspector's signature

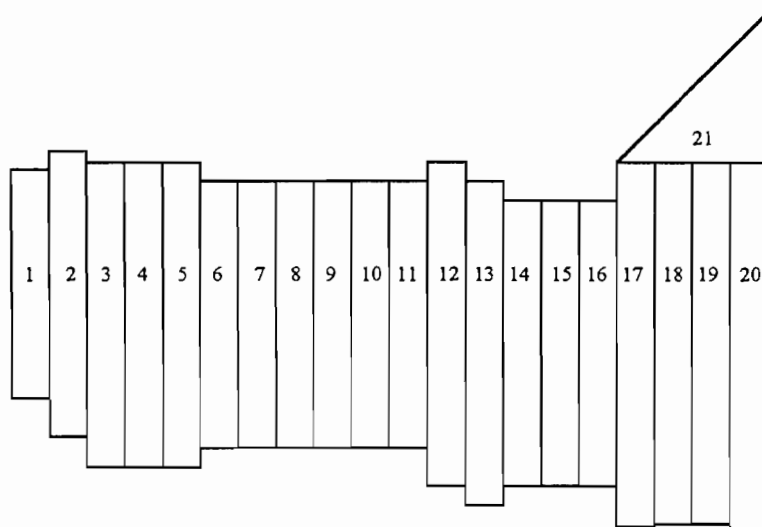
Glenn Josue

Inspector's name

Roy F. Weston of New York, Inc.

Clarkstown Municipal Sanitary Landfill Remediation

Below is an illustration (not to scale) of the geocomposite measured on January 20, 1998:



I.D.	Length (ft)	Width (ft)	Area (ft ²)	Area (yd ²)
1	155.6	13.0	2,022.8	224.8
2	209.7	13.4	2,810.0	312.2
3, 4	216.7	26.1	5,655.9	628.4
5	216.7	12.0	2,600.4	288.9
6, 7, 8, 9, 10, 11	213.0	75.4	16,060.2	1,784.6
12	227.0	13.0	2,951.0	327.9
13	201.0	13.4	2,693.4	299.3
14	178.8	13.0	2,324.4	258.3
15, 16	178.8	26.5	4,738.2	526.5
17	215.6	12.5	2,695.0	299.4
18	215.6	13.0	2,802.8	311.4
19	215.6	13.2	2,845.9	316.2
20	215.6	13.0	2,802.8	311.4
21	71.5	51.7	1,848.3	205.4
Total			54,851.0	6,094.6

Inspector's Daily Report

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W (TH) F S

Job No: 03228-018-001-0003-00

Date: 1/27/98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 506

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
ptly cl / clr	52	35

Description of work performed and inspected

[illegible]

Remarks: Monitored field work observed by others, including placement of cover goit in in LFB #1 and #8 and the installation of liner around the Leachate collection chamber No. 2 and associated vault.

Equipment & Labor Record

[illegible]

Start/finish time: 7:00 - 15:30

Inspector's signature
Inspector's name

S M T (W) TH F S

Date: 4-1-93

IDR #: 568

Weather	High	Low
CLDY AM / RAIN	72°	53°

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT THEN GLUE WELD EMBOSSED BLANKET # 424
AT AREA LFP-1 SECTION 9F

PLACEMENT OF EMBOSSED BLANKET # 420 THEN GLUE WELDED NORTH
OF BLANKET # 424 AT AREA LFP-1 SECTION 9F

DEPLOYMENT OF 602. NON W/VEH. TRAFF. FROM THE WEST SIDE OF
RIVERSD PROPERTY AT AREA LFR-1

DEPLOYMENT OF 602. NON WOVEN FABRIC WEST OF DL-12 AT AREA LFP-1. AT DAY'S END ALL FABRIC WAS HAND STICED TOGETHER.

Start/finish time: 7:00 / 3:30

Inspector's signature
JOE SCHOFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
LINER PANEL INSPECTION FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden Remediation Services, Inc.
LINER INSTALLER: Environmental Liners

DATE: 4-2-98
INSPECTOR: JOE SchoFIELD
LINER TECHNICIAN: LYLE L.

TEMP. DEG F

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 52°		PM 63°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-3-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 570

Contractor: Ogden Remedial Services Corporation

Weather		High	Low
CLR / CLR		70°	46°

Description of work performed and inspected

[illegible]

Remarks: DEPLOYMENT OF (5) EMBOSSED BLANKETS THAT TIED-IN
ON THE NORTH SIDE OF BLANKET # 290-A, AT AREA F-8

BLANKETS # 419 AND 422 WAS CUT DIAGONALLY 45° DEGREES AND WAS INTO (2) PARTS. THE NARROW END WELDED TO BLANKET # 290-A AND THE FULL WIDTH AT THE BOTTOM OF SLOPE, IN ORDER TO CONFORM TO THE CROWN OF THE SLOPES NORTH END OF LFP-8. DIAGRAM ON THE FOLLOWING PAGE.

EG DEN DRESSED UP THE SOUTHEAST END OF LFP-6 THE FLAPS, PEELING BACK GEOTEXTILES ALSO EXCAVATION OF COVER SOIL WAS DONE TO EXPOSE HOLES IN THE LINER, WHICH DEVELOPED DURING CONSTRUCTION OF COVER SOIL PLACEMENT. AT DAYS END THE LINER CONTRACTOR (EL) PLACED A 33' FT PATCH.

Start/finish time: 7:00 / 4:00

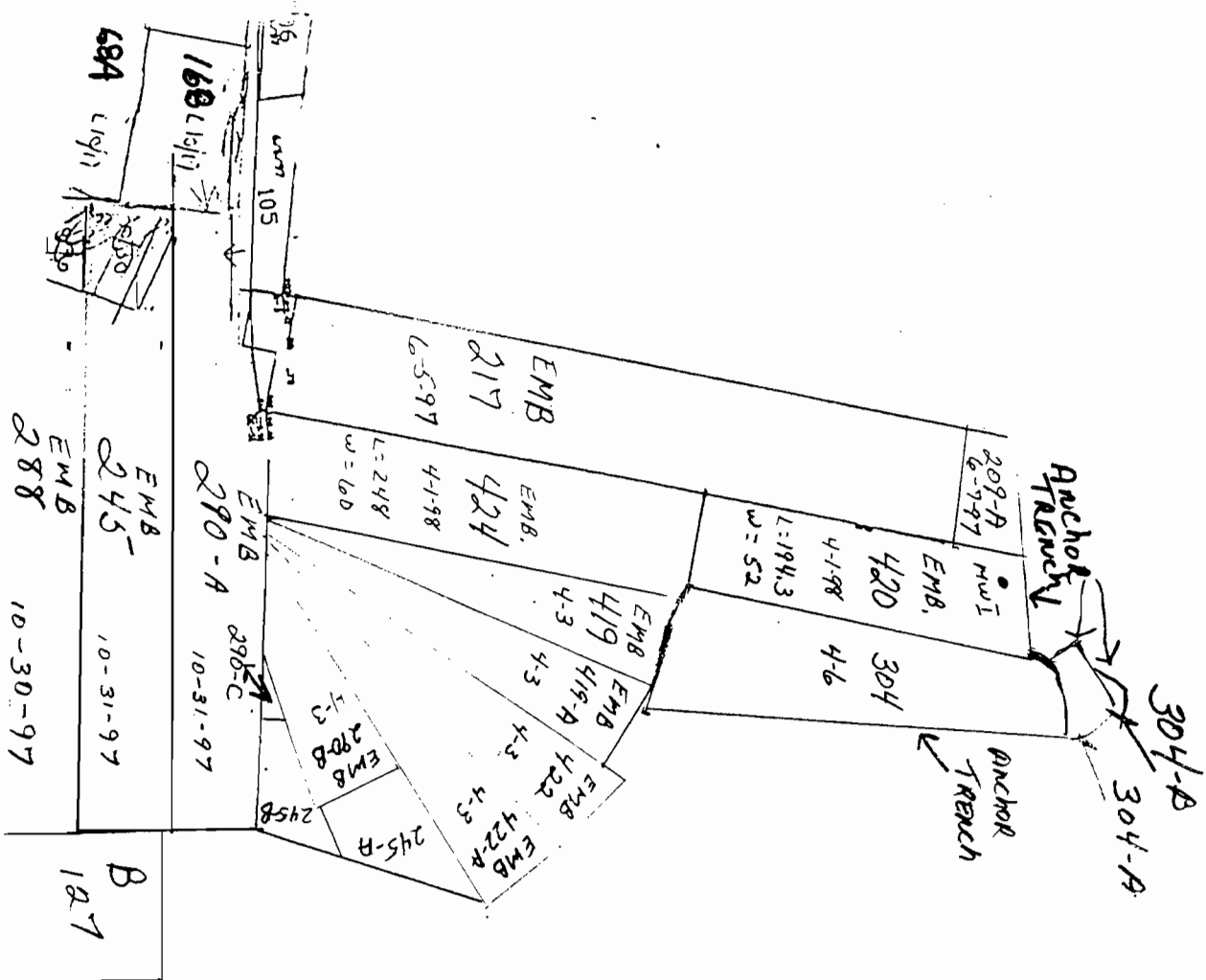
Page 1 of 2 pages

s:\clarktwn\fldforms\idr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name

N ↑

← MAIL →



Trailers

S M T W TH F S

Date: 4-6-98

IDR #: 573

Weather	High	Low
CLR / CLR	63°	38°

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF EMBOSSED PVC BLANKETS# 290-C NORTH SIDE OF
290-A. EMB. BLANKET# 245-A WHICH IS NORTH OF BLANKET# 290-E
EMB. BLANKET# 245-B WHICH IS NORTH OF 290-A. BLANKETS
PLACED ARE IN AREA LFP-8 F8 AND G-8.

PLACEMENT OF A SMOOTH BLANKETS # 304 - 304A AND 304B
THESE BLANKETS ARE EAST OF BLANKET # 420 LFP-1 IN AREA'S
F-9 AND G-9, AT DAY'S END ALL BLANKETS WERE WEDGE WELDED

(EL) ALSO HAD PATCH REPAIR ON THE FLAPS AT DIKE 4 AREA
GE-17, (27) PATCHS WERE PLACED THEN AIR LANCED WHICH WAS OK.
PATCHS # 22-23 WERE PATCH FROM THE UNDER SIDE

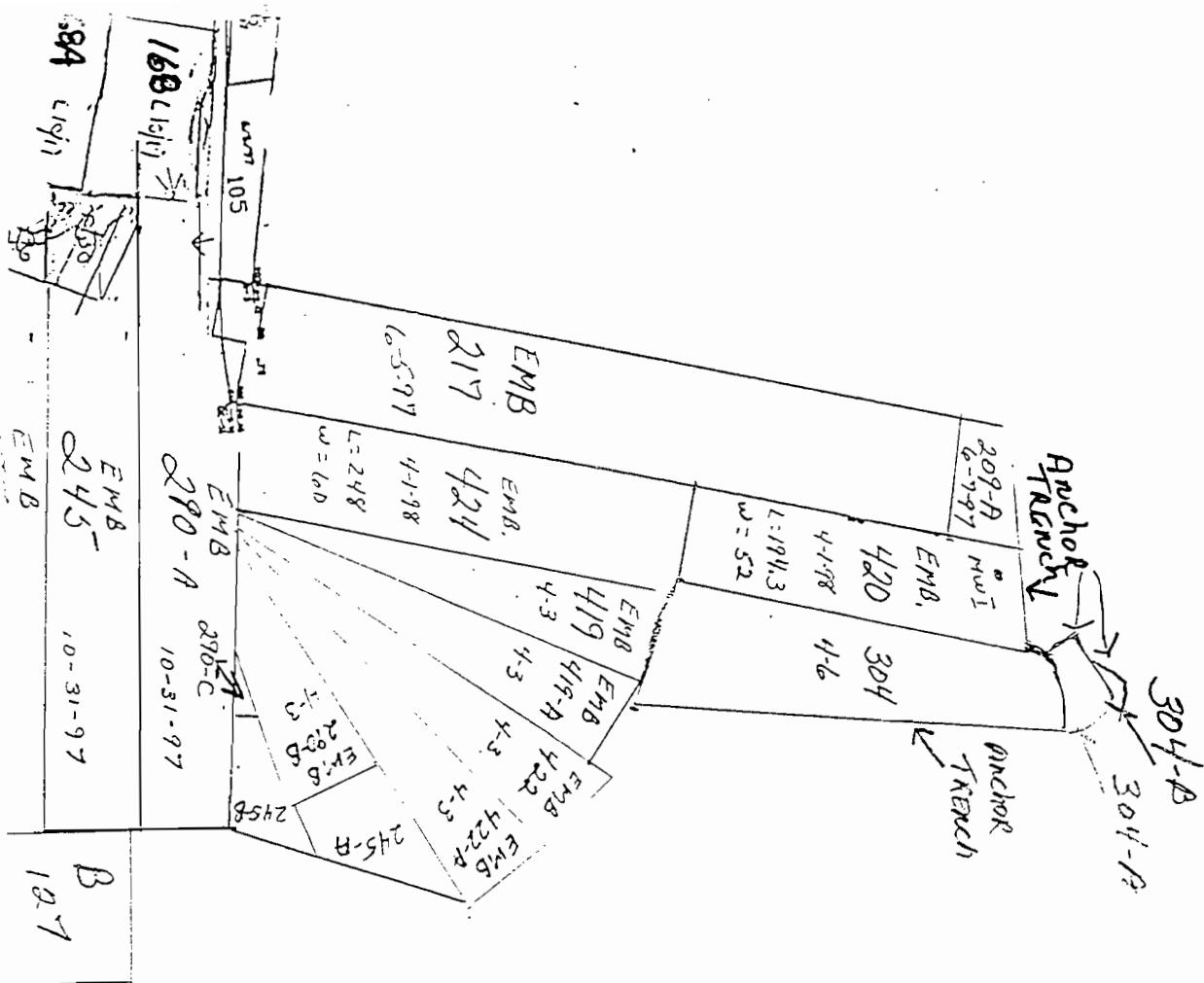
PLACEMENT THEN HAND STITCHED 602. NON WOVEN FABRIC ALONG CHANNEL #21 NORTH OF GE=49 AND DL-4

Start/finish time: 7:00/5:00

Page 1 of 4 pages
s:\clarktw\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name

← MALL →



→ RT. 303 →

ROY F. WESTON OF NEW YORK, INC.

Repair Log

Project Name CLARKSTOWN CO. LANDFILL
 Project No. 03228-018-001-0003-00
 Material PVC LINER

Date 4-6-98
 QA/QC Inspector JOE SCHOFIELD
 Page 1 of 2

REPAIR #	DEFECT CODE	REPAIR DATE	LOCATION	REPAIR TYPE	REPAIR TECH	VT P/F	VT DATE
1	EE	4-6-98	DIKE 4 AREA E-3 AND	P	Sohn	P	4-6
2			E-4				
3			ALL PATCHS HAS BEEN AIR				
4			LANCED AND RS-BUILD				
5			WILL FOLLOW				
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Defect Code: BO-Burn Out SI-Soil Surface Irregularity Repair Type: C-Cap Strip
 CR-Crease T-Joint P-Patches
 DS#-Destructive Test VI-Vacuum Test Leak B-Bead
 EE-Earthwork Equipment Damage WR-Wrinkle
 FM-Fishmouth WS-Welder Restart
 FT-Pressure Test Cut Other

Environmental Geosynthetics

Repair Log

Date 4-6-98
QA/QC Inspector JOE SCHOFIELD
Page 2 of 2

AIR FORCE

Defect Code:	BO-Burn Out	SI-Soil Surface Irregularity	Repair Type:	C-Cap Strip
	CR-Crease	T-Joint		P-Patches
	DS#-Destructive Test	VL-Vacuum Test Leak		B-Bead
	EE-Earthwork Equipment Damage	WR-Wrinkle		
	FM-Fishmouth	WS-Welder Restart		
	FT-Pressure Test Cut	Other		

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

$\leftarrow M_{\text{ALL}} \rightarrow$



ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 4-7-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN COOKIE

WEATHER	AM	<u>CLR.</u>	PM	<u>CLR</u>
TEMP DEG F	HI	<u>69°</u>	LO	<u>39°</u>
WIND	AM	<u>< 10</u>	PM	<u>< 10</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-8-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 575

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / OVER	64°	38.5°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
<u>22E</u>	<u>FLAP GE-17 TO GE-13</u>		
	<u>327' FT X 12' FT</u>	<u>436 SY.</u>	<u>SEE PAGE: 4</u>
	<u>AREA 1 PVC BLANKET</u>		<u>FOR DIAGRAM OF</u>
			<u>FLAP</u>
<u>22-E</u>	<u>FLAP GE-17 TO GE-4</u>		
	<u>AREA 2 PVC BLANKET</u>		
	<u>104.8 X 28.1</u>	<u>327.2 SY.</u>	<u>SEE PAGE: 4</u>
	<u>13 X 19.6</u>	<u>14.1 SY.</u>	<u>L + 2</u>
	<u>65 X 38.8</u>	<u>280.2 SY.</u>	
	<u>142.4 X 23</u>	<u>363.9 SY</u>	
	<u>35.6 X 35</u>	<u>138.4 SY</u>	
		<u>1,123.8 SY'S</u>	<u>TOTAL AREA: 2</u>
<u>24 A</u>	<u>DRAINAGE NET OVER FLAP</u>		
	<u>AREA 1 SAME AS PVC BLANKET</u>	<u>436 SY'S</u>	
	<u>AREA 2</u>	<u>1,123.8 SY'S</u>	
<u>23 A</u>	<u>602. NONWOVEN GEOTEXTILE</u>		
	<u>SAME AS BLANKET AND NET</u>		
	<u>AREA 1</u>	<u>436 SY'S</u>	
	<u>AREA 2</u>	<u>1,123.8 SY'S</u>	

Remarks: PLACEMENT THEN WEDGE WELD IN PLACE SMOOTH PVC BLANKETS #
148 - 148A - 305C AND 305D. ALL BLANKETS WERE IN
AREA G-9 AND G-8. DIAGRAM ON THE FOLLOWING PAGE.

PLACEMENT THEN HAND STICED TOGETHER 602. NON WOVEN FABRIC AT
THE BEGINNING AND NORTH OF CHANNEL #1 IN AREA G-8 AND H-8

OGDEN REEXCAVATED THE EXPOSED GAS COLLECTION PIPE WHICH ENDED IN THE
CENTER OF CHANNEL #1. THEY EXCAVATED THE SAME ELEVATION GOING
SOUTH AND ADDED A (23') FT. SECTION AT $\approx 30^\circ$ AND (5') FT. ABOVE GROUND.

(EL) THE LINER CONTRACTOR WELDED LINER USED FOR FLAPS RUNNING
NORTH AT AREAS GE-17 - GE-16 - GE-13 GE-7 AND GE-4

Start/finish time: 7:00/6:00

Page 1 of 4 pages

s:\clarktown\fldforms\ldr.xls

Joe Schofield
 Inspector's signature
JOE SCHOFIELD
 Inspector's name

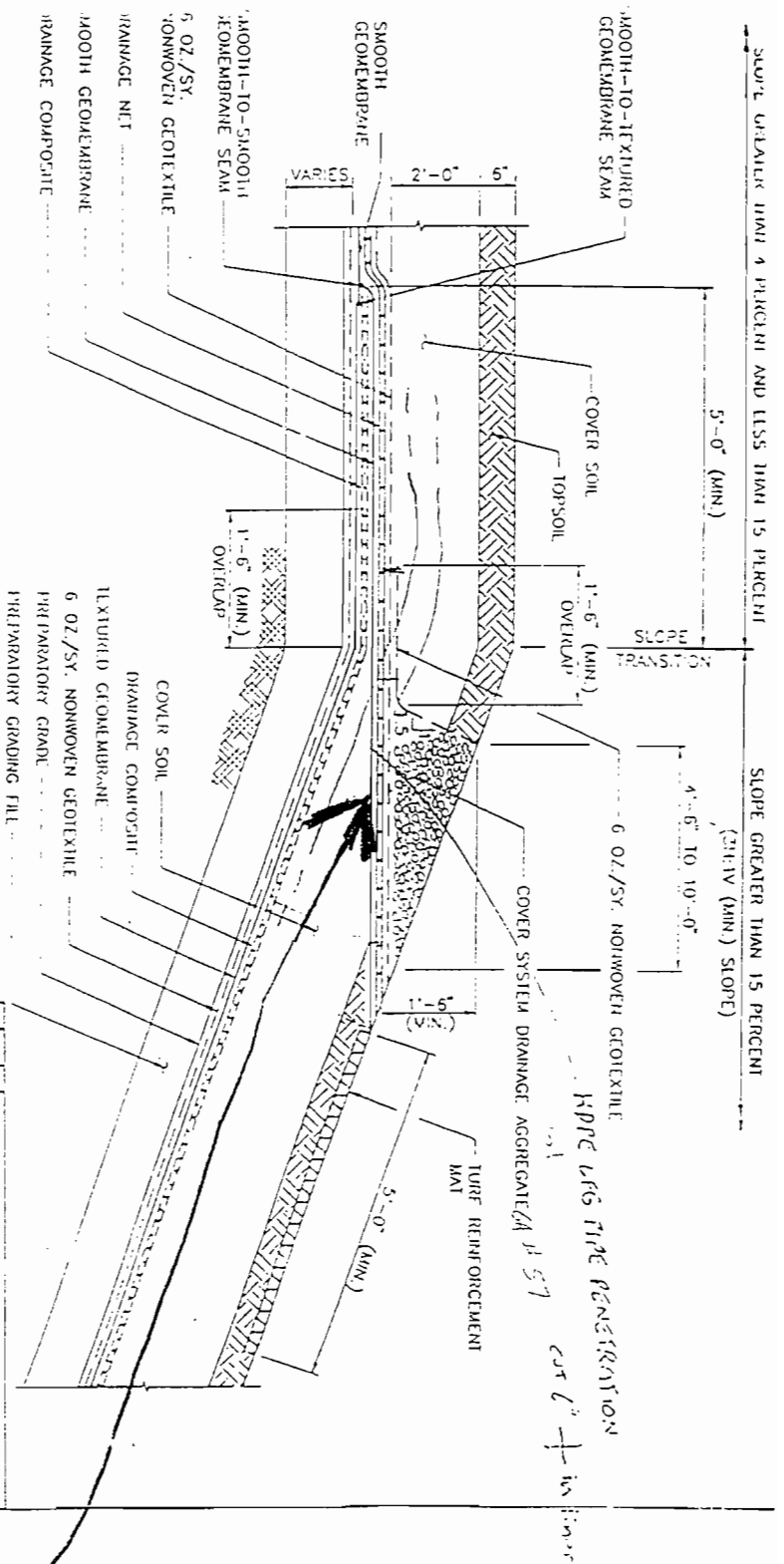
CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

DATE: 4-8-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN COOKIE

WEATHER	AM <u>OVER</u>	PM <u>CLDY</u>
TEMP DEG F	HI <u>64</u>	LO <u>38</u>
WIND	AM <u><10</u>	PM <u><10</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

[illegible]

c:\clarktwn\fldforms\geotex.xls



FINAL COVER SYSTEM CROSS SECTION AT TRANSITION
FROM LANDFILL FLAT AREA TO LANDFILL SIDE SLOPE

DETAIL

Top of Slope

3.5
2015
2016
2019
2020

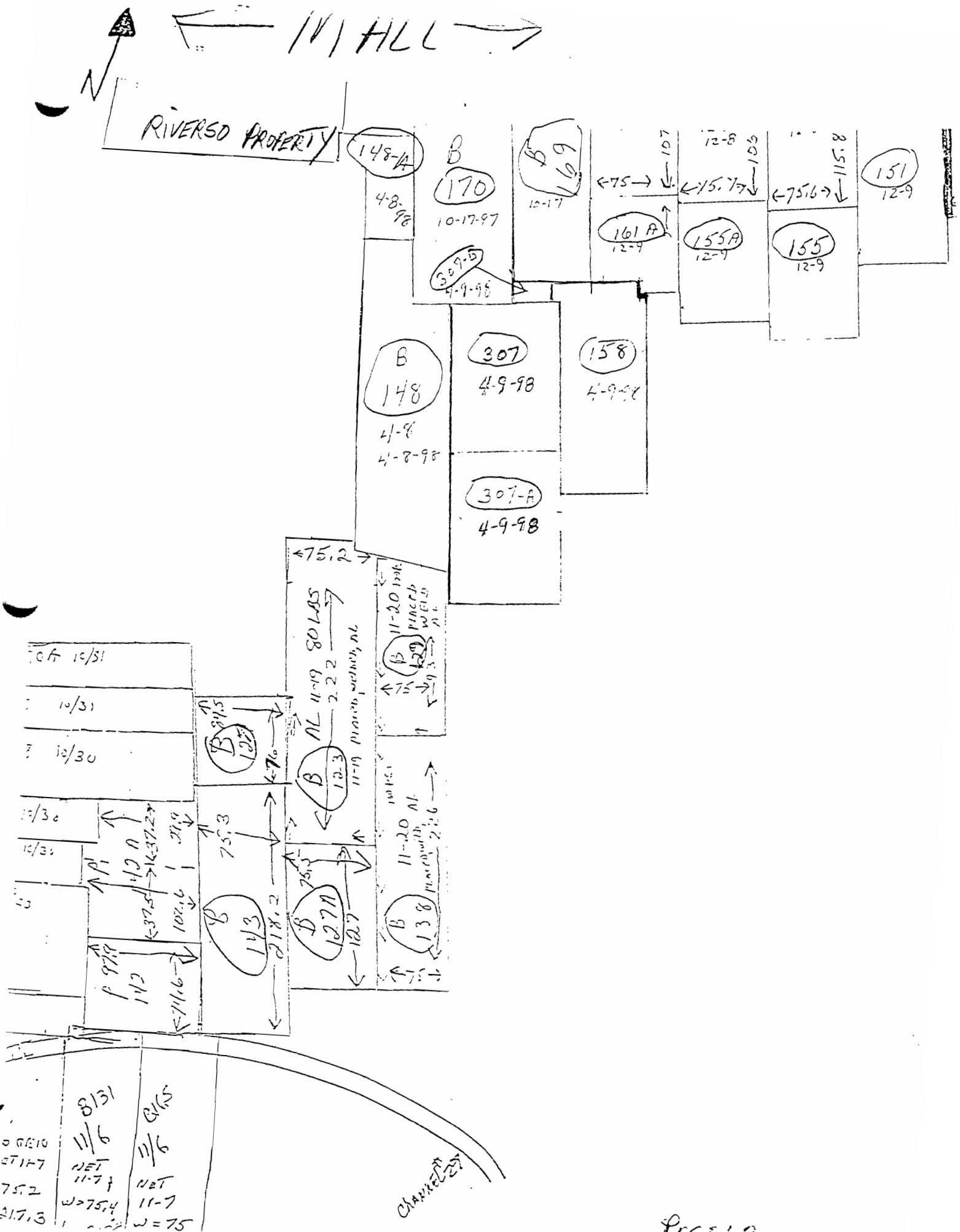
NO.	REVISION	DATE	BY	CHKD	APP'D
1	ISSUED FOR PERIOD	11/15/2015			

CLARKSON MUNICIPAL SANITARY
LANDFILL REDEMPTION
FINAL COVER
SYSTEM DETAILS



THE FLAP WHICH WAS WELDED

Inspector's signature
JOE SCHOFIELD
Inspector's name



S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-9-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 576

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
RAIN / OVER	53°	43°

Repair Log

Description of work performed and inspected

[illegible]

DEFECT CODE:	BO-BURN OUT
	CR-CREASE
	DS#-DESTRUCTIVE TEST
	EE-EARTHWORK EQUIPMENT
	J-JOINT
	O-OTHER

REPAIR TYPE: C-CAP STRIP
P-PATCH

START/FINISH TIME _____/_____/_____

PAGE 3 OF 4 PAGES

INSPECTORS SIGNATURE
JOE SCHOFIELD
INSPECTORS NAME

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 4-9-98
INSPECTOR: JOE SchoFIELD
LINER TECHNICIAN: John

WEATHER	AM <u>OVER</u>	PM <u>RAIN</u>
TEMP DEG F	HI <u>53</u>	LO <u>43</u>
WIND	AM <u><10</u>	PM <u><10</u>
PRECIPITATION	AM	PM

[illegible]

COMMENTS: PLACED OVER SUBGRADE
LENGTH + WIDTH WILL BE INCLUDED AFTER

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-10-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 577

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
OVER / CLR	59°	42

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22D	EMBOSSED 40 MIL. PVC LINER F-8 AND G-8		DIAGRAM AND MATH. ON THE FOLLOWING PAGES.
	EMBOSSED 419-419A	1315.0 SY'S	
	422-422A	1308.3 SY'S	
	290B-245A	726.2 SY'S	
	290C	8.8 SY'S	
	245B	31.2 SY'S	
22E	SMOOTH 40 MIL. PVC LINER AREA'S F-9, G-9 AND G-7		
	SMOOTH 305	687.3 SY'S	
	305A	80.0 SY'S	
	130	117.56 SY'S	
	304	1876.3 SY'S	
	304A-304B	82.3 SY'S	
	306	1225.7 SY'S	

Remarks: DUE TO HEAVY RAIN 4-9-98 PM, (EL) THE LINER CREW CALLED OFF THE DAY, BECAUSE IT WAS TOO WET AND SUBGRADE NEEDED WORK.

ABE (OGDEN REP.) AND MYSELF WALKED OUT TO MEASURE WITH THE WHEEL THE EROSION CONTROL MAT WITH TOP SOIL PLACEMENT AND SLURRY WALL CONSTRUCTION WITH TOP SOIL IN AREAS H-1, H-2 AND G-3.

(OGDEN REP.) ABE AND MYSELF ALSO WALKED OUT WITH THE MEASURING WHEEL IN AREA'S F-8, F-9, G-8, G-9 AND G-7.

THE BLANKETS INCLUDE (419-419A) (422-422A) (290B-245A) (290C) (245B) (305) (305A) (130) (304) (304A-304B) AND (306).

THE DIAGRAM AND THE SY'S FOR MEASUREMENTS ON THE FOLLOWING PAGES

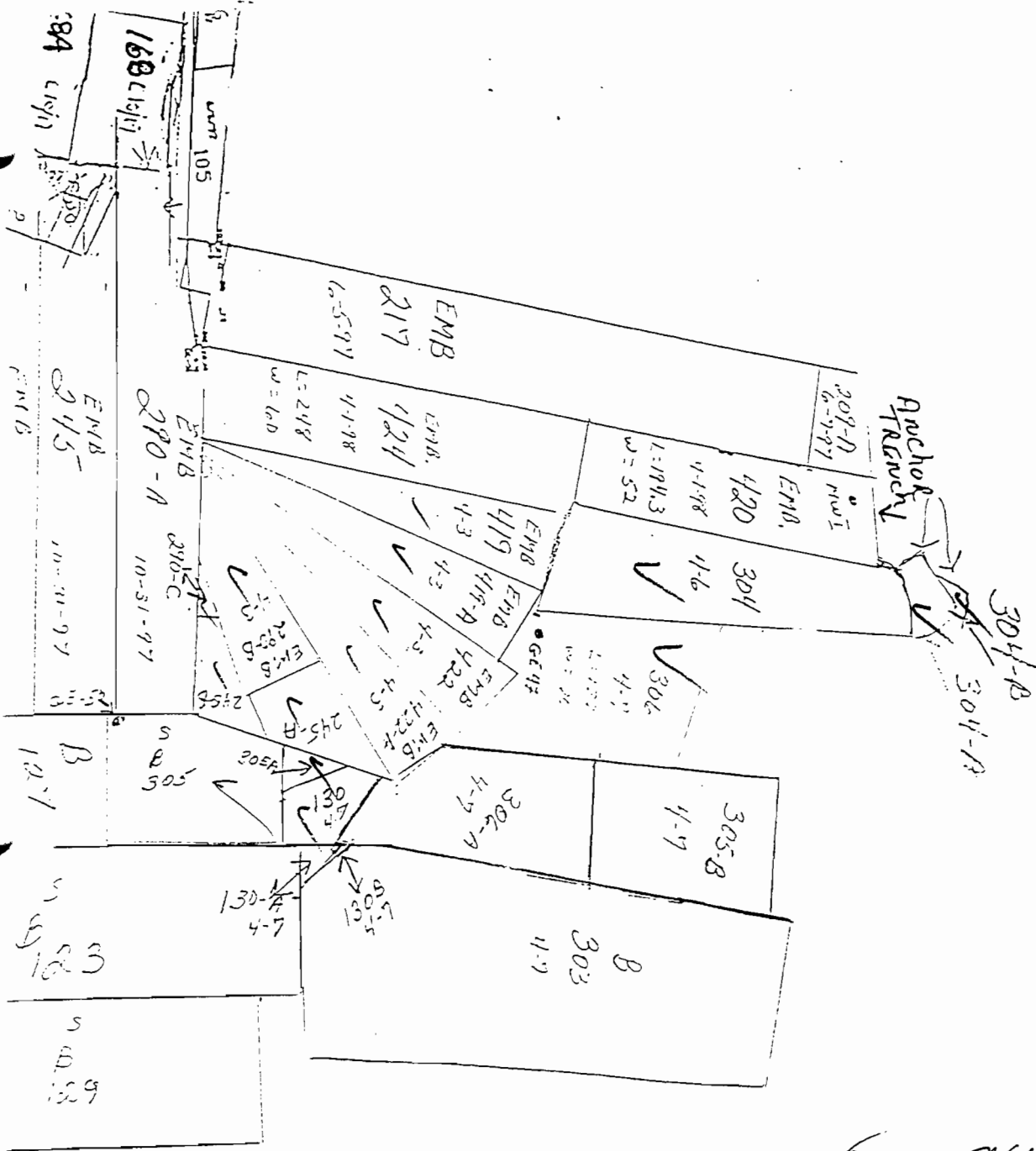
Start/finish time: 7:00/4:30

Page 1 of 4 pages
s:\clarktown\fldforms\idr.xls

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

N ↑

← MALL →



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION	TASK NO.
1. Review the project schedule and identify the critical path.	1
2. Conduct a risk assessment for the project.	2
3. Develop a communication plan for the project.	3
4. Monitor the project progress and report to the sponsor.	4
5. Close the project and conduct a post-mortem.	5

PREPARED BY _____ DEPT _____ DATE _____ APPROVED BY _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

$$E\ 419-419A \quad \Delta \div 2 \quad 103.1 \times 229.6) = 11835.88 (SF) = \boxed{1315.0\ SF/S}$$

$$E_{422-422A} \Delta + 2 \quad 100.3 \times 234.8 = 11775.22 \text{ (SF)} = \boxed{1308.3 \text{ SY'S}}$$

$$E_{290B-245A} \quad 38.0 \times 17.2 = 6536 \text{ (SF)} = \boxed{726.2 \text{ SY'S}}$$

$$E_{290C} \quad \Delta \div 2 \quad 7.2 \times 22.0 = 79.2 \text{ (SF)} = \boxed{8.8 \text{ sy's}}$$

E 245B $\Delta \div 2$ $29.0 \times 19.4 = 281.3 (SF) = \boxed{31.2 \text{ SY'S}}$

S 305  TREAT LIKE  THEN REMOVE 

$$\Delta +2 \quad \begin{array}{r} 93.0 \times 77.0 = 7161 (SF) = 795.6 \text{ SY'S} \\ 53 \times 36.8 = 975.2 (SF) = -108.3 \text{ SY'S} \\ \hline 687.3 \text{ SY'S} \end{array}$$

S 325A  TREAT LIKE (2)  THEN ADD 

$\triangle 3.4 \times 9.3 = 15.81 (SF) = 1.75 \text{ SY's}$
 $\triangle 35.6 \times 13 = 231.4 (SF) = 25.71 \text{ SY's}$
 $\square 23.8 \times 14 = 473.2 (SF) = 52.57 \text{ SY's}$
80.03 SY's

$\angle 130$  TREAT LIKE (2)  THEN 

$$\begin{array}{rclcl} 38.2 \times 23.7 & = & 905.34 \text{ (SF)} & = & 100.59 \text{ SY'S} \\ 17 \times 8 & = & 136 \text{ (SF)} & = & 15.11 \text{ SY'S} \\ \triangle 12 \times 2.8 & = & 16.8 \text{ (SF)} & = & + 1.86 \text{ SY'S} \end{array}$$

117.56 SY's



SHEET _____ of _____

CLIENT SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

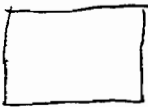
PREPARED BY _____ DEPT _____ DATE _____

APPROVED BY _____

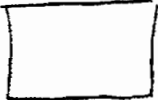
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____

S 304  $222.2 \times 76 = 16887.2(SF) = 1876.35(SYs)$

S 304A - 304B  $\triangle \div 2 \quad 49.4 \times 30 = 741.0(SF) = 82.3(SYs)$

S 306  $144.2 \times 76.5 = 11031.3(SF) = 1225.7(SYs)$

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

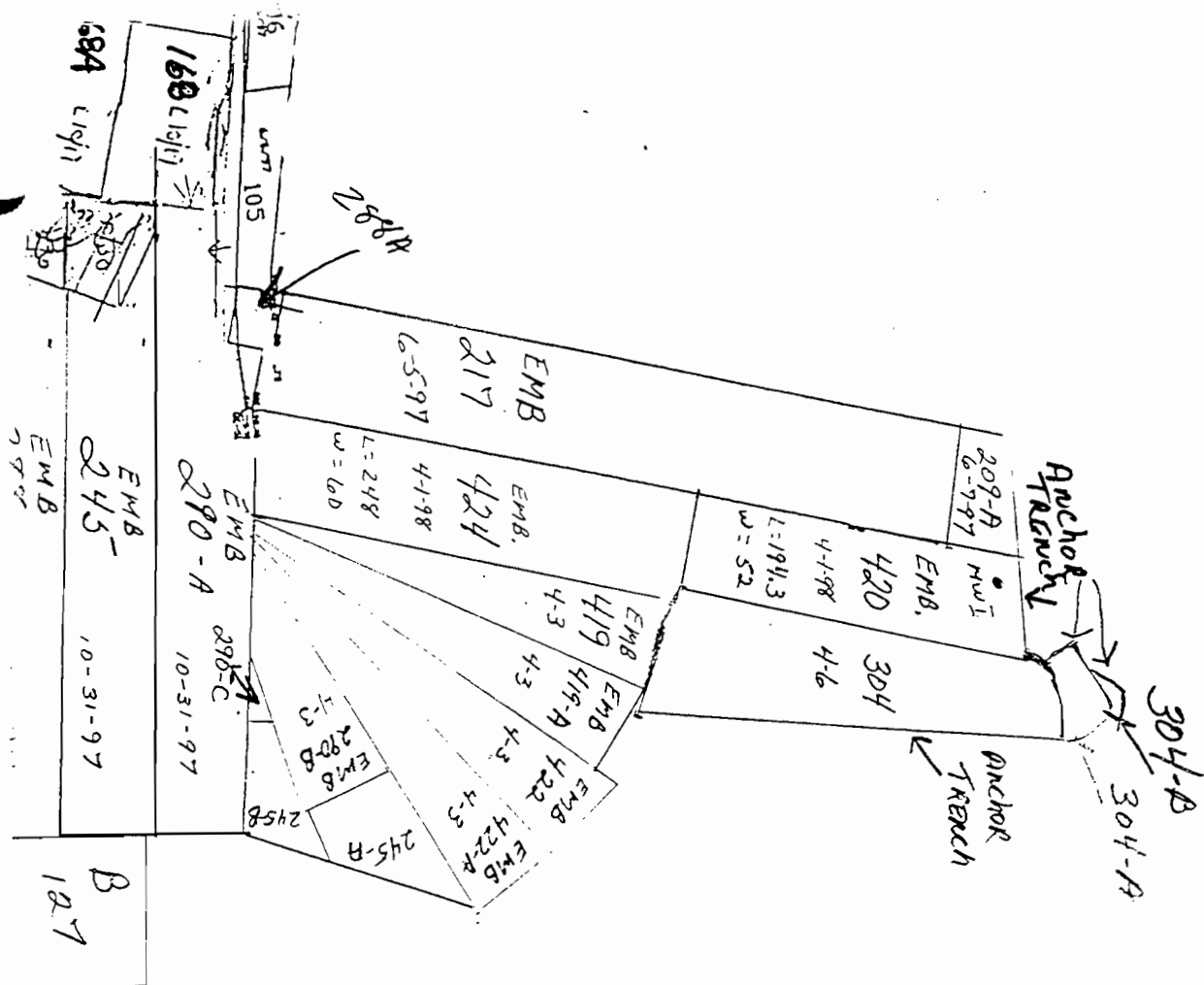
LANCHON
TRENCH



Chaudhary

Inspector's signature
JOE SCHOFIELD
Inspector's name

← MALL →



PAGE: 2

→ RT. 303 ←

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 4-14-98
INSPECTOR: Joe Schofield
LINER TECHNICIAN: John Cookie

WEATHER	AM	CLR	PM	CLR
TEMP DEG F	HI	68	LO	39
WIND	AM	< 10	PM	< 10
PRECIPITATION	AM	—	PM	—

[illegible]

COMMENTS:

S M T W TH F S

Date: 4-13-78

IDR #: 382

Weather	High	Low
RAIN / OVER	57°	45°

Description of work performed and inspected

[illegible]

Remarks: RAIN THIS MORNING AND LABOR FORCE WENT HOME.

MIKE DIANA (OGDEN REP.) AND MYSELF MEASURED THE FLAP AT
E-7 GE-4 AREA

(EL) THE LINER CONTRACTOR HAD TAKEN (4) DESTRUCTIVE TESTS WHICH I OBSERVED AND THE RESULTS ARE ON THE FOLLOWING PAGE.

WHEELED OUT TO MEASURED SEAM LENGTHS ON BLANKETS
PLACED AND WELDED FROM 4-1-98 - TO 4-9-98

Start/finish time: 7:00 / 5:00

Page 1 of 2 pages
s:\ciarktw\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name

TOWN OF CLARKSTON, WEST NYACK, NEW YORK

ENVIRONMENTAL LINERS, INC.

ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 4-15-98

☒ Destructive Seam Log

15-48
G.A. SIGN

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-16-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 583

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
FOG / OVER	56°	50°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
24 B	DRAINAGE GEODCOMPOSITE AT E-7 AND F-7		
	$217 \times 52 = 11284 \text{ (SF)} =$	1253.7 (SV's)	
	$132.3 \times 14.1 = 1865.4 \text{ (SF)} =$	207.2 (SV's)	
	$93.2 \times 35.2 = 3280.6 \text{ (SF)} =$	364.5 (SV's)	
	$37.5 \times 14.6 = 547.5 \text{ (SF)} =$	60.8 (SV's)	
22E	SMOOTH 40 MIL PVC LINER IN AREA G-8 BLANKETS #130A - 130B.		
	$27.5 \times 24.1 = 662.7 \text{ (SF)} =$	73.6 (SV's)	

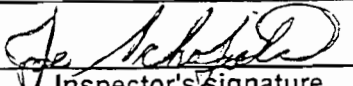
Remarks: PLACEMENT THEN HAND STICHED TOGETHER GEODCOMPOSITE IN AREA'S E-7, F-7, G-7 AND F-8. MIKE DIANA (OGDEN) REP. AND MYSELF WALKED TO MEASURED (4) SECTIONS OF COMPOSITE FOR COVER SOIL PLACEMENT.

THE PIN HOLES FOUND IN THE LINER #290A (4) WERE PATCHED AND AIR LANDED (2) 14" IN HOLES FOUND ON LINER #218 WERE PATCHED AND AIR LANDED. PATCH REPAIR ON THE NORTH END OF BLANKET #123 ≈ 11' FT LONG WAS PATCH AND AIR LANDED.

PLACEMENT OF COVER SOIL 2' FT. THICK FROM GE-52 TO GE-50

Start/finish time: 7:00 / 5:00

Page 1 of 2 pages
s:\clarktown\fldforms\idr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 4-16-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN COKIE

WEATHER	AM	<u>FOG</u>	PM	<u>OVER</u>
TEMP DEG F	HI	<u>56</u>	LO	<u>50</u>
WIND	AM	<u>210</u>	PM	<u>210</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS: PAGE: 1 IS THE ONLY MEASURED AREA'S FOR
BLANKETS # 245, 290A, 290C AND 245B SO OGDEN CAW
PLACED COVER SOIL IN SAID AREA'S

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH **F** S

Job No: 03228-018-001-0003-00

Date: 4-17-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 584

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
RAIN	62°	54°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH PVC 40 MIL. LINER 305C-305D IN AREA G-8		
	24.4 x 18 = 439.2 (SF) =	48.8 (SY's)	
		OR	
		49.0 (SY's)	
	SMOOTH PVC 40 MIL. LINER BLANKET # 303 IN AREA G-8		
	226.0 x 75.7 = 17108.2 (SF) =	1900.9 OR	
		1901 (SY's)	

Remarks: PLACEMENT THEN HAND STICKED TOGETHER GED COMPOSITE ON THE EMBOSSED PVC LINER EAST THEN WEST OF GE-47.

PATCH REPAIR ON DESTRUCTIVE TESTS TAKEN TODAY (4) TEST RESULTS ON FOLLOWING PAGE

FILLED IN ANCHOR TRENCH EAST SIDE OF BLANKET # 304A AND 304B

THE AIR LANCE TEST RESULTS FOR 4-14-98 WITH SEAM LENGTHS IS ON PAGE: 4

MIKE DIANA (OGDEN REP.) AND MYSELF MEASURED SMOOTH PVC BLANKETS # 305C-305D WHICH WE COMBINE BOTH BLANKETS FOR (1) BLANKET THEN MEASURED SMOOTH PVC BLANKET # 303. THE DIAGRAM ON PAGE 5

Start/finish time: 7:00/3:30

Page 1 of 5 pages
s:\clarktown\fldforms\idr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name

TOWN OF CLARKSTOWN, WEST NYACK, NEW YORK

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 4-17-98

☐ Trial Seam Sample Log

☒ Destructive Seam Log

4-11-18
D.A. SIGN

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 4-17-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN COOKIE

	10:00	
WEATHER	AM <u>RAIN</u>	PM <u> </u>
TEMP DEG F	HI <u>54</u>	LO <u> </u>
WIND	AM <u>< 10</u>	PM <u> </u>
PRECIPITATION	AM <u>10:00</u>	PM <u> </u>
	<u>RAIN</u>	

[illegible]

COMMENTS: AT DAY'S END THERE WAS NO MEASUREMENT
ON GEO COMPOSIT

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

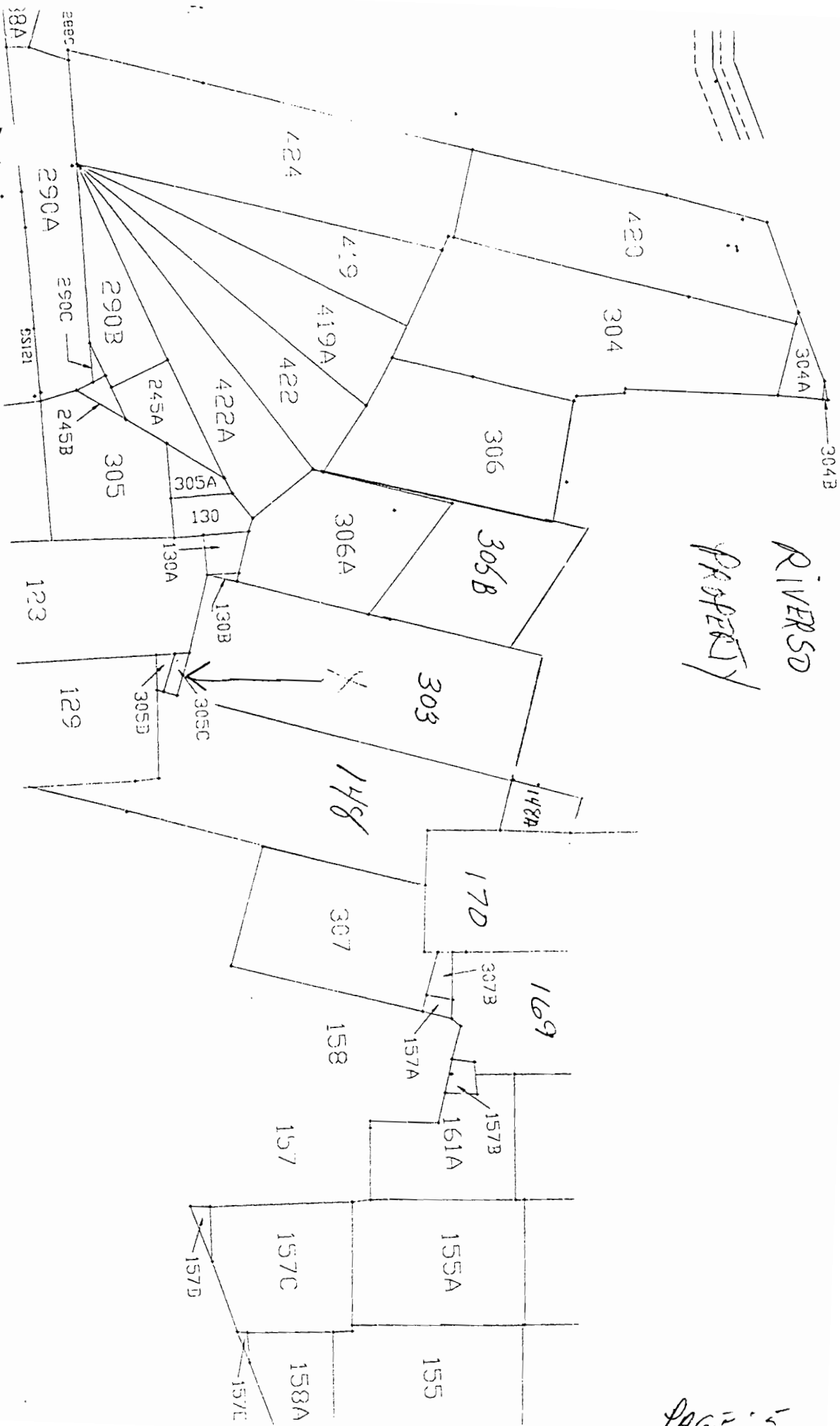
DATE: 4-17-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRAFT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

AIR LANCE TAKEN ON 4-14-98

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 39°			PM 68°
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
217-290A	424	90-95 PSI	320	
217-209A	420		235	
424-304	419		281	
419-304-306	419 A		275	
419A-306	422		286	
422-306A	422A		274	
422A-290A-245A	290B		165	
245B 422A-305A-305	245A		117	
245A-305-130-422A	305A		89	
123-130A-306-422A	130		62	
245A-305A-130-123	305		182	
290A-290B-245B	290C		51	
290C-290B	245C		49	
123-130-306A-130B	130A		52	
306A-130A-303	130B		26	
419A 304-422A-306	304		291	
304-422	304A		51	
304A	304B		22	
422-419A-304	306		194	
306-422A-130-303	306A		142	
306-306A-303	305B		173	
306A 305B 123	303		301	
123-305D-303	305C		34	
129-123-305C	305D		32	
129-303-305D	148		372	
303-170-148	148A		98	
148-170-307B	307		191	
170-169-307-157A	307B		56	
307-148-129	307A		162	
157 307-157A-157B 169	158		280	
157 158-307B-169	157A		14	
158-169-161A	157B		54	
158-161A-157C	157		147	
157-155A-157D	157C		185	



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S (M) T W TH F S

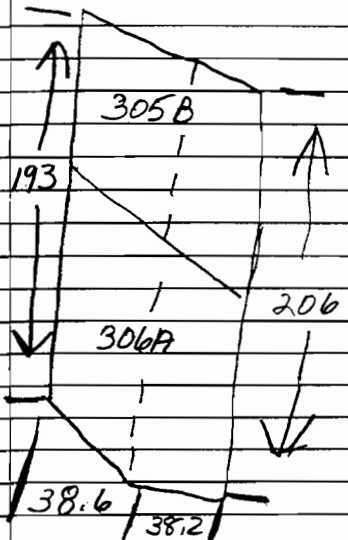
Date: 4-20-98

IDR #: 587

Weather	High	Low
CLDY / CLDY	60°	40°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH PVC 40 MIL. LINER IN AREA G-8 MEASURED BOTH BLANKETS 305B - 306A TOGETHER IN TWO HALVES		
	193 X 38.6 = 7449.8 (SF) =	827.7 (SY'S)	
	206 X 38.2 = 7869.2 (SF) =	874.3 (SY'S)	
	TOTAL (SY'S) FOR 305B + 306A =	1702.0 SY'S	
24 B	DRAINAGE GEOCOMPOSITE EMBOSSED PVC LINER NORTH SLOPE AREA F-7, F-8, AND F-9	5308 (SY'S)	SEE PAGE (2) FOR MATH (3) FOR DIAGRAM



Remarks: PLACEMENT THEN HAND STICKED TOGETHER GEO COMPOSITE ON
BLANKETS # 424 - 420 - 419

PLACEMENT OF GEONET OVER SMOOTH BLANKETS # 304 - 306

MIKE DIANA (OGDEN REP.) AND MYSELF MEASURED SMOOTH PVC BLANKETS #
306A AND 305B AND COMBINE BOTH BLANKETS FOR (SY'S).

MIKE DIANA AND MYSELF ALSO FINISHED MEASURING OUT ALL THE
REMAINING GEO COMPOSITE BOTH EAST AND NORTH SLOPE OF THE
EMBOSSED PVC BLANKETS # 422 - 419A - 419 - 424 AND 420

Start/finish time: 7:00 / 6:00

Page 1 of 3 pages
s:\clarktown\fdforms\idr.xls

Joe Schafeldt
Inspector's signature
JOE SCHAFELDT
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 4-20-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN COOKLE

WEATHER	AM	<u>CLDY</u>	PM	<u>CLDY</u>
TEMP DEG F	HI	<u>60</u>	LO	<u>40</u>
WIND	AM	<u>E10</u>	PM	<u>E20</u>
PRECIPITATION	AM	<u>-</u>	PM	<u>-</u>

PLACED OVER	DC420SE66APA			DIMENSIONS L X W = SF / S = SY
PANEL NO.	ROLL NO.	LENGTH (L)	WIDTH (W)	
419	LOT #			
424	H 2074			
420	2126			
	2136			
	2156			
	2162			
		191	65.5 =	12510.5(SF) = 1390 (SY'S)
		133	53 =	7049 (SF) = 783.2 (SY'S)
		95.5	39 =	3724.5(SF) = 413.8 (SY'S)
	△ + 2	73.2	85.0 =	3111 (SF) = 345.6 SY'S
	△ + 2	202.6	32.5 =	3292.2(SF) = 365.8 SY'S
		420	28.9 =	12138.0(SF) = 1348.6 SY'S
		222	26.8 =	5949.6 (SF) = 661.0 SY'S
TODAY'S (SY'S) =		1390		
		783.2		
		413.8		
		345.6		
		365.8		
		1348.6		
		661		
TOTAL =		5308	(SY'S)	

COMMENTS:

SMOOTH BLANKET #148

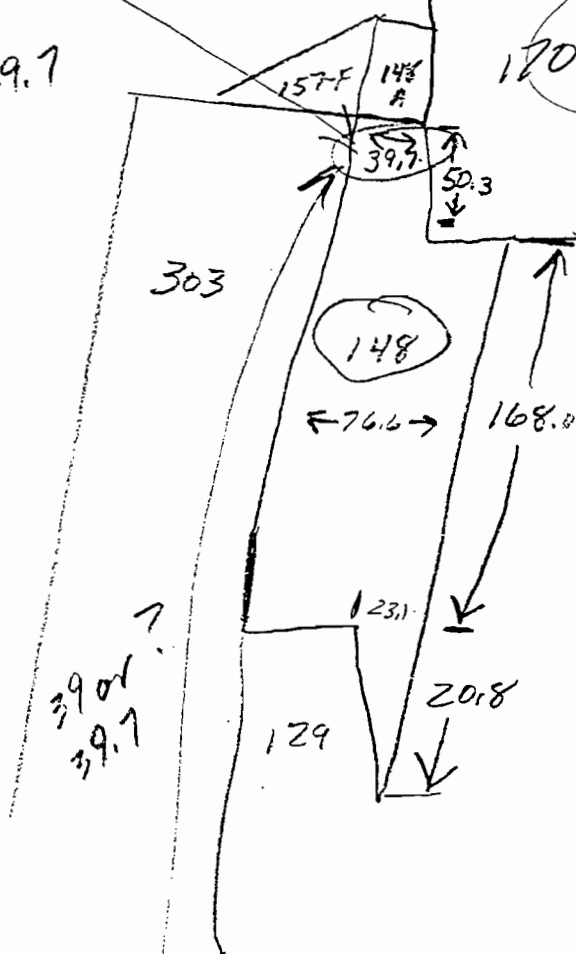
$$23.1 \times 20.8 = 480.4 (SF) \frac{1}{2} = 240.2 (SY's)$$

$$76.6 \times 168.0 = 12868.8 (SF) = 1429.8 (SY's)$$

$$37.9 \times 50.3 = 1906.3 (SF) = 211.8 (SY's)$$

$$? \text{ Total SY's} = 1694.9 (SY's) \text{ OR } 1695.0$$

37.9 or 39.7



Blanket #148 A

$$28.7 \times 39 = 1119.3 (SF) = 124.3 (SY's)$$

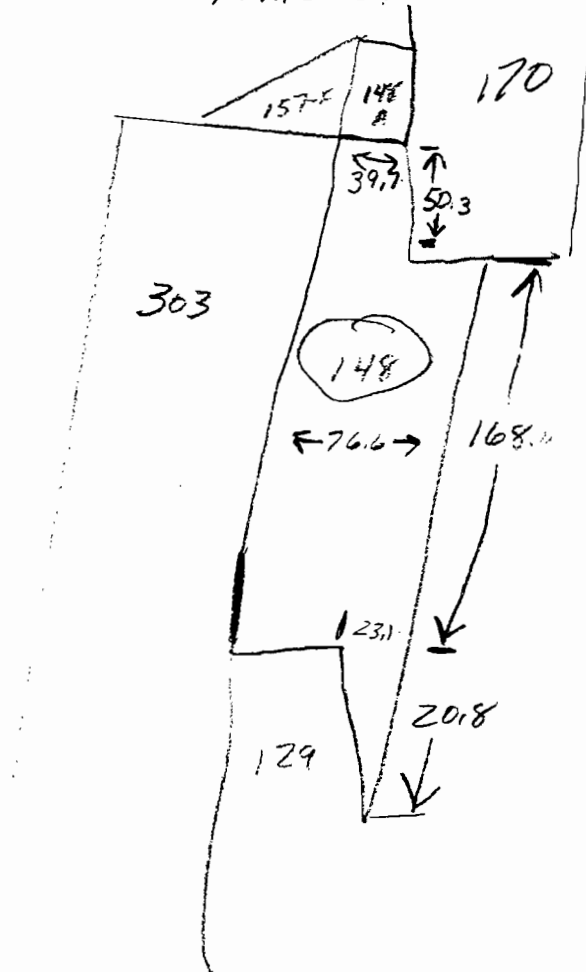
$$7.6 \times 21.5 = 163.4 (SF) = 18.1 (SY's)$$

$$\text{Total SY's} = 142.4 (SY's)$$

SMOOTH BLANKET # 148

$$\begin{array}{rcl}
 \triangle \div 2 \begin{array}{c} W \\ 23.1 \end{array} \times \begin{array}{c} L \\ 20.8 \end{array} & = & 240.2 \text{ (SF)} = 26.6 \text{ (SY's)} \\
 76.6 \times 168.2 & = & 12868.2 \text{ (SF)} = 1429.8 \text{ (SY's)} \\
 39.7 \times 50.3 & = & 1996.9 \text{ (SF)} = 221.8 \text{ (SY's)} \\
 \text{Total SY's} & = & \underline{1678.2 \text{ (SY's)}}
 \end{array}$$

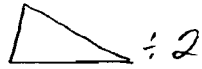
1678.2



Blanket # 148 A

$$\begin{array}{rcl}
 \begin{array}{c} W \\ 28.7 \end{array} \times \begin{array}{c} L \\ 39.7 \end{array} & = & 1139.3 \text{ (SF)} = 126.5 \text{ (SY's)} \\
 7.6 \times 21.5 & = & 165.4 \text{ (SF)} = 18.1 \text{ (SY's)} \\
 \text{Total SF's} & = & \underline{144.6 \text{ (SY's)}}
 \end{array}$$

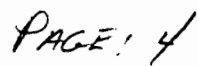
SMOOTH PVC BLANKET 157-F



W L

$$25.3 \times 95 = 1201.7 \text{ (SF)} = 133.5 \text{ (SY'S)}$$

RIVERSO
PROPERTY



Inspector's signature
30E SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

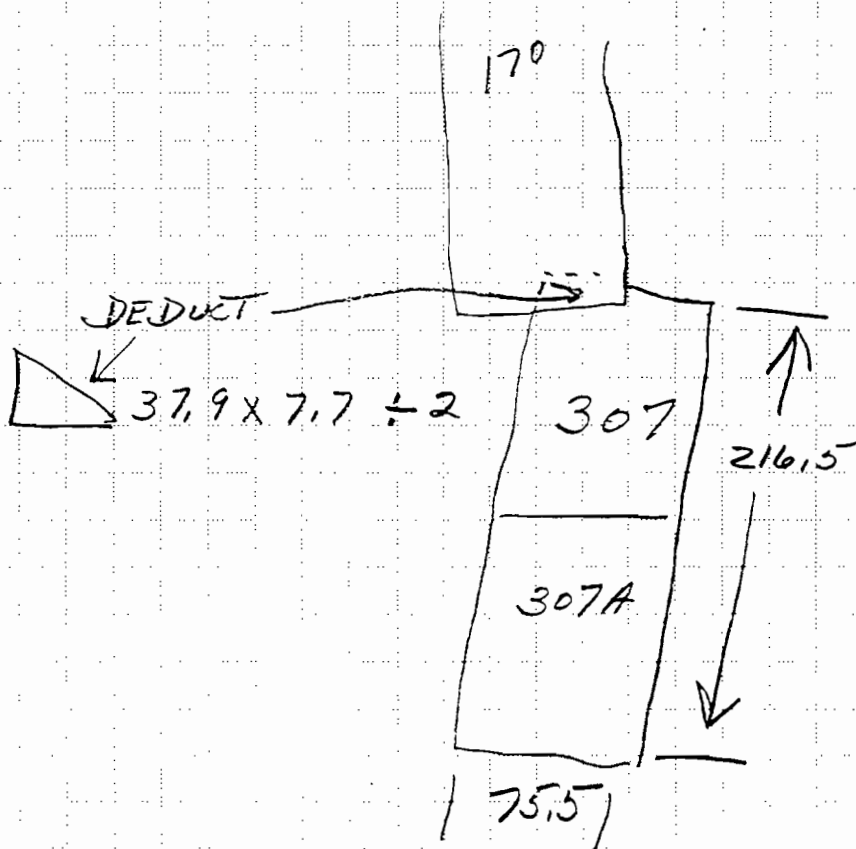
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

^{II}
BLANKET 307-307A



$$\begin{array}{rcl}
 W & L & \\
 75.5 & \times & 216.5 = 16345.7 \text{ (SF)} = 1816.1 \text{ (YD}^2\text{)} \\
 37.9 & \times & 7.7 = 145.9 \text{ (SF)} = 16.2 \text{ (YD}^2\text{)} \\
 & & \boxed{1799.9 \text{ (YD}^2\text{)}}
 \end{array}$$

PAGE: 3

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

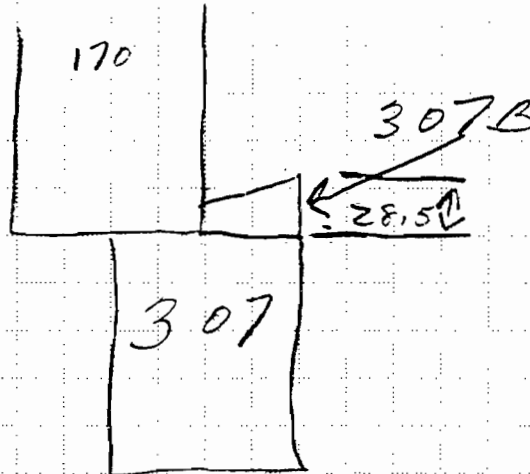
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET #307B



$$\begin{array}{l}
 \text{W} \\
 9.4 \\
 16.3
 \end{array}
 \left. \vphantom{\begin{array}{l} \text{W} \\ 9.4 \\ 16.3 \end{array}} \right\} \text{AVE} = \frac{\text{W}}{2} = 12.8 \times \frac{\text{L}}{2} = 28.5 = 364.8 (\text{SF}) = \boxed{40.5 (\text{YD}^2)}$$

PAGE: 4

S M T W (TH) F S

'רב No: 03228-018-001-0003-00

Date: 4-23-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 590

Contractor: Ogden Remedial Services Corporation

Weather		High	Low
OVER AM	RAIN PM	66°	46'

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF 602. FABRIC OVER THE SUBGRADE THEN HAND
SEWED TOGETHER EAST OF BLANKETS #129-138 TO THE FENCE LINE AT
CHANNEL #12.

MIKE JIANG (OGDEN REF.) AND MYSELF MEASURED THE MID FLAP AT ARER
FG.

MIKE DIANA AND MYSELF ALSO MEASURED BLANKETS # 158- 157 B AND 130 B IN AREA H8 AND AREA G8 FOR 130B

A DESTRUCTIVE TEST WAS DONE ON SEAM # 303 AND 157 F AND THE RESULTS ARE ON PAGE : 4

Start/finish time: 7:00 / 4:00

Page 1 of 4 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

MID FLAP: EAST OF DIKE #3 AREA: F6 (4) MEASUREMENTS

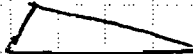
$$\begin{aligned}
 38.4 \times 26.2 &= 1006.0 \text{ (SF)} = 111.7 \text{ (SY'S)} \\
 70.1 \times 26.8 &= 1878.6 \text{ (SF)} = 208.7 \text{ (SY'S)} \\
 35.6 \times 26.6 &= 946.9 \text{ (SF)} = 105.2 \text{ (SY'S)} \\
 77.5 \times 23.3 &= 1805.7 \text{ (SF)} = 200.6 \text{ (SY'S)} \\
 \text{TOTAL in AREA F6} &= \boxed{626.2} \text{ (SY'S)}
 \end{aligned}$$

BLANKET # 158

$$\begin{aligned}
 170.7 \times 76.3 &= 13024.4 \text{ (SF)} = 1447.1 \\
 43 \times 11 &= 473.0 \text{ (SF)} = 52.5 \\
 &= \boxed{1394.6}
 \end{aligned}$$

BLANKET # 157 B

$$17.6 \times 20.3 = 357.2 \text{ (SF)} = 39.6 \text{ OR } \boxed{40.0 \text{ (SY'S)}}$$

BLANKET # 130 B  ÷ 2

$$46 \times 16 = 368 \text{ (SF)} = 40.8 \text{ OR } \boxed{41.0 \text{ (SY'S)}}$$

PAGE: 2

LIV
TIED
AND

☐ Trial Seam Sample Log

4-23-88
De Schuyvel
Q.A. SIKU

PAGE: 4

S M T W TH **F** S

Job No: 03228-018-001-0003-00

Date: 4-24-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 591

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLR PM AM	76°	42°

Description of work performed and inspected

[illegible]

Remarks: THE SUBGRADE $\approx 75'$ FT NORTHEAST OF GE-48 HAD A AREA OF 10' FT X 20' FT WITH A PONDING EFFECT, SO LABORERS CUT OPEN 602. FABRIC AND (2) TRUCK LOADS OF STRUCTURAL FILL UNLOADED, DOZER PUSH AND BACK BLADE FOR LEVEL AND ROLLER USED FOR COMPACTION, FINISHED GRADE WAS ACCEPTABLE. LABORERS THEN RESTITCHED THE 602. FABRIC OVER THE SUBGRADE. THERE WAS BOTH EMBOSSED AND SMOOTH PVC BLANKET DEPLOYMENT TODAY NORTH OF GE-48, ON AND OVER CHANNEL #1 AND TIED-IN ALONG THE FENCE LINE AT CHANNEL #12. THE BLANKETS PLACED ARE AS FOLLOWS: SMOOTH BLANKET #136 WHICH TIE-IN TO LFP-8 BLANKETS #138-129, SMOOTH BLANKET #310B TIED-IN TO #136, SMOOTH BLANKET 310-C TIED-IN TO #136, EMBOSSED #238A NORTHEAST TIE-IN #158 AND 307A, EMBOSSED 238B BOTH NORTH AND WEST END TIED-IN TO #307A, SMOOTH #310 PLACED EAST OF CHANNEL #1 AND TIED-IN TO 238A, EMBOSSED #421 WHICH AT NARROW POINT WAS $\approx 7'$ FT. EAST OF CHANNEL #1 NORTH END TIED-IN TO #238A AND 238B

Start/finish time:

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

SHEET 2 of 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION CONTINUED FROM PAGE : 1 TASK NO. _____

PREPARED BY _____	DEPT _____	DATE <u>4-24-98</u>	APPROVED BY _____
MATH CHECK BY _____	DEPT _____	DATE _____	_____
METHOD REV. BY _____	DEPT _____	DATE _____	DEPT _____ DATE _____

PLACEMENT OF EMBOSSED PVC LINER BLANKET #423 WAS TIED-IN TO THE SOUTH END OF #158 AND THE EXISTING LINER IN CHANNEL #12 ALONG THE FENCE LINE.

AT DAY'S END, NOT ALL SEAMS WERE WELDED

DIAGRAM OF TODAY'S BLANKET DEPLOYMENT WILL BE ON THE FOLLOWING REPORT.

BARBELLA (PIPE CONTRACTOR) HAD WELDED ON FROM THE EXISTING "10" IN RING HEADER PIPE FROM DL-4 AND ADDED ON AND ADDITIONAL 82' FT. PLUS A 2' FT. TEE.

Chavez

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

(307A)

$$75.5 \times 170.6 = 12880.3 \text{ (SF)} =$$

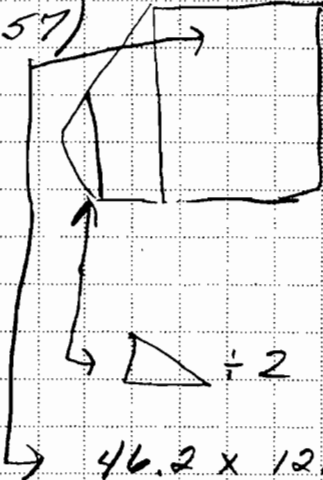
$$\text{DEDUCT } \triangle \div 2 \quad 43 \times 11 = 236.5 \text{ (SF)} =$$

$$1431.1 \text{ (SY'S)}$$

$$- 26.2 \text{ (SY'S)}$$

$$1404.9 \text{ (SY'S)}$$

(157)



$$15.4 \times 102.3 = 1575.4 \text{ (SF)} =$$

$$175.0$$

$$\triangle \div 2 \quad 78.4 \times 12.3 = 482.2 \text{ (SF)} =$$

$$53.6 \text{ (SY'S)}$$

$$46.2 \times 121.0 = 5590.2 \text{ (SF)} =$$

$$621.1 \text{ SY'S}$$

TOTAL SY'S =

$$849.7$$

157C

+

157D



$$84.4 \times 76.4 = 6448.1 \text{ (SF)} =$$

$$716.4 \text{ (SY'S)}$$

158A

+

157E



$$\text{AVE} \left[\begin{array}{l} L = 30.5 \\ 59.5 \end{array} \right] = 45$$

$$\times 72.0 = 3240 \text{ (SF)} = 360 \text{ SY'S}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

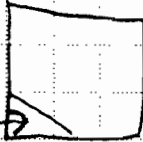
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	

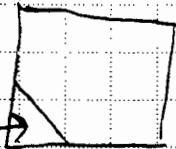
DEPT _____	DATE _____

130
+
158B



$$\text{AVE. } \left[\begin{array}{l} L = 48.4 \\ 79.4 \end{array} \right] \overset{L}{63.9} \times \overset{W}{77.2} = 4933.0 \text{ (SF)} = \boxed{548.1 \text{ (5)}} \quad \text{L}$$

130A
+
158C



$$\text{AVE. } \left[\begin{array}{l} L = 58.8 \\ 29.8 \end{array} \right] \overset{L}{44.3} \times \overset{W}{77.2} = 3419.9 \text{ (SF)} = 379.9 \quad \text{L}$$

380 (5's)

CLIENT/SUBJECT _____ W.O. NO. _____

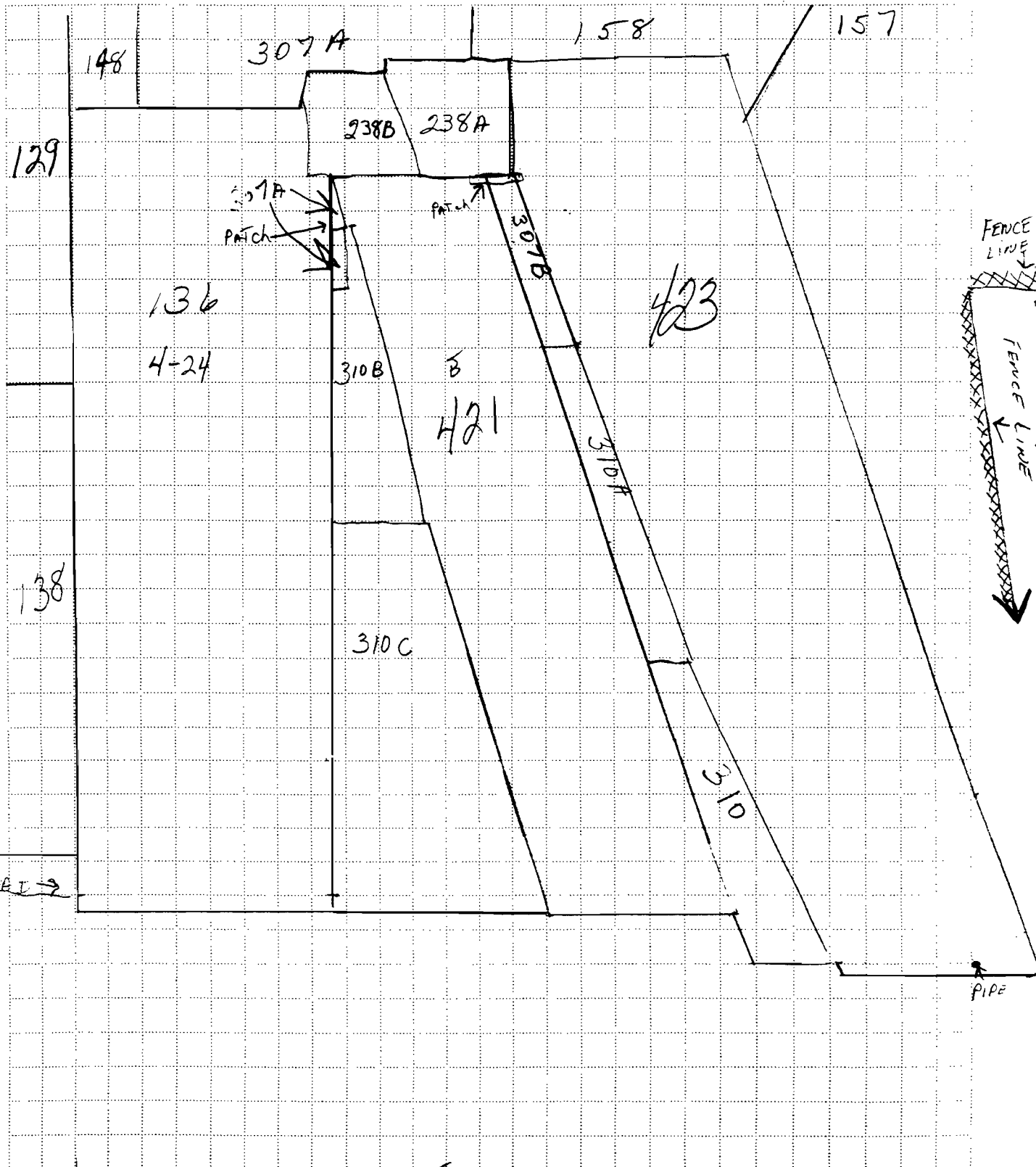
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-28-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 145

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR.	66°	36°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH 40 MIL PVC LINER IN AREA H 7		SEE PAGE 1 2 FOR DIAGRAM
	BLANKET # 136	1921 (YD2)	
	310 C	566.2 (YD2)	PAGE 1 3
	310 B + 307 A	172.5 (YD2)	FOR MATH
	310 + 310 A + 307 B	399.4 (YD2)	
22 D	EMBOSSED 40 MIL PVC LINER IN AREA H 7		
	BLANKET # 238 A + 238 B	146.1 (YD2)	SEE PAGE 1 2
	421	1333.4 (YD2)	FOR DIAGRAM
	423	1737.2 (YD2)	PAGE 1 4
			FOR MATH

Remarks: PLACEMENT OF GEONET LFP-1 FROM BLANKET #157 RUNNING EAST TO BLANKET #130A. PLACEMENT THEN HAND STICKED TOGETHER. 602. FABRIC OVER NET FROM LFP-1 BLANKET #148 TO BLANKET 157C. PLACEMENT OF GEONET AT LFP-8 FROM THE EXISTING GEONET BLANKETS # 129-138 WHICH COVERED BLANKETS # 136-307A-310B AND 310C. FINISHED AIR LANCEING EXPOSED LINER ALONG FENCE LINE SOUTH OF COMPOSITE STOCKPILE AREA, LFP-1. FOUR DESTRUCTIVE PVC TESTS WERE TAKEN AND TEST RESULTS IN FIELD WERE ACCEPTABLE.

MIKE, DIANA (OGDEN REP.) AND MYSELF MEASURED BOTH EMBOSSED AND SMOOTH BLANKETS PLACED ON FRI. 4-24-98 AT LFP-8 FROM TIE-IN BLANKETS #129-138, BLANKETS MEASURED WERE AS FOLLOWS: #136 - 238B - 238A - 307A - 310B - 310C - 421 - 307B - 310A - 310 - AND 423. DIAGRAM AND MATH ON THE FOLLOWING PAGES

Start/finish time: 7:00/5:30

Page 1 of 7 pages
s:\clarktown\fldforms\idr.xls

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

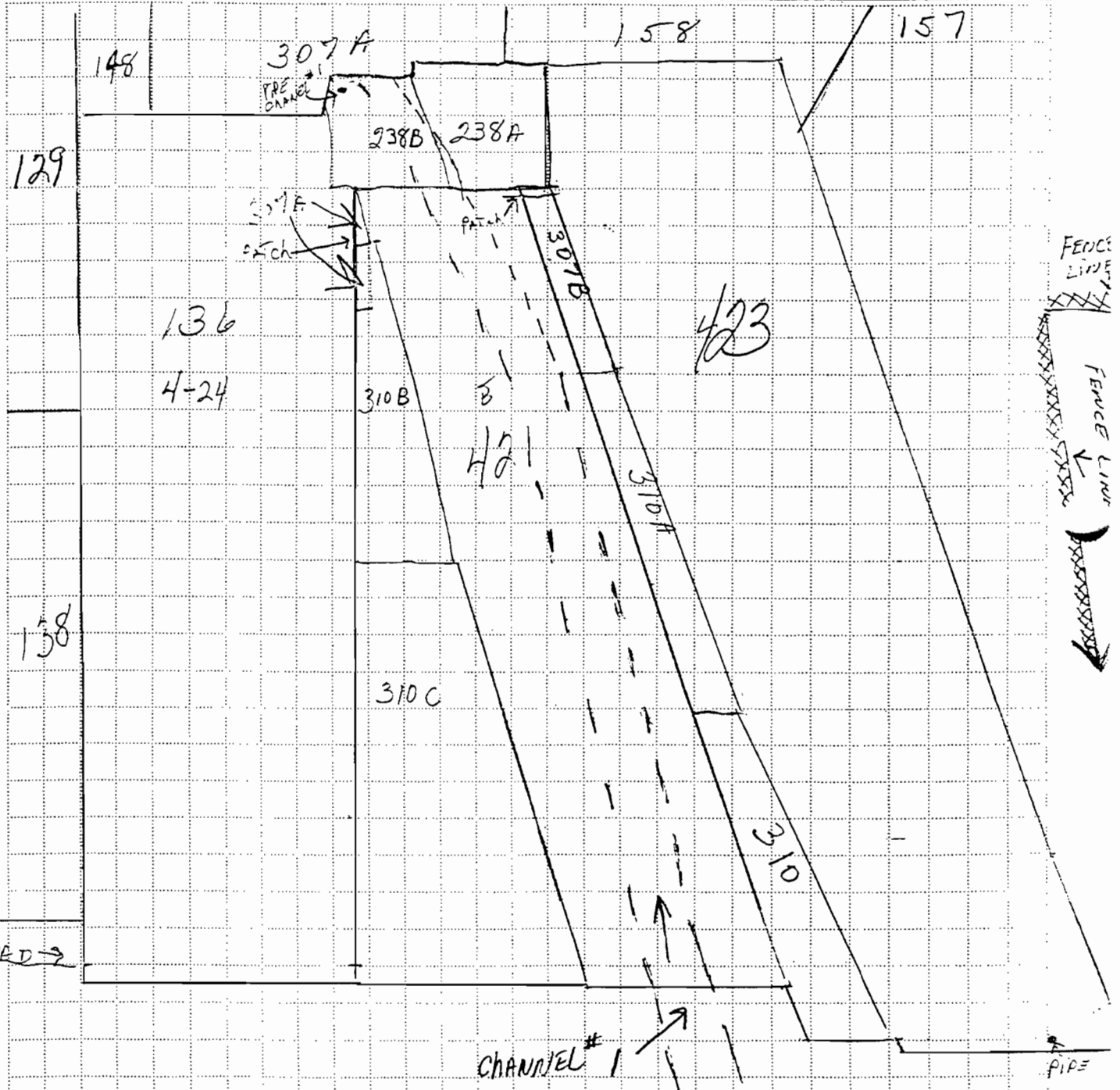
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____	
DEPT _____	DATE _____



CLIENT/SUBJECT SMOOTH BLANKETS W.O. NO.

TASK DESCRIPTION BLANKETS MEASUREMENTS FROM AREA H7 TASK NO.

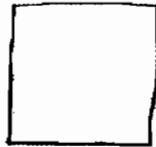
PREPARED BY DEPT DATE

MATH CHECK BY DEPT DATE

METHOD REV. BY DEPT DATE

APPROVED BY	
DEPT <u> </u>	DATE <u> </u>

SMOOTH
SMOOTH BLANKET #136



$$\begin{matrix} W & L \\ 76.5 & \times 226.0 = \end{matrix} 17289.0 (SF) =$$

1921 (YD²)

SMOOTH # 310C



$$\begin{matrix} W & L \\ 29.3 & \\ 61.0 & \end{matrix} \left. \begin{matrix} \\ \end{matrix} \right] \text{AVE. } 45.1 \times 113.0 = 5096.3 (SF) =$$

566.9 (YD²)

SMOOTH 310B + 307A



$$\begin{matrix} \triangle \div 2 & W & L \\ & 29.3 & \times 106.0 = \end{matrix} 1552.9 (SF) =$$

172.5 (YD²)

SMOOTH 310 + 310A + 307B



$$\begin{matrix} W & L \\ 21.3 & \\ 5.8 & \end{matrix} \left. \begin{matrix} \\ \end{matrix} \right] \text{AVE. } = 13.5 \times 226.3 = 3055.0 (SF) =$$

339.4 YD²

CLIENT/SUBJECT EMBOSSED BLANKETS W.O. NO.

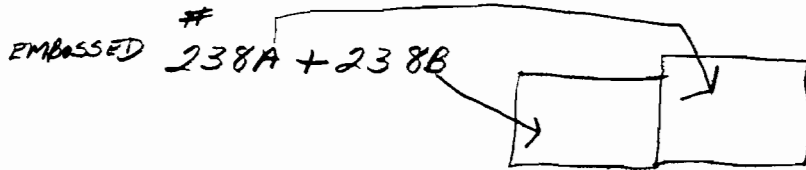
TASK DESCRIPTION BLANKETS MEASUREMENTS AREA H7 TASK NO.

PREPARED BY DEPT DATE

MATH CHECK BY DEPT DATE

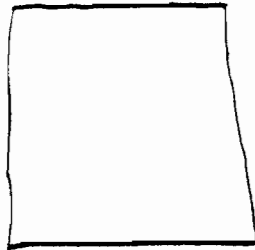
METHOD REV. BY DEPT DATE

APPROVED BY	
DEPT <u> </u>	DATE <u> </u>



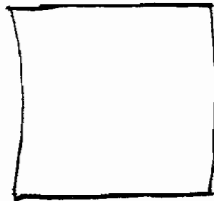
W
 $\left. \begin{array}{l} 19.2 \\ 24.2 \end{array} \right\} \text{AVE.}$ L
 $21.7 \times 60.6 = 1315.0 \text{ (SF)} = \boxed{146.1 \text{ (YD}^2\text{)}}$

EMBOSSED # 421



W
 $\left. \begin{array}{l} 50.9 \\ 53.3 \end{array} \right\} \text{AVE.}$ L
 $53.1 \times 226.0 = 12000.6 \text{ (SF)} = \boxed{1333.4 \text{ (YD}^2\text{)}}$

EMBOSSED # 423



W
 $\left. \begin{array}{l} 60.4 \\ 60.8 \end{array} \right\} \text{AVE}$ L
 $60.6 \times 258.0 = 15634.8 \text{ (SF)} = \boxed{1737.2 \text{ YD}^2}$

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINEKS, INC. JOB NO:1818

Date: 4-28-78

☐	Trial Seam Sample Log
☒	Destructive Seam Log

Q.A. SIGN

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

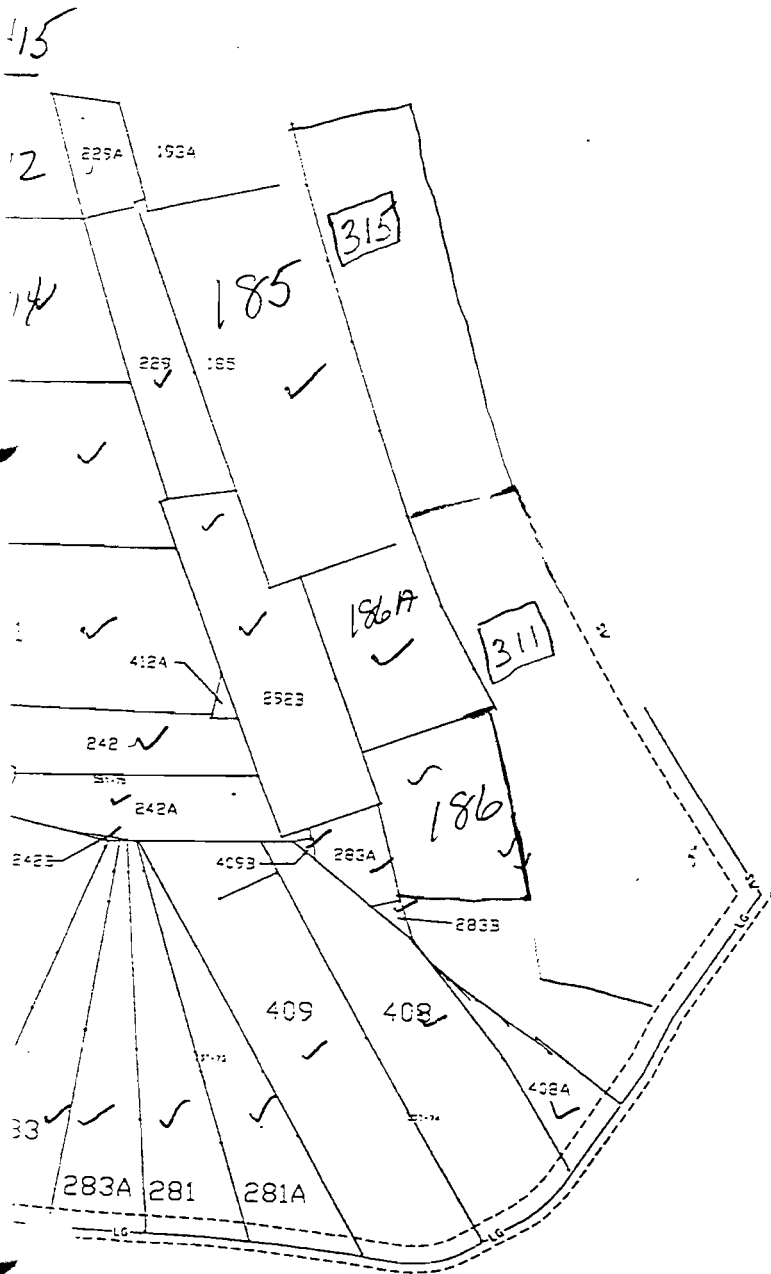
DATE: 4-28-98
INSPECTOR: Joe Schofield
LINER TECHNICIAN: John Cokie

WEATHER	AM	<u>CLR</u>	PM	<u>CLR</u>
TEMP DEG F	HI	<u>66</u>	LO	<u>36</u>
WIND	AM	<u>< 10</u>	PM	<u>< 10</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS: MEASUREMENTS ARE THE SAME AS LINER

Inspector's signature
JOE SCHOFIELD
Inspector's name



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 4-30-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 597

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
OVER	OVER	74° 57°

Description of work performed and inspected

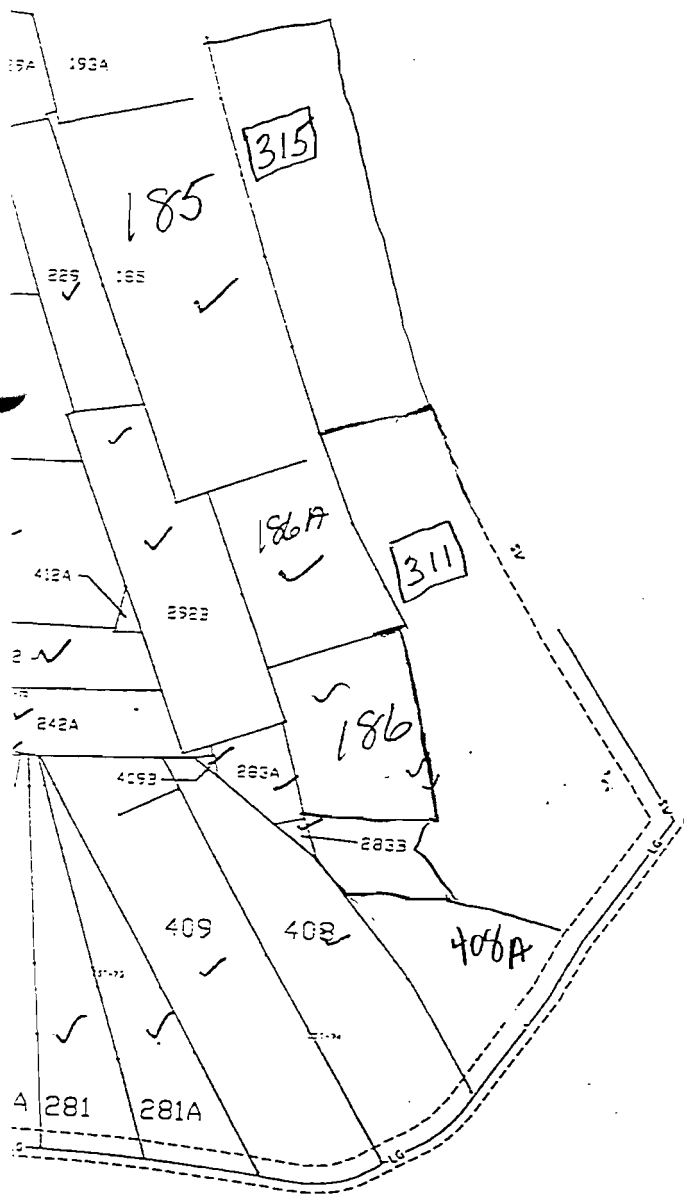
ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH 40 MIL. PVC LINER FOR MID FLAP, EAST OF DIKE #4 AREA F5		
	W L 28.2 X 147.5 = 4159.5 (SF) =	462.1 (YD ²)	
24 B	DRAINAGE COMPOSITE FOR MID FLAP AT SAID AREA	462.1 (YD ²)	
23 A	60Z. NON WOVEN GEOTEXTILE MID FLAP AT SAID AREA		
	W L 8 X 147.5 = 1180 (SF) =	131.1 (YD ²)	

Remarks: LABORERS PLACED GEO COMPOSITE OVER PVC LINER INTO THE EXISTING COMPOSITE AT THE MID FLAP IN AREA F6. THEN STICHED TOGETHER. AFTER GEO COMPOSITE WAS STICHED A 8' FT. WIDE 60Z. FABRIC WAS HAND STICHED FROM EXISTING COMPOSITE FOR COVER SYSTEM OVER DRAINAGE AGGREGATE.
MID FLAP EAST OF DIKE #4 AREA F-5 LABORERS PATCHED (2) HOLES WHICH WAS DONE DURING EXCAVATION THEN AIR LANCED REPAIRS.
COMPOSITE WAS THEN PLACED OVER PVC SMOOTH LINER AND TIED-IN TO THE EXISTING LINER THEN HAND STICHED TOGETHER THEN A 8' FT WIDE 60Z. FABRIC WAS STICHED AT ONE END TO THE EXISTING COMPOSITE FOR COVER SYSTEM OVER DRAINAGE AGGREGATE.
MIKE, DIANA AND MYSELF MEASURED SAID AREA MID FLAP EAST OF DIKE #4
PREP WORK FOR RECONSILATION

Start/finish time: 7:00 / 4:30

Joe Schafeld
Inspector's signature
JOE SCHAFELD
Inspector's name

Inspector's signature
Joe Schmitt
Inspector's name



LFP-4

CLIENT/SUBJECT Blankets Placed 4-20-98 W.O. NO. _____

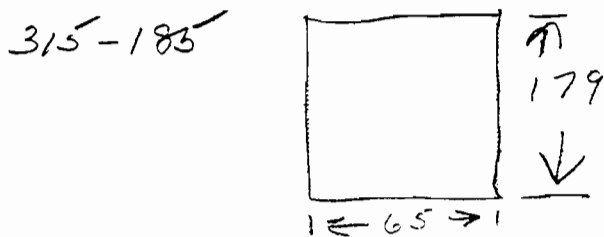
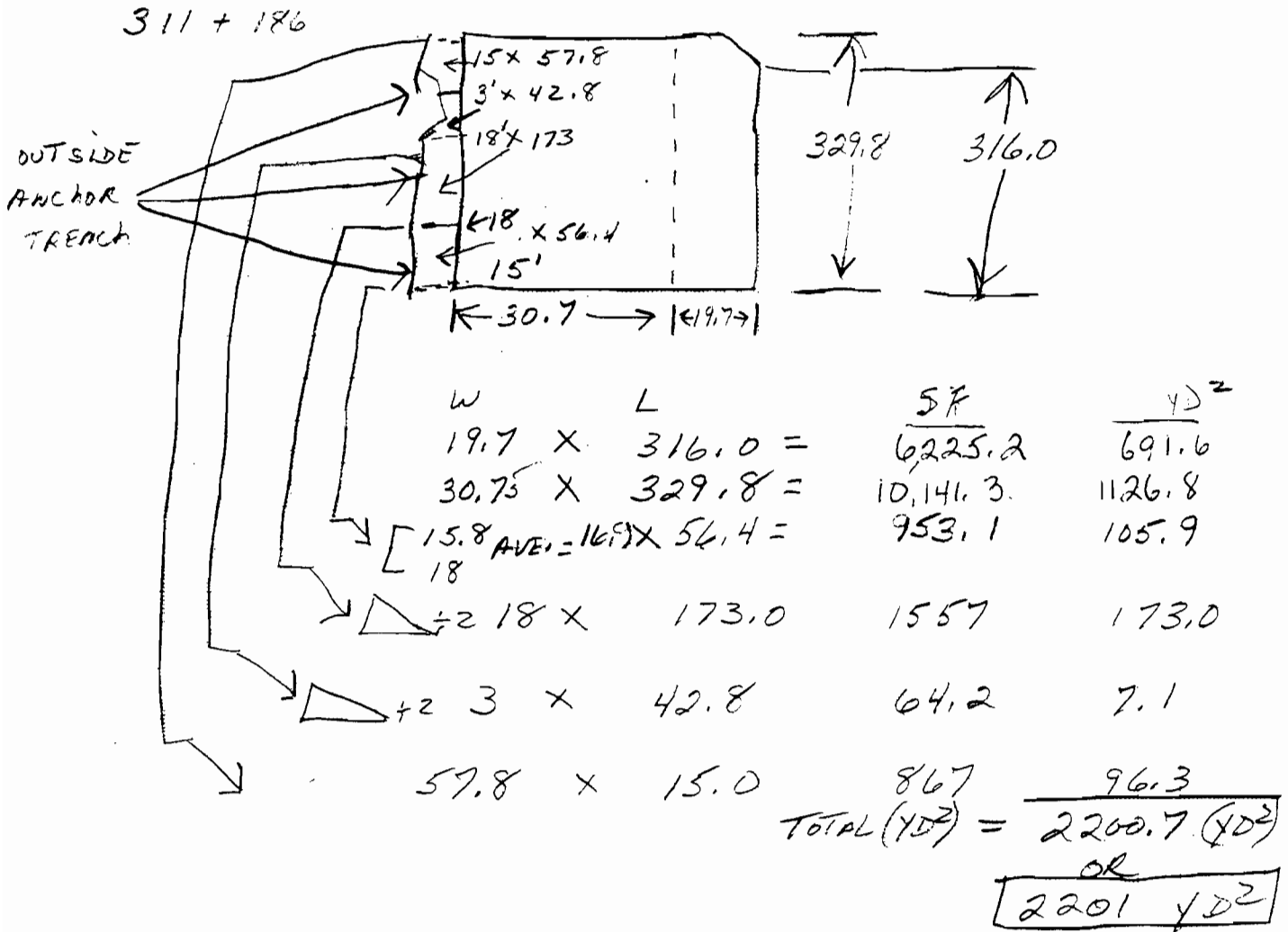
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



$$W \quad L$$

$$65 \times 179 = 11,625 \text{ (SF)} = 1,275 \text{ YD}^2 \text{ OR } 1,275 \text{ YD}^2$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-1-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRAVE MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 58°		PM 65°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-03

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-1-98
INSPECTOR: Joe Schofield
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM <u>OVER</u>	PM <u>OVER</u>
TEMP DEG F	H <u>65</u>	L <u>58</u>
WIND	AM <u>< 10</u>	PM <u>< 10</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

[illegible]

COMMENTS:

TOWN OF CLARKSTON, WEST NYACK, NEW YORK

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 5-4-78

☐ Trial Seam Sample Log
☒ Destructive Seam Log

115-5131
FPO - 26445

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-4-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: John CUCKIE

WEATHER	AM	<u>CLDY</u>	PM	<u>OVER</u>
TEMP DEG F	HI	<u>65°</u>	LO	<u>51°</u>
WIND	AM	<u><10</u>	PM	<u><10</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS: COMPOSITE IS SAME AS BLANKETS (1.2)

Inspector's signature
Joe Schafelt
Inspector's name

— 25 —

S M T W TH F S

Date: 5-6-98

IDR #: 603

Weather		High	Low
OVER	OVER	70°	55°

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH 40 MIL. PVC LINER USED FOR TOP FLAP AND MID FLAP.		MATH ON PAGE 12
	TOP FLAP ABOVE DIKE #3 BETWEEN GE 51 - GE 50	301.3 (YD ²)	
	MID FLAP SOUTH OF GE-47	369.0 (YD ²)	↓
24 A	DRAINAGE COMPOSITE TOP FLAP	301.3 (YD ²)	SAME AS LINER
	MID FLAP	369.0 (YD ²)	PLACEMENT

Remarks: PLACEMENT TIE THEN HAND STICKED GEO COMPOSITE OVER PVC
SMOOTH BLANKETS USED FOR FLAPS ABOVE DIKE #3 BETWEEN GE-51
AND GE 50. ALSO GEO COMPOSITE PLACEMENT FOR MID FLAP
SOUTH OF GE 47

Inspector's signature
JOE SCHOFIELD
Inspector's name

Page 1 of 2 pages

s:\clarktwn\fldforms\ldr.xls

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

TOP FLAP ABOVE DIKE #3 BETWEEN GE 51 - GE 50

$$\begin{array}{r} W \quad L \\ 20.2 \times 85 = 1717 \text{ (SF)} = 190.7 \text{ (YD}^2\text{)} \\ + \end{array}$$

$$\begin{array}{r} W \quad W \quad L \\ 14 \quad] \quad \text{AVE.} = 15.2 \times 65.5 = 995.6 \text{ (SF)} = 110.6 \text{ (YD}^2\text{)} \\ 16.4 \quad] \end{array}$$

TOTAL = 301.3 (YD²)

MID FLAP SOUTH OF GE 47

$$\begin{array}{r} W \quad W \quad L \\ 22.6 \quad] \quad \text{AVE.} = 20.8 \times 159.7 = 3321.76 \text{ (SF)} = 369.0 \text{ (YD}^2\text{)} \\ 19.0 \quad] \end{array}$$

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W (TH) F S

Date: 5-7-98

IDR #: 604

Contractor: Ogden Remedial Services Corporation

Weather		High	Low
OVER	1 CLDY	71°	58°
AM	PM		

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH 40 MIL. PVC LINER FOR FLAPS EAST OF DIKE #3 TO GE 50	261.1 (YD ²)	MATH FOR TODAY'S MEASUREMENTS ON PAGE: 2
24 B	DRAINAGE COMPOSIT OVER LINER FOR FLAPS EAST OF DIKE #3 TO GE 50	261.1 (YD ²)	SAME AS LINER
	DRAINAGE COMPOSITE NORTH OF FLARE STATION AND NORTH OF GE 48	3415.2 (YD ²)	

Remarks:

Remarks: PLACEMENT OF SMOOTH PVC LINER FOR MIDFLAP EAST OF
DIKE #3 TO GE 50 THEN DRAINAGE COMPOSITE OVER LINER.

MIKE DIANA (OGDEN REP.) AND MYSELF MEASURED MID FLAP AT
SAND AREA.

MIKE DIANA AND MYSELF ALSO MEASURED DRAINAGE COMPOSITE
NORTH OF FLARE STATION AND NORTH OF GE 48

Start/finish time: 7:00/4:30

Page 1 of 2 pages

s:\clarktwn\fldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT 5-7-98 W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

(22E)

SMOOTH 40 MIL LINER

FOR FLAPS EAST OF DIKE #3 GE 50

$$\begin{array}{c} W \\ 23.5 \end{array} \times \begin{array}{c} L \\ 100 \end{array} = 2350 \text{ (SF)} = \text{TOTAL} = \boxed{261.1 \text{ YD}^2}$$

(24B) DRAINAGE COMPOSITE SAME AS LINER $\boxed{261.1 \text{ YD}^2}$
FOR FLAPS EAST OF DIKE #3 GE 50

(24B)

DRAINAGE COMPOSITE NORTH OF FLARE STATION
AND NORTH OF GE 48

$$\begin{array}{c} W \\ 52.7 \\ 62.4 \end{array} \left[\begin{array}{c} W \\ \text{AVE.} = 57.5 \end{array} \right] \times \begin{array}{c} L \\ 121.3 \end{array} = 6974.75 \text{ (SF)} = 774.9 \text{ (YD}^2)$$

$$\begin{array}{c} W \\ 129.0 \\ 138.0 \end{array} \left[\begin{array}{c} W \\ \text{AVE.} = 133.5 \end{array} \right] \times \begin{array}{c} L \\ 178.0 \end{array} = 23763.0 \text{ (SF)} = 2640.3 \text{ (YD}^2)$$

TOTAL =

$$\boxed{3415.2 \text{ YD}^2}$$

PAGE: 2

Project: Remediation of Clarkstown Landfill and Landfill Capping

S (M) T W TH F S

Date: 5-11-98

IDR #: 608

Weather	High	Low
OVER / OVER	33°	50°

[illegible]

Remarks: BECAUSE OF CONTINUOUS RAIN SINCE FRI. 5-8-98 ALL
THE SUBGRADE FOR ANY LINER WORK WAS TOO WET. THE LINER
CREW WENT HOME.

Start/finish time: 7:00 / 3:30

Page of pages
s:\clarktwn\fidforms\ldr.xls

Inspector's signature
Joe Schindler
Inspector's name

Inspector's signature
Inspector's name

Inspector's signature
JOE SCHOFIELD

Inspector's signature
JOE SCHOFIELD
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 5/13/98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 610

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
Clear	73°	42°

Description of work performed and inspected

[illegible]

Remarks: One of the Backhoes and a laborer completed backfill of a drainage trench, which was opened up on 5/8 to help drainage in the eastern culvert of LFP 9. The backhoe and laborer also helped the FEL clear the adjacent pavement area of any previously excavated preparatory grade material.

Equipment & Labor Record

[illegible]

Start/finish time: 7:00 / 3:30

Grind Cattle.

Inspector's signature

Eric T. C. Faldi

Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

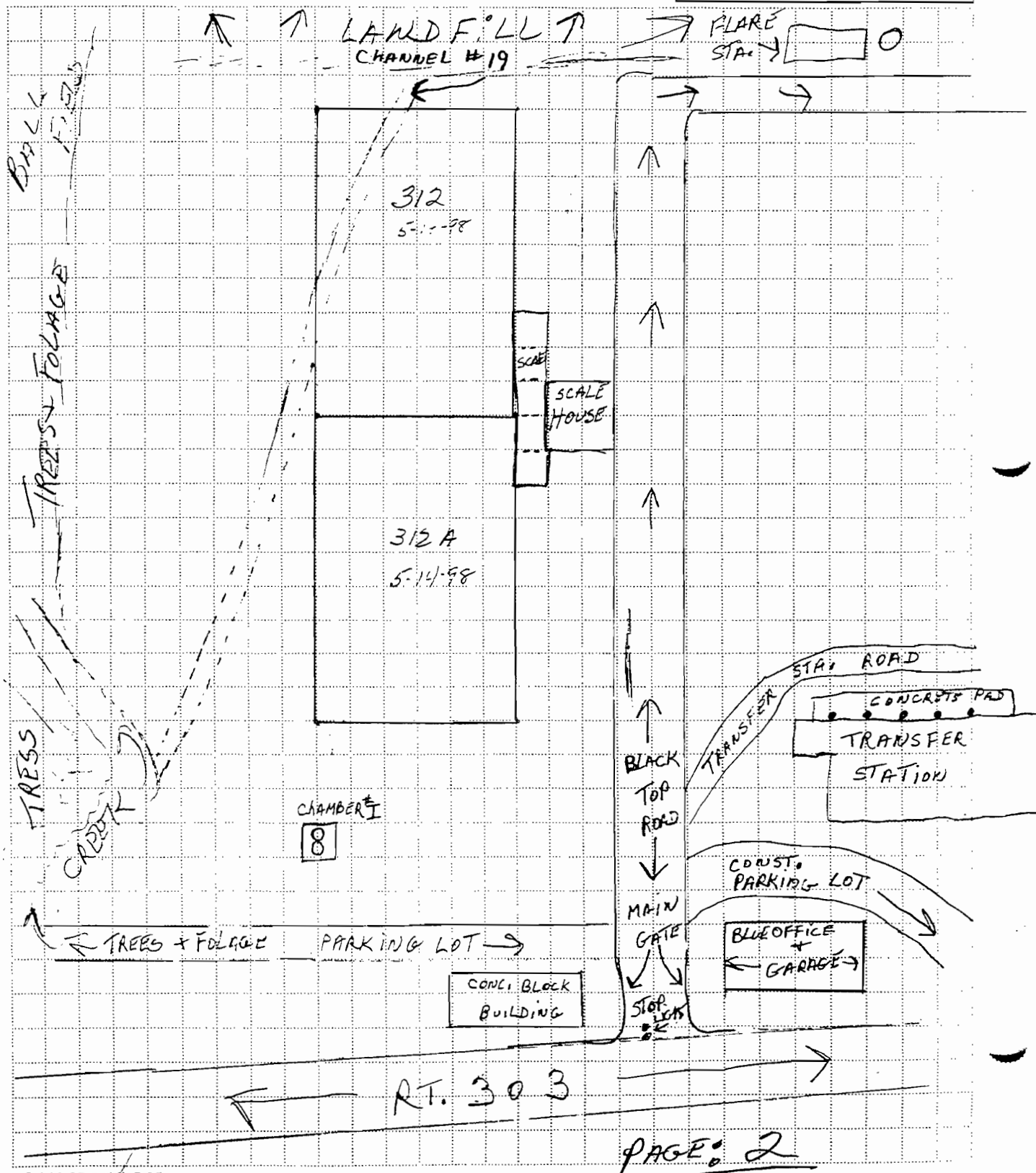
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-14-98
INSPECTOR: JOE SchoFIELD
LINER TECHNICIAN: John Cuckie

WEATHER	AM	<u>CLR.</u>	PM	<u>CLR.</u>
TEMP DEG F	HI	<u>80</u>	LO	<u>41</u>
WIND	AM	<u>L10</u>	PM	<u>L10</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS: 602 FARRIE WILL BE ACCOUNTED FOR PVC
BLANKET L X W = 402

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 5-15-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 612

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
LLR / CLR	86°	41°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL. PVC LINER LFP-5		SEE PAGE: (2) DIAGRAM
	BLANKETS# 312-312A AND 315A	2712.6 (YD ²)	PAGE: 3 MATH
	BLANKET # 315B	83.3 (YD ²)	
23A	602. NON WOVEN GEOTEXTILE TYPE III AREA (2) LAYERS LFP-5		TYPE III AREA (2) LAYERS WHICH SANDWICH PVC BLANKETS
	BLANKETS# 312-312A AND 315A	5425.2 (YD ²)	
	BLANKET # 315B	166.6 (YD ²)	
24A	DRAINAGE NET TYPE III AREA LFP-5		↓
	BLANKETS# 312-312A AND 315A	5425.2 (YD ²)	
	BLANKET # 315B	166.6 (YD ²)	

Remarks: PLACEMENT OF PVC LINER BLANKETS #315A TIED-IN EAST END OF #312A - BLANKET #315B TIED-IN WEST END OF #312 AND INTO THE ANCHOR TRENCH - BLANKET #314A TIED-IN THE SOUTH END OF #315B AND #312 AND BLANKET #314 TIED-IN THE SOUTH END OF 312A. AIR LABELED SEAMS (315B-312) (312-312A) AND (312A-315A). MIKE DIANA AND MYSELF MEASURED BLANKETS #312-312A-315A AND 315B. PLACEMENT OF GEONET OVER PVC BLANKETS #315B-312-312A AND 315A, THEN PLACEMENT WITH HAND STITCHING AT THE SEAMS 602. FABRIC OVER THE GEONET. THIS AREA IS TYPE III SPECIFICATIONS WHERE AS THE PVC LINER IS SANDWICH BETWEEN BOTH 602. FABRIC AND GEONET FOR A TOTAL OF (2) LAYERS. DIAGRAM AND MATH FOR TODAY'S MEASURED BLANKETS AT THE SCALE HOUSE ARE ON PAGE: (2) AND (3).

Start/finish time: 7:00 / 4:30

Page 1 of 5 pages
s:\clarktown\fldforms\idr.xls

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

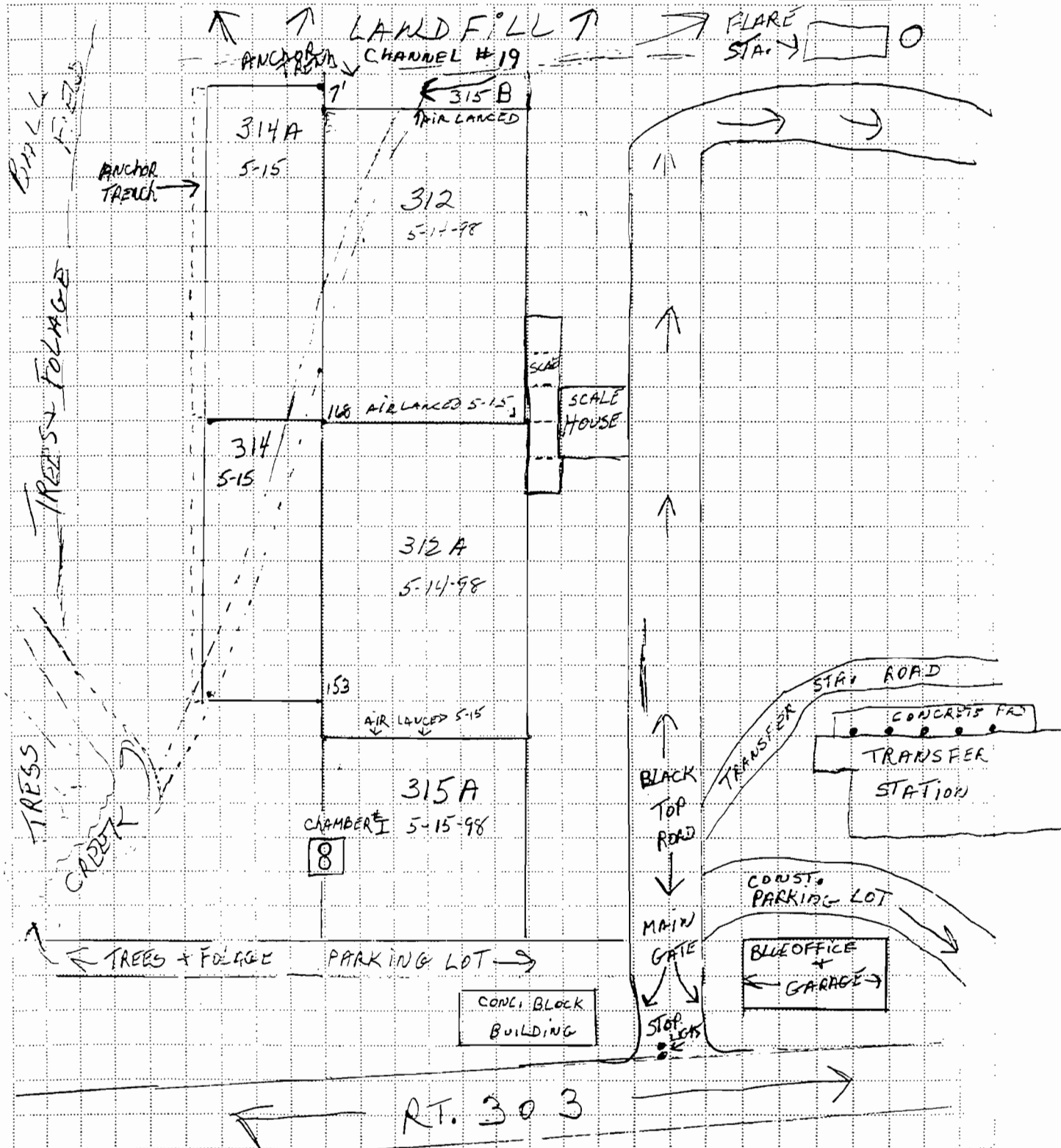
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____



PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

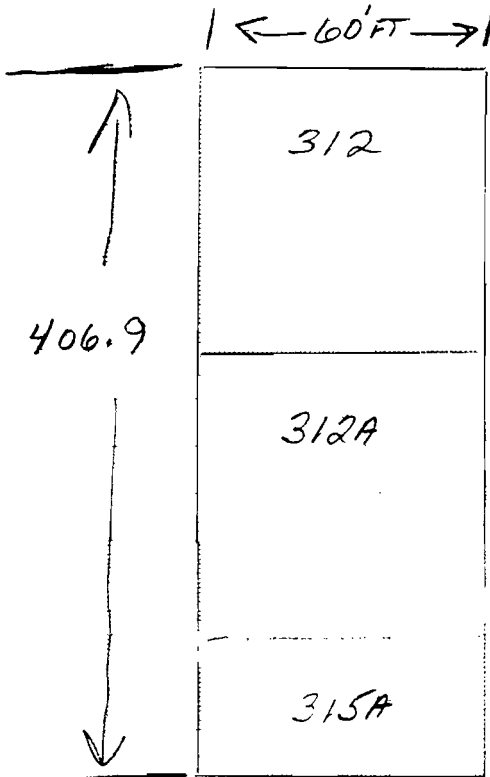
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKETS # 312 - 312A AND 315A

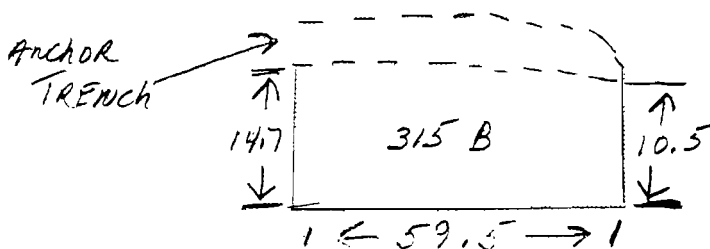


$$W \quad L$$

$$60 \times 406.9 = 24,414 \text{ (SF)} = 2712.6 \text{ (YD}^2\text{)}$$

2712.6 YD^2

BLANKET # 315 B



$$\begin{matrix} L \\ 10.5 \\ 14.7 \end{matrix} \left. \vphantom{\begin{matrix} L \\ 10.5 \\ 14.7 \end{matrix}} \right\} \text{AVE.} = 12.6$$

$$L \quad \times \quad W$$

$$12.6 \times 59.5 = 749.7 \text{ (SF)} = \boxed{83.3 \text{ (YD}^2\text{)}}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-15-98

INSPECTOR: JOE SCHOFIELD

LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 41°		PM 86°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

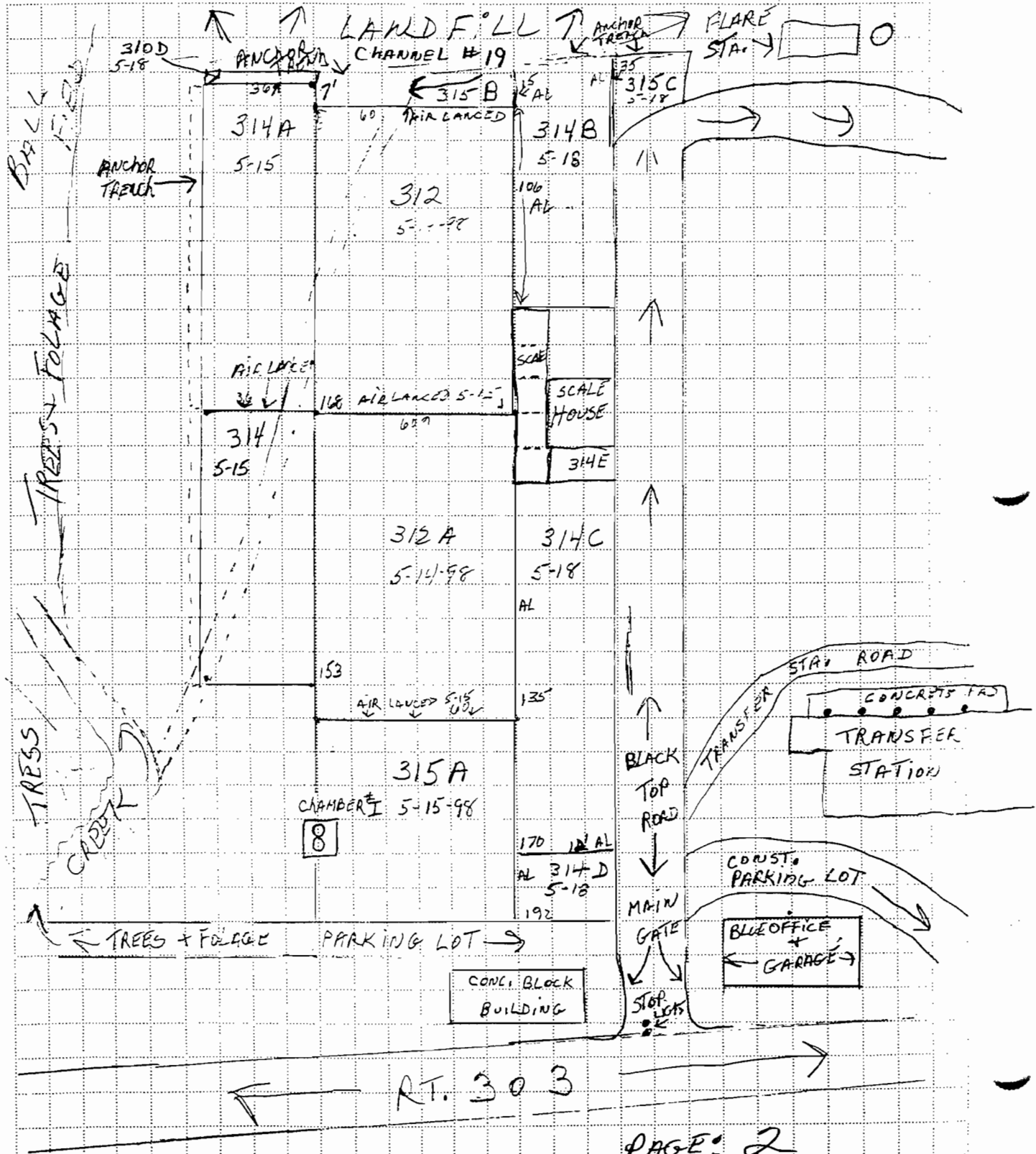
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MATH FOR (YD²) SCALE HOUSE TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

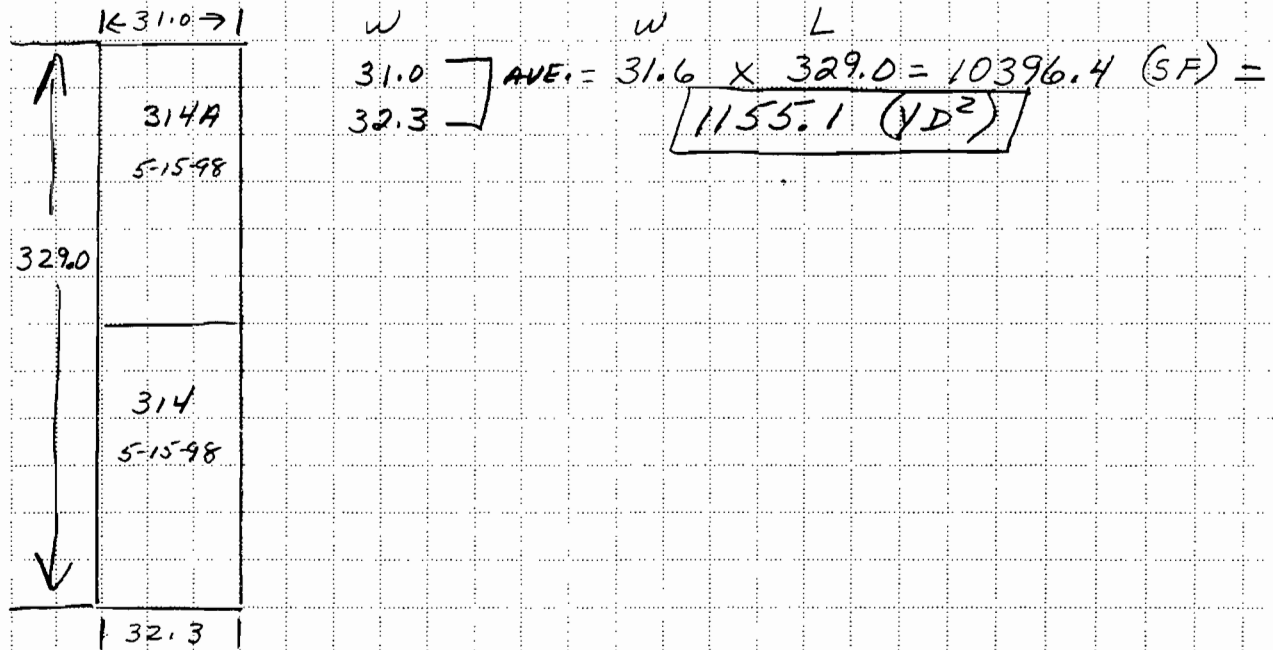
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

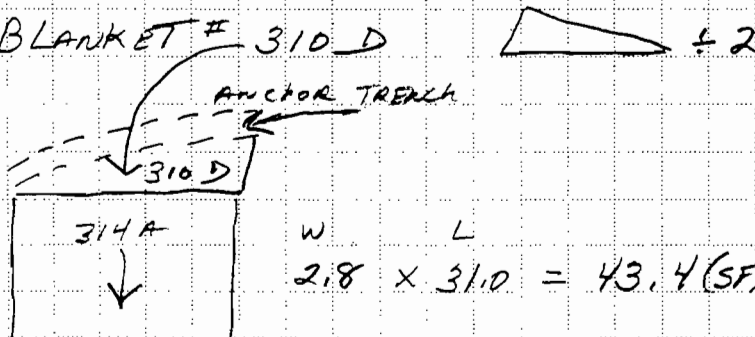
APPROVED BY	

DEPT _____	DATE _____

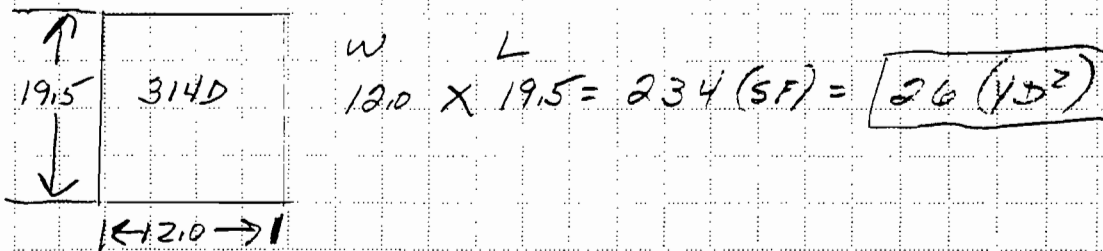
BLANKET # 314A + 314



BLANKET # 310D



BLANKET # 314D



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MATH FOR (16) FOR SCALE HOUSE TASK NO. _____

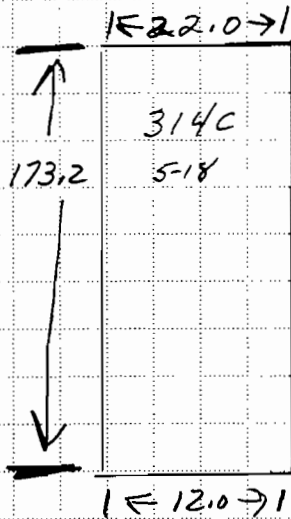
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

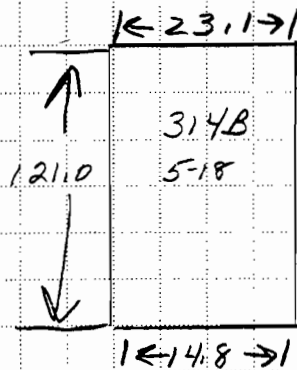
APPROVED BY	
DEPT _____	DATE _____

BLANKET # 314C



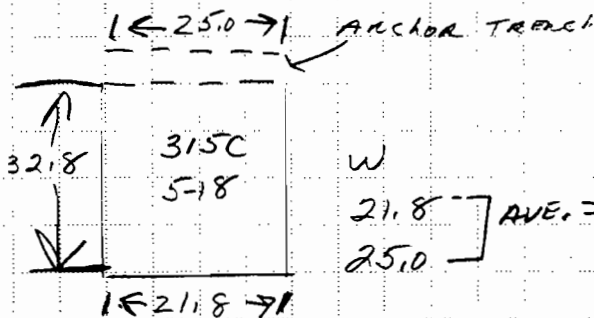
$$\begin{array}{l} W \\ 12.0 \\ 22.0 \end{array} \left[\begin{array}{l} W \\ L \\ AVE. = 17 \times 173.2 = 2944.4(SF) = \boxed{327.1 YD^2} \end{array} \right.$$

BLANKET # 314B



$$\begin{array}{l} W \\ 14.8 \\ 23.1 \end{array} \left[\begin{array}{l} W \\ L \\ AVE. = 18.9 \times 121.0 = 2286.9(SF) = \boxed{254.1 YD^2} \end{array} \right.$$

BLANKET # 315C



$$\begin{array}{l} W \\ 21.8 \\ 25.0 \end{array} \left[\begin{array}{l} W \\ L \\ AVE. = 23.4 \times 32.8 = 767.5(SF) = \boxed{85.2 YD^2} \end{array} \right.$$

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 5-19-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 616

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR.	90°	56°

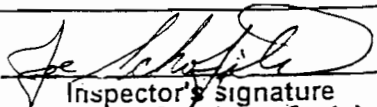
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL PVC LINER LFP-5		
	OUT BOUND SCALEHOUSE I5 + J5		SEE DIAGRAM PAGE: 2
	BLANKET# 315 D	168.9 (YD2)	
	BLANKET# 310 E	22.9 (YD2)	MATH PAGE: 3
	BLANKET# 314 E	14.0 (YD2)	
	BLANKET# 314 F	3.1 (YD2)	
23A	60Z. NON WOVEN GEOTEXTILE		
+	OUT BOUND SCALEHOUSE I5 + J5		THIS AREA IS TYPE III
	BLANKET# 314A - 314	2310.2 (YD2)	
24A	310 D	9.6 (YD2)	BOTH GEOTEXTILE
	314 D	52 (YD2)	AND DRAINAGE
DRAINAGE	314 C	654.2 (YD2)	NET IS SANDWICH
NET	314 B	508.2 (YD2)	BETWEEN PVC
	315 C	170.4 (YD2)	LINER A TOTAL
	315 D	337.8 (YD2)	OF (2) LAYERS
	310 E	45.8 (YD2)	EACH.
	314 E	28 (YD2)	
	314 F	6.2 (YD2)	

Remarks: PLACEMENT OF BLANKETS# 315 D WHICH TIED -IN SOUTH END OF #315A - BLANKET# 310 E TIED -IN SOUTH OF BLANKET 315A - BLANKET# 314 E + 314 F EAST END OF SCALE HOUSE BUILDING. BLANKETS PLACED, WELDED AND AIR LANCED TODAY IS IN AREA I5 AND J5 OUT BOUND SCALE HOUSE AREA. MIKE DIANA AND MYSELF MEASURED BLANKETS# 315 D - 310 E - 314 E AND 314 F AT SAID AREA. PLACEMENT OF 60Z. FABRIC OVER NET FOR TYPE III FINISH ON BLANKETS# 310 D - 314A AND 314. PLACEMENT OF DRAINAGE NET OVER BLANKETS THEN 60Z. FABRIC OVER NET FOR THE FINISH OF TYPE III MATERIAL OVER BLANKETS# 315 D - 310 E - 314 B - 315 C - 314 F - 314 E - 314 C AND 314 D. AIR LANCED MW#1 LFP-1 OVER BLANKET# 420.

Start/finish time: 7:00/5:30

Page 1 of 5 pages
s:\clarktown\fldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

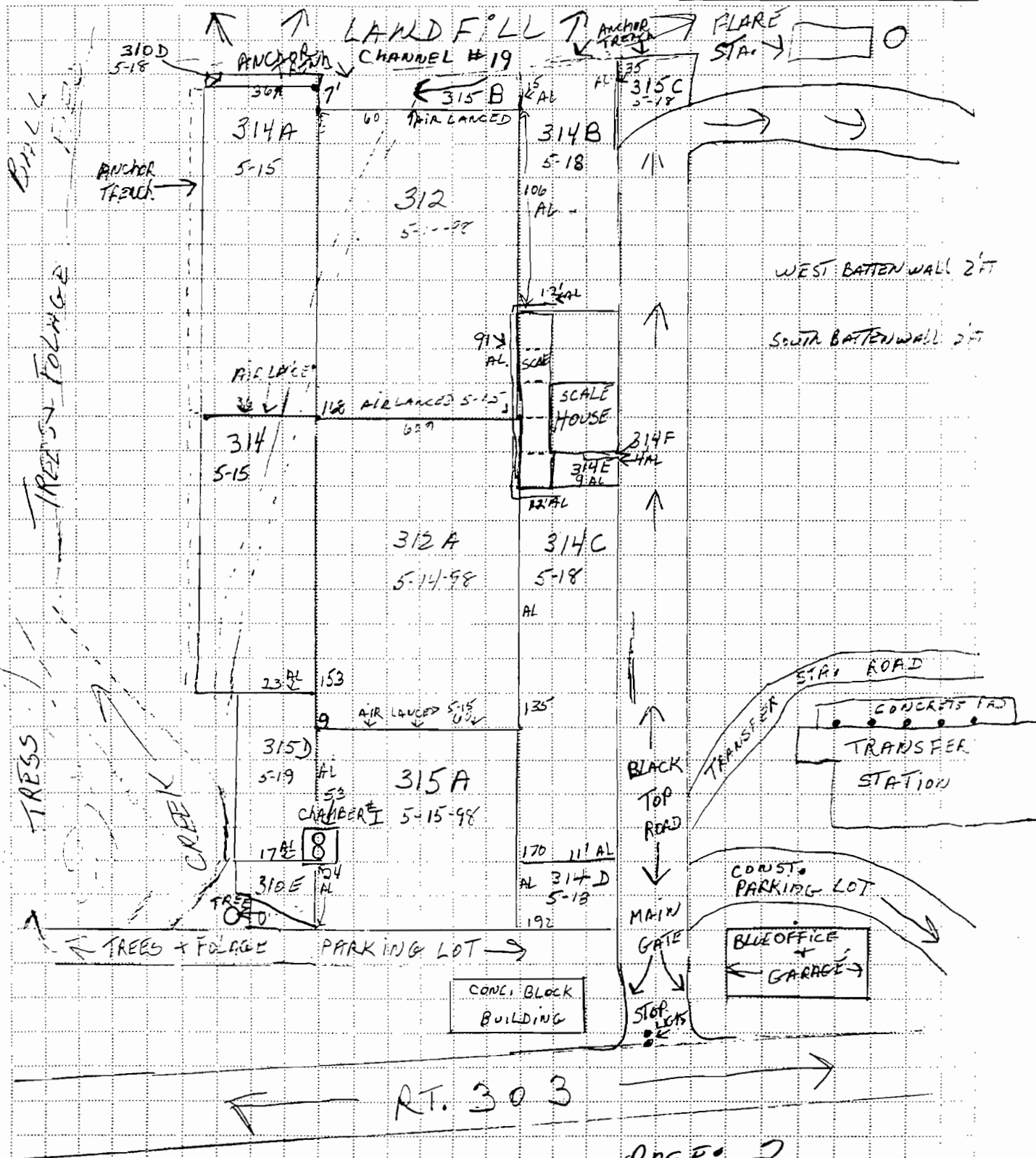
CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____ APPROVED BY _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____ DEPT _____ DATE _____



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MATH FOR (YD) SCALE HOUSE OUT BOUND TASK NO. _____

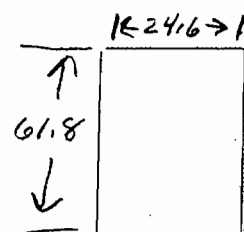
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

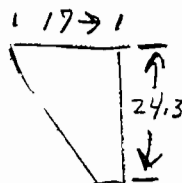
BLANKET # 315 D



W L

$$24.6 \times 61.8 = 1520.2 (SF) = \boxed{168.9 (YD^2)}$$

BLANKET # 310 E ÷ 2



W L

$$17 \times 24.3 = 206.5 (SF) = \boxed{22.9 YD^2}$$

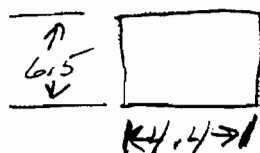
BLANKET # 314 E



W L

$$11 \times 11.5 = 126.5 (SF) = \boxed{14.0 (YD^2)}$$

BLANKET # 314 F



W L

$$4.4 \times 6.5 = 28.6 (SF) = \boxed{3.1 YD^2}$$

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-19-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: John Cuckie

WEATHER	AM	<u>CLR.</u>	PM	<u>CLR.</u>
TEMP DEG F	HI	<u>90</u>	LO	<u>56</u>
WIND	AM	<u>110</u>	PM	<u>110</u>
PRECIPITATION	AM	<u> </u>	PM	<u> </u>

[illegible]

COMMENTS: DIMENSIONS OF FABRIC SAME AS LINER

CLIENT/SUBJECT _____ W.O. NO. _____

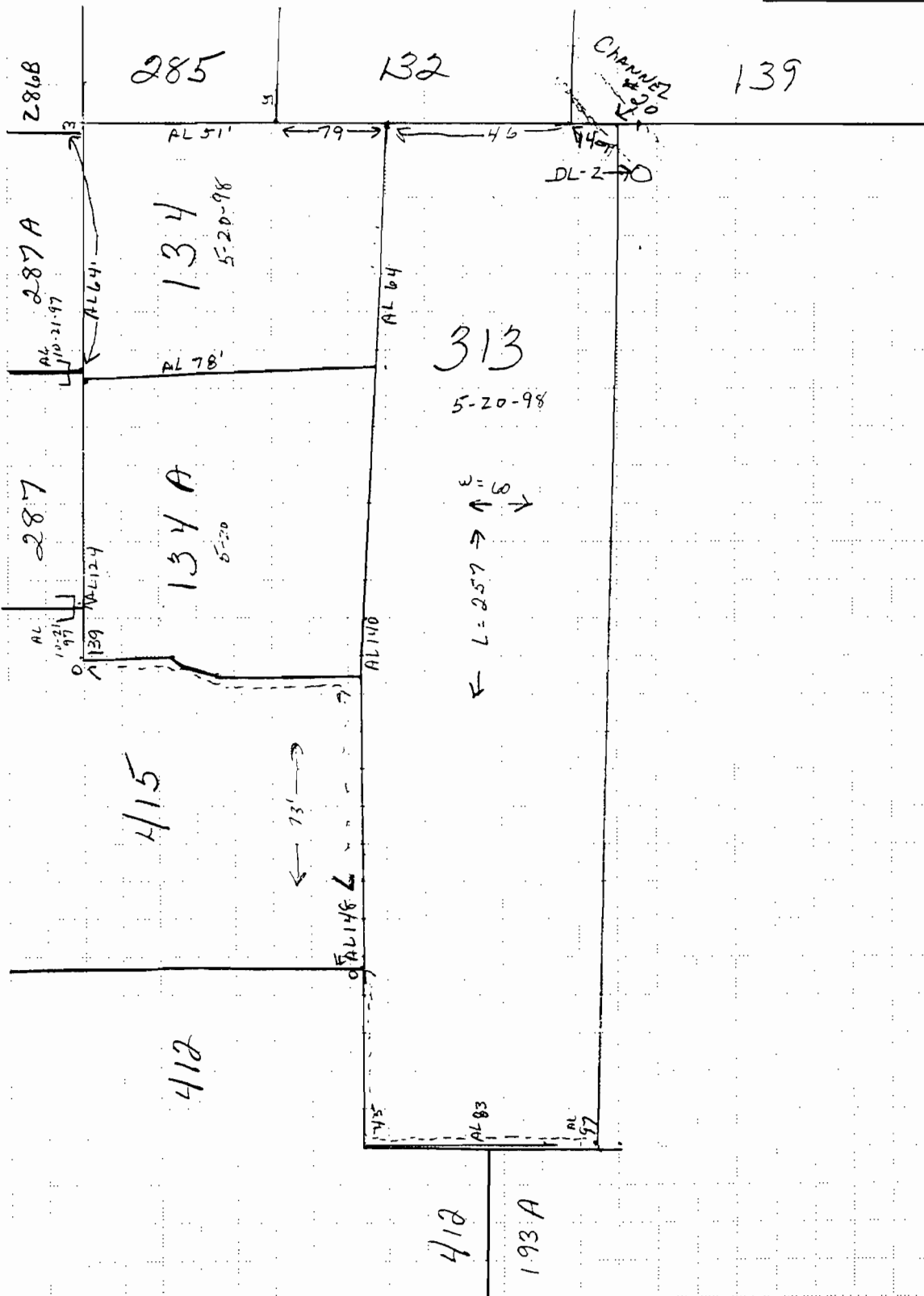
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____	
DEPT _____	DATE _____



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MATH. FOR (YD²) AREA G 4 TASK NO. _____

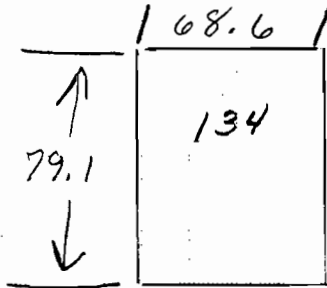
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

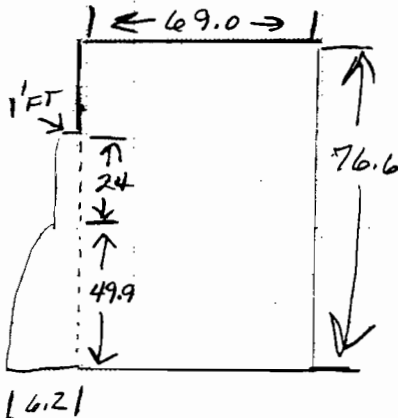
BLANKET # 134



$$w \quad L$$

$$68.6 \times 79.1 = 5426.2(SF) = \boxed{602.9 \text{ YD}^2}$$

BLANKET # 134 A



$$w \quad L$$

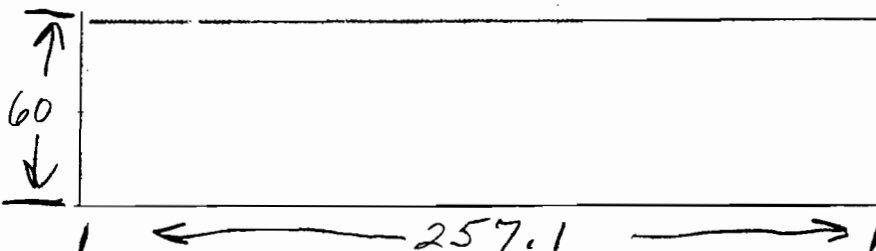
$$69.0 \times 76.6 = 5285.4(SF) = 587.2(YD^2)$$

$$1 \times 24 = 24(SF) = + 2.6(YD^2)$$

$$6.2 \times 49.9 = 309.3(SF) = + 34.3(YD^2)$$

$$\boxed{TOTAL = 624.3(YD^2)}$$

BLANKET # 313



$$w \quad L$$

$$60 \times 257.1 = 15426(SF) = \boxed{1714(YD^2)}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

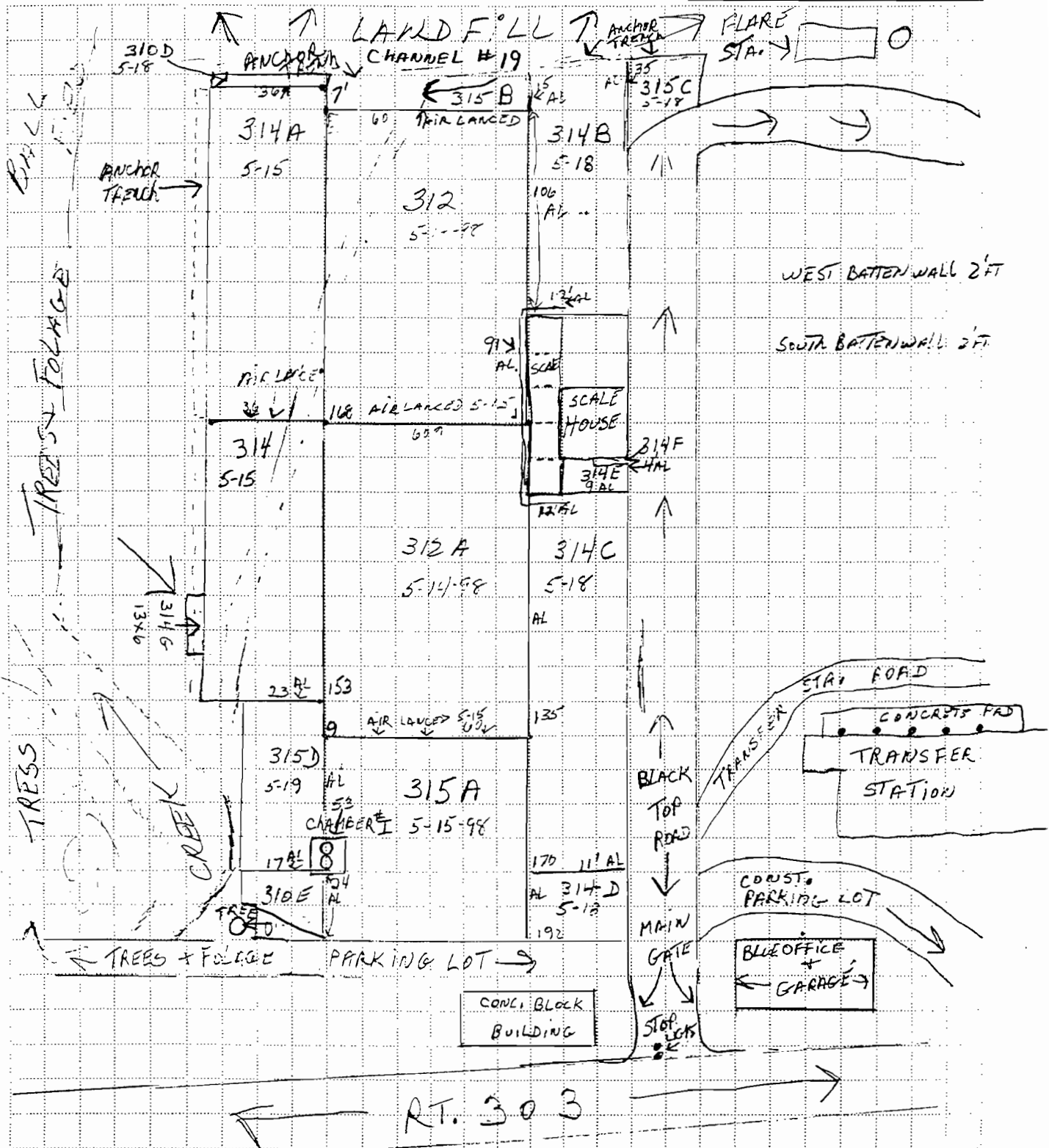
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 5-21-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 618

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLDY	83°	59°

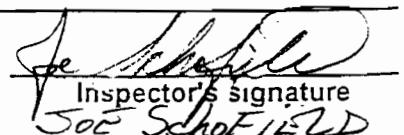
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL PVC LINER OUTBOUND SCALEHOUSE AREA 55		
	BLANKET # 314B		
	W L		
	1206 X 8.2 = 1033 (SF) =	11.4 (YD ²)	
24A	DRAINAGE NET AREA G4 ALONG CHANNEL #20		
	BLANKET # 134	602.9 (YD ²)	
	134A	624.1 (YD ²)	
	313	1714 (YD ²)	
23A	602 NON WOVEN GEOTEXTILE AREA G4 ALONG CHANNEL #20		TYPE I AREA (2) LAYERS
	BLANKET # 134	1205.8 (YD ²)	(1) LAYER FOR
	134A	1248.2 (YD ²)	SUBGRADE AND
	313	3428 (YD ²)	(1) LAYER ON TOP

Remarks: OUTBOUND SCALEHOUSE BLANKET # 314 NEEDED MORE LINER AND GEOTEXTILES BECAUSE OF OVERSIGHT FROM OGDEN NOT INFORMING THE LINER CREW OF THE NEW ROADWAY. PLACEMENT OF BLANKET # 314B WAS ADDED FROM THE ANCHOR TRENCH AND TIED-IN FROM BLANKET # 312 G. PLACEMENT OF DRAINAGE NET PVC LINER # 314-314A AND 313 THEN 602. FABRIC OVER NET AT SAID BLANKETS IN AREA G4. PLACEMENT OF SMOOTH PVC LINER, STAINLESS STEEL BATTEN, NEOPREN GASKET AND STAINLESS STEEL HILT: KWIK BOLT @ 1' FT INTO CONCRETE AND STEEL BATTEN FOR EXISTING SCALES TIE-IN AT THE OUTBOUND SCALEHOUSE SIDE. SEE PAGE (2) FOR DETAIL. AT DAY'S END LINER WAS ALMOST COMPLETED

Start/finish time: 7:00 / 4:30

Page 1 of 2 pages
S:\clarktown\ldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

Inspector's signature
500 Schafie
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

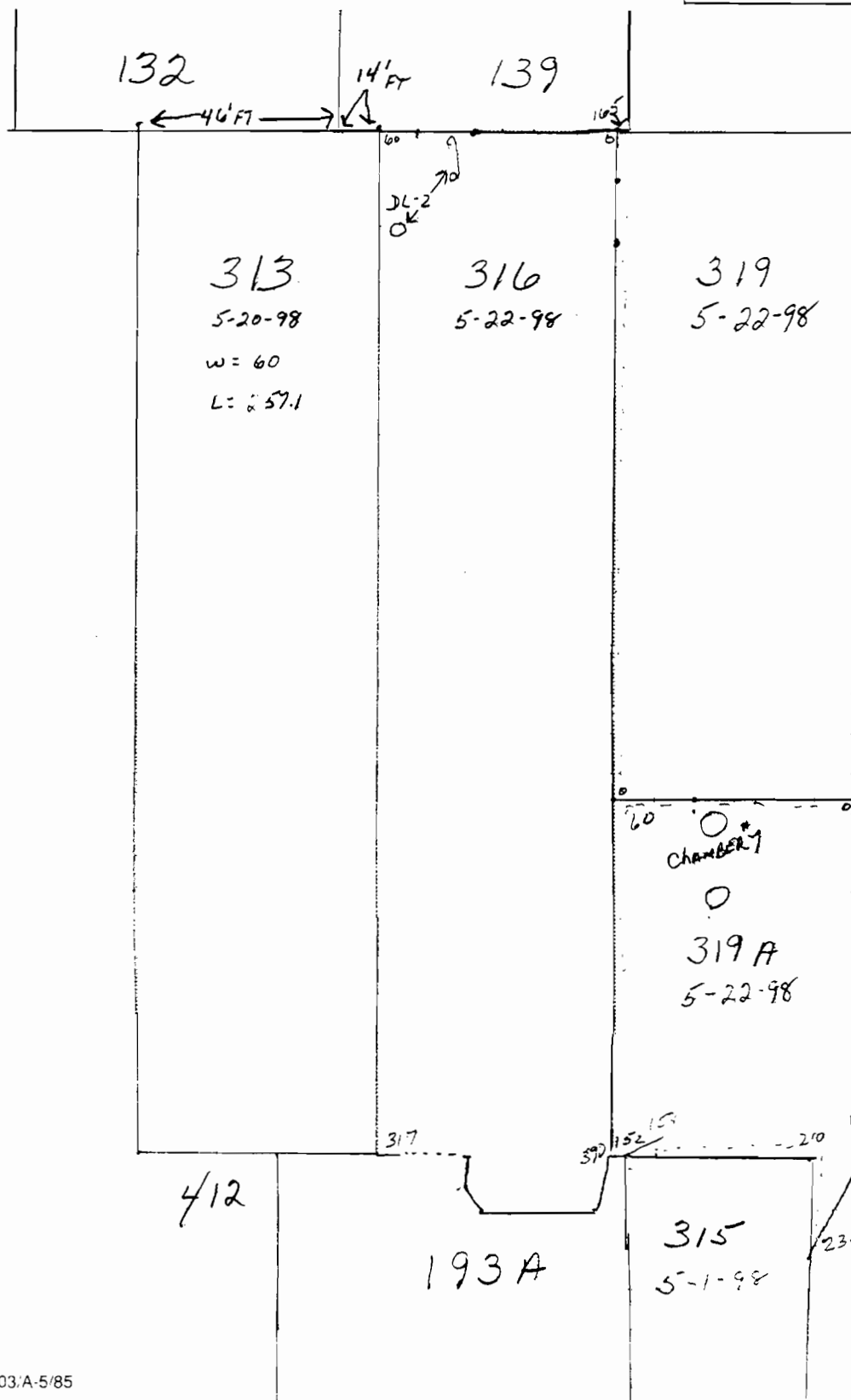
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



(pp. 2)

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-22-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN CUCKIE

WEATHER	AM _____	PM _____
TEMP DEG F	HI _____	LO _____
WIND	AM _____	PM _____
PRECIPITATION	AM _____	PM _____

[illegible]

COMMENTS: DIMENSIONS FOR (YD^2) ARE THE SAME AS THE BLANKET (YD^2) .

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 5-26-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 623

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	84°	58°

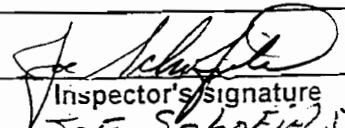
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22 E	SMOOTH 40 MIL. PVC LINER		SEE PAGE: 2
	IN AREA G4 AROUND CHAMBER # 7		DIAGRAM AND
	BLANKET # 316	1832.0 (YD2)	PAGE: 3 FOR
	BLANKET # 319	1131.8 (YD2)	MATH
	BLANKET # 319 A	582.0 (YD2)	
	OUT BOUND CONCRETE SCALE HOUSE		
	WALL WITH LINER BATTEN 55		
	WEST BATTEN 12' FT x 4' FT = 48 (SF) =	5.3 (YD2)	SEE PAGE: 4
	SOUTH BATTEN 91' x 2.5' = 227.5 (SF) =	25.2	
	SOUTHEAST COR. 3 x 1.8 = 5.4 (SF) =	.6	FOR DIAGRAM
	9.9 x 4 = 39.6 (SF) =	4.4	AND
	EAST BATTEN 8' x 5' = 40.0 (SF) =	4.4	PAGE: 5
	4 x 4 = 16 (SF) =	1.7	
	NORTH BATTEN 4 x 4 = 16 (SF) =	1.7	FOR
	8' x 5' = 40.0 (SF) =	4.4	DETAIL
	NORTH EAST BATTEN 5 x 4 = 20 (SF) =	2.2	
	4.5 x 4 = 18 (SF) =	2.0	
	NORTH ALONG IN BOUND SCALE WALL		
	3.6 x 41.9 = 150.8 (SF)	16.7	

Remarks: AIR LANKED PATCHES AND REPAIRS FOR AREA G4 CHAMBER # 7. PLACEMENT OF DRAINAGE NET OVER BLANKETS # 319 - 319 A AND 316 FOR AREA G4. MIKE DIANA AND MYSELF MEASURED BLANKETS # 316 - # 319 - AND # 319 A, SEE PAGE: (2) DIAGRAM. PLACEMENT THEN WELD TOGETHER PVC BOOT 6' FT. DIA. AROUND EAST END OF CHAMBER # 1 AND A 58" IN BOOT DIA. AROUND WEST END OF CHAMBER # 1 IN AREA K5. PLACEMENT OF PVC BOOT AROUND THE RADIATION SENSOR CONDUIT SOUTH SIDE OF THE IN BOUND SCALE, AND THE ELECTRICAL POWER CONDUIT OF THE EAST END SCALE HOUSE BUILDING. MIKE DIANA AND MYSELF MEASURED THE OUT BOUND CONCRETE SCALE HOUSE WALL WITH LINER BATTEN, THEN THE FINAL COVER SYSTEM WAS PLACED TYPE III SEE PAGE: 5

Start/finish time: 7:00 / 7:00

Page 1 of 5 pages
s:\clarktown\fldforms\idr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

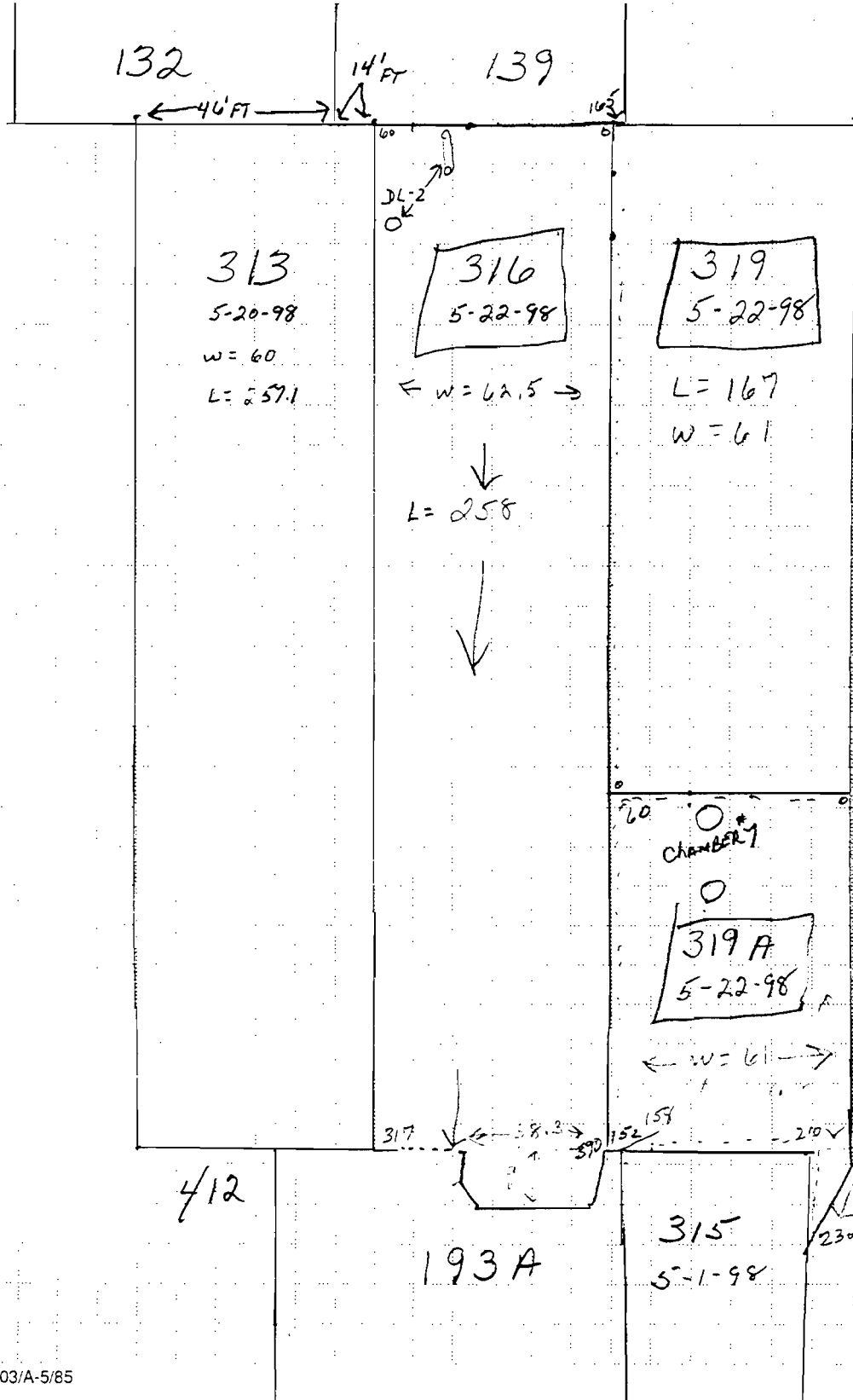
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MATH FOR BLANKETS #316 - 319 AND 319A TASK NO. _____

PREPARED BY AREA G4 DEPT _____ DATE _____

MATH CHECK BY CHAMBER*7 AREA DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 316

$$\begin{array}{rcl} W & L & \\ 62.5 & \times 258 & = 16125 \text{ (SF)} = 1791.6 \text{ (YD}^2\text{)} \\ + & & \end{array}$$

$$\begin{array}{rcl} W & L & \\ 38.3 & \times 9.5 & = 363.8 \text{ (SF)} = 40.4 \end{array}$$

TOTAL = 1832.0 YD²

BLANKET # 319

$$\begin{array}{rcl} W & L & \\ 61 & \times 167 & = 10187 \text{ (SF)} = 1131.8 \text{ (YD}^2\text{)} \end{array}$$

BLANKET # 319 A

$$\begin{array}{rcl} W & L & \\ 61 & \times 84.8 & = 5172.8 \text{ (SF)} = 574.7 \end{array}$$

$$\begin{array}{rcl} W & L & \\ 7.0 & \times 18.8 & = 131.6 \text{ (SF)} = 14.6 \end{array}$$

 ÷ 2

TOTAL = 582.0 (YD²)

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

OUT BOUND SCALE
↓

IN BOUND SCALE
↓

WEST END
↓

N
↗

CONCRETE
SCALE

WORKING
CONCRETE
SCALE

"18" IN GAP

SCALE
HOUSE
BUILDING

2 STEPS

○ ELECTRICAL
POWER
CONDUIT

○ RADIATION
SENSOR

SOUTH
END →

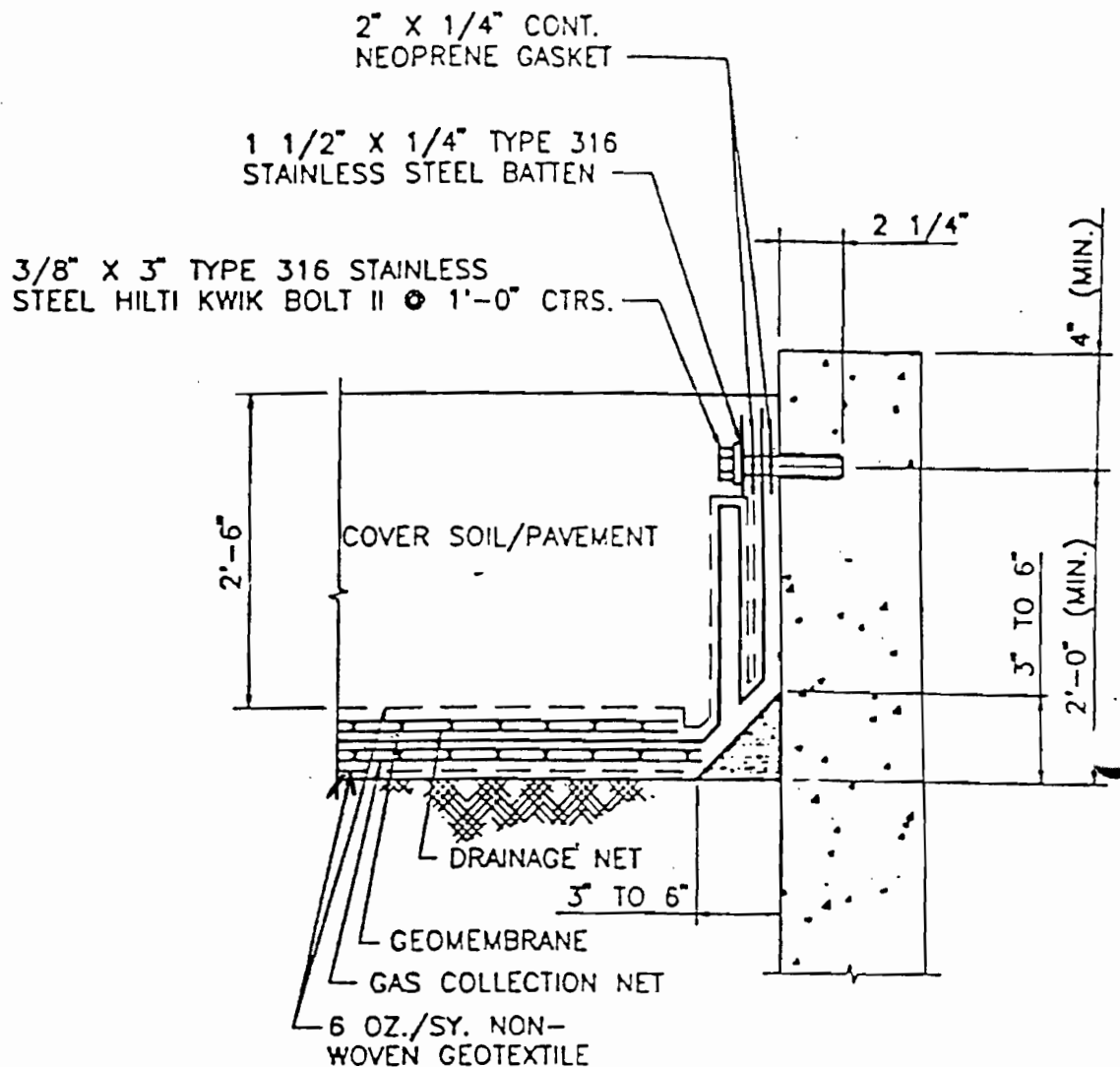
↑
EAST END

NORTH ALONG
INBOUND
SCALE WALL

MAIN

← EAST →

PAGE: 4



NOTE:

1. NO HEAVY EQUIPMENT COMPACTION SHALL BE ALLOWED WITHIN THREE FEET OF THE STRUCTURE, HAND COMPACTION SHALL BE REQUIRED.

FINAL COVER SYSTEM (TYPE III) CROSS SECTION
AT EXISTING SCALES TIE-IN

DETAIL
N.T.S.

47
2021

S M T (W) TH F S

Date: 5-27-98

IDR #: 624

Weather	High	Low
CLR / CLR	83°	57°

Description of work performed and inspected

[illegible]

Remarks: AIR LANCED ALL COR. PATCHS WITH FOLDS AT OUTBOUND SCALE HOUSE
AT AREA 35. AIR LANCED ALL PATCHS AND REPAIRS ON BLANKETS* 316-319
AND 319A AROUND CHAMBER* 7 G-4. PLACEMENT OF 602. FABRIC OVER
DRAINAGE NET ON BLANKETS* 319- 319A TO COMPLETE TYPE I G-4 AREA.
PLACEMENT OF BLANKETS AT LFP-4 AREA G-3 AND G-4 BLANKET* 134B TIED-IN
EAST OF * 311 - BLANKET* 134C-319B AND 319C TIED-IN EAST OF BLANKET 315.
PLACEMENT OF LINER USED FOR BATTEN AND TYPE III COVER SYSTEM AT
THE SOUTH SIDE OF THE SCALE HOUSE BUILDING AND LINER PLACED
AT THE NORTHWEST COR. VISUAL OBSERVED DESTRUCTIVE SEAM
TESTS ON DS# 152 TO DS# 157 RESULTS ON PAGE: 4

Start/finish time: 7:00/6:00

Page 1 of 4 pages
s:\ciarktw\fldforms\ldr.xls

Inspector's signature
JOE SCHAFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____	TASK NO. _____
------------------------	----------------

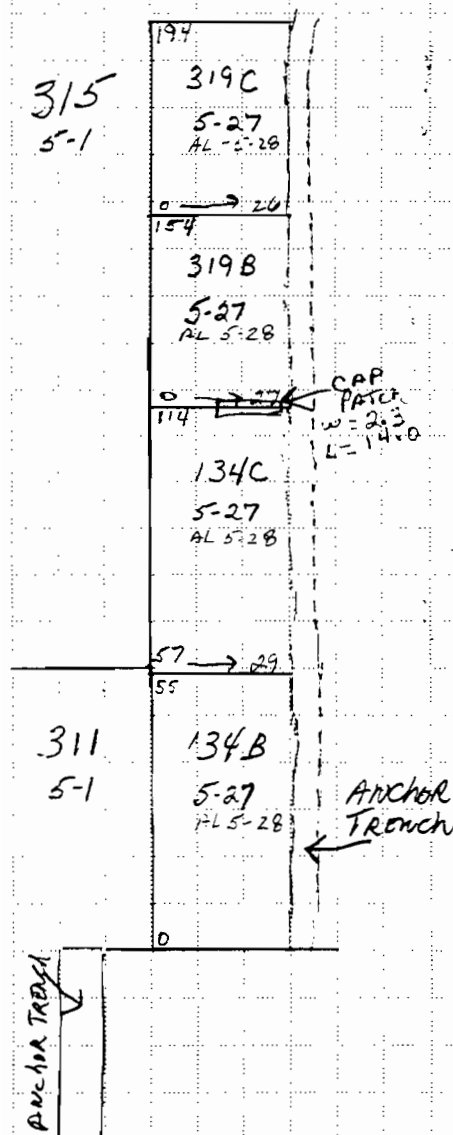
PREPARED BY _____ DEPT _____ DATE _____

APPROVED BY

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____



TREES
+
FOLIAGE

LFP- hf

PAGE 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

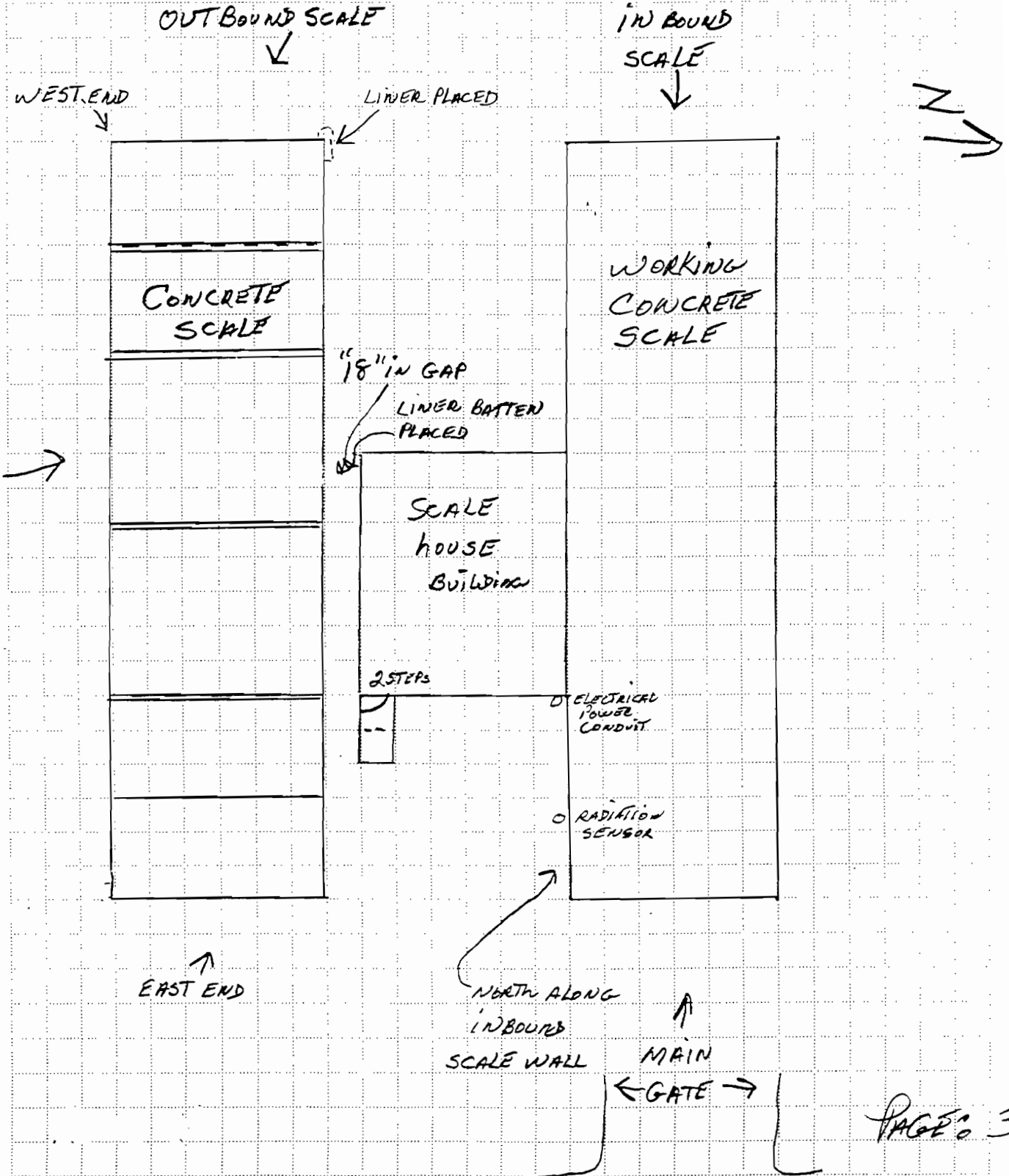
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



TOWN OF CLARKSTOWN. WEST NYACK. NEW YORK

SUBCONTRACT NO. 7-52-52-111970

ENVIRONMENTAL LINERS, INC. JOB NO:1818

NO: 1813

PAGE: 4

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 5-28-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 625

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	93°	53°

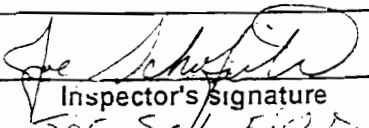
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
6 B	PERIMETER PERFORATED DRAINAGE PIPE SOUTH LEG AT FLARE STATION (5-26)	202.0 FT.	PIPE HAD 602. FABRIC AND STONE BEDDING WRAP.
	EAST LEG (5-26) CHANNEL #11	321.0 FT.	
	(5-28)	82.6 FT.	
22 E	SMOOTH 40 MIL. PVC LINER LFP-4 SOUTH OF CHAMBER #7		SEE PAGE: (2) DIAGRAM
	BLANKETS #134B-134C-319B AND 319C	666.8 (YD ²)	PAGE: (3) MATH
	LFP-1 SOUTHEAST COR. CHANNEL #11 LOW POINT		SEE PAGE: (3) FOR MATH AND
	BLANKET # 313A	100.8 (YD ²)	PAGE: 4 FOR DIAGRAM

Remarks: AIR LANDED ALL SEAMS LFP-4 CHAMBER #7 AREA, INCLUDING PATCHES AND REPAIRS. MIKE DIANA AND MYSELF MEASURED BLANKETS #134B-134C-319B AND 319C. PLACEMENT OF DRAINAGE NET THEN 602. FABRIC OVER SAID BLANKETS. PLACEMENT OF PVC BLANKET #313A AT LFP-1 WHICH TIED-IN EAST OF #30A AND SOUTH OF #129. AIR LANDED ALL SEAMS AND PATCH ON BLANKET #313A IN LFP-1. MIKE DIANA AND MYSELF MEASURED BLANKET #313A. PLACEMENT OF DRAINAGE NET OVER BLANKET #313A, THEN 602. FABRIC OVER NET AT SAID BLANKET.

Start/finish time: 7:00/5:30

Page 1 of 5 pages
s:\clarktown\fldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

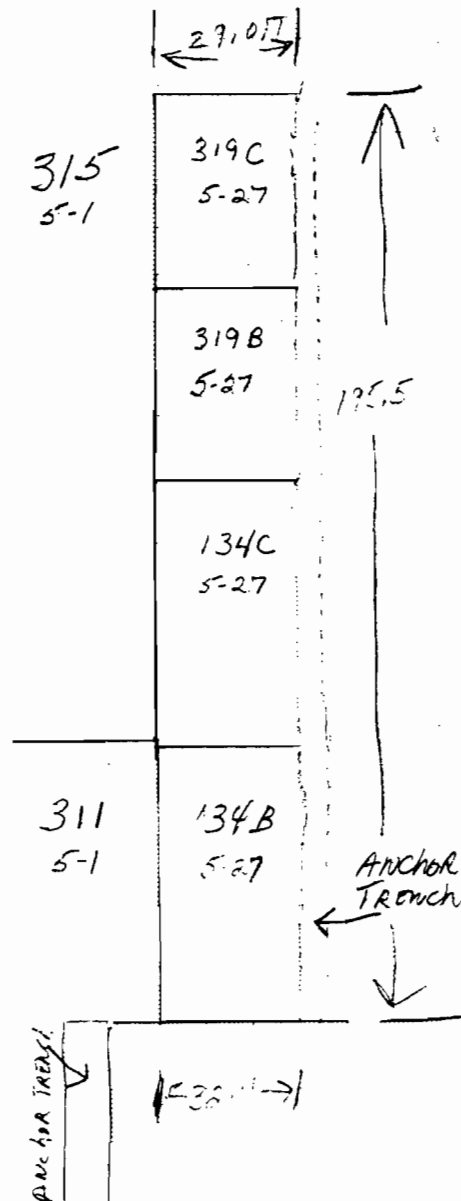
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

CHAMBER #7



125.5

7.45

LFP-4

PAGE 1 OF 1

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MATH FOR LFP-1 "CHANNEL" TAIL TASK NO. _____

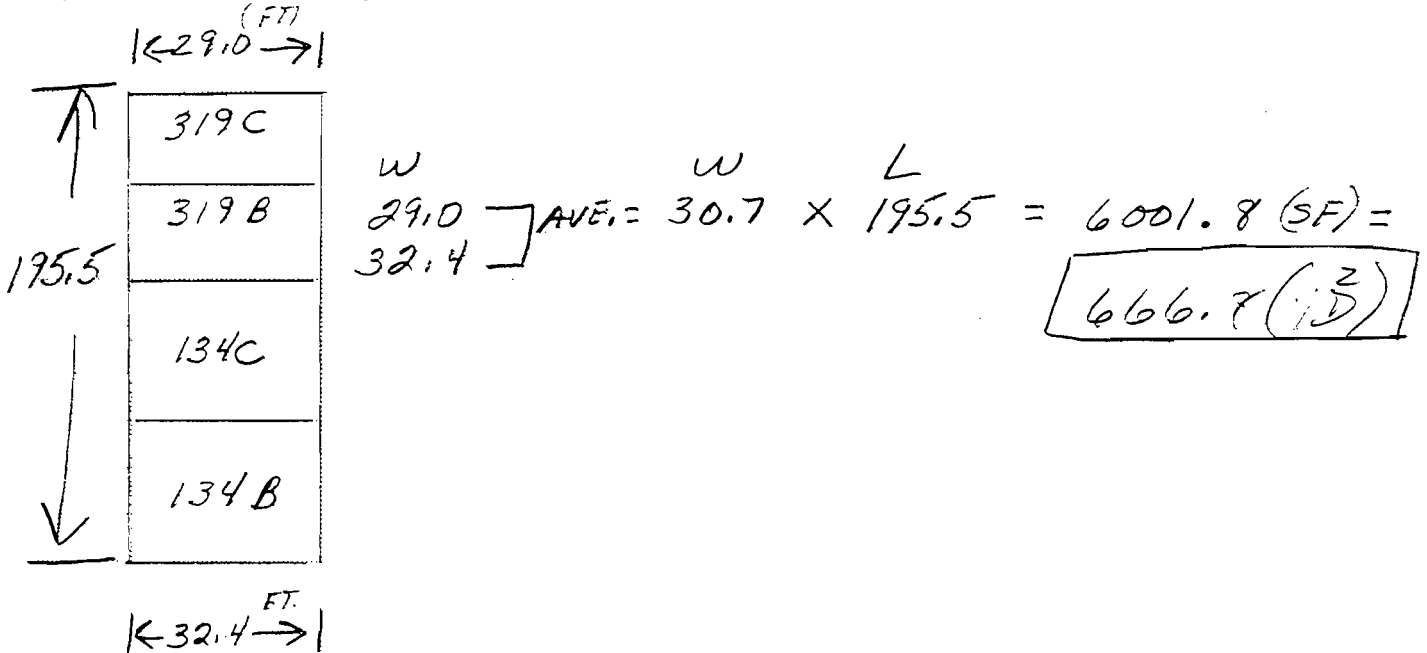
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

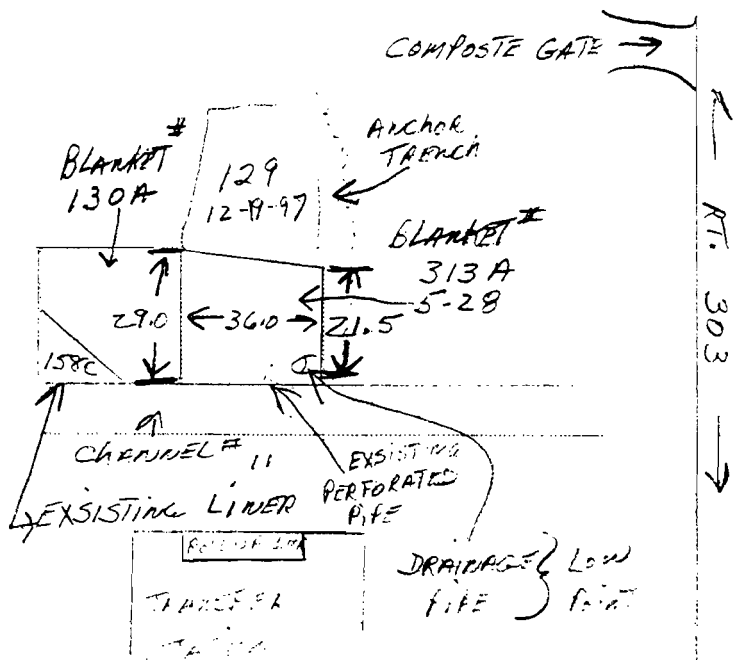
METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKETS # 134B-134C-319B AND 319C



MATH FOR BLANKET # 313A LFP-1 LOW POINT CHANNEL #11



$$\begin{matrix} W \\ 29.0 \\ 21.5 \end{matrix} \left[\begin{matrix} W \\ AVE. = 25.2 \end{matrix} \right]$$

$$\begin{matrix} W \\ 25.2 \end{matrix} \times \begin{matrix} L \\ 36 \end{matrix} = 907.2 (SF) = 100.8 (yd^2)$$

PAGE # 3

MALL $\Rightarrow$

LFP-1

ANCHOR
TREX

TODAY'S
BLANKET

FENCE LINE

CHANNEL # 11

TIE-IN JOINT

$f_{ENC} = 17$

channel[†]₁₂

PAGE: 4

Charitable

S M T W TH F S

Date: 5-29-98

IDR #: 626

Weather		High	Low
CLR	1 CLR	85°	61°

Description of work performed and inspected

[illegible]

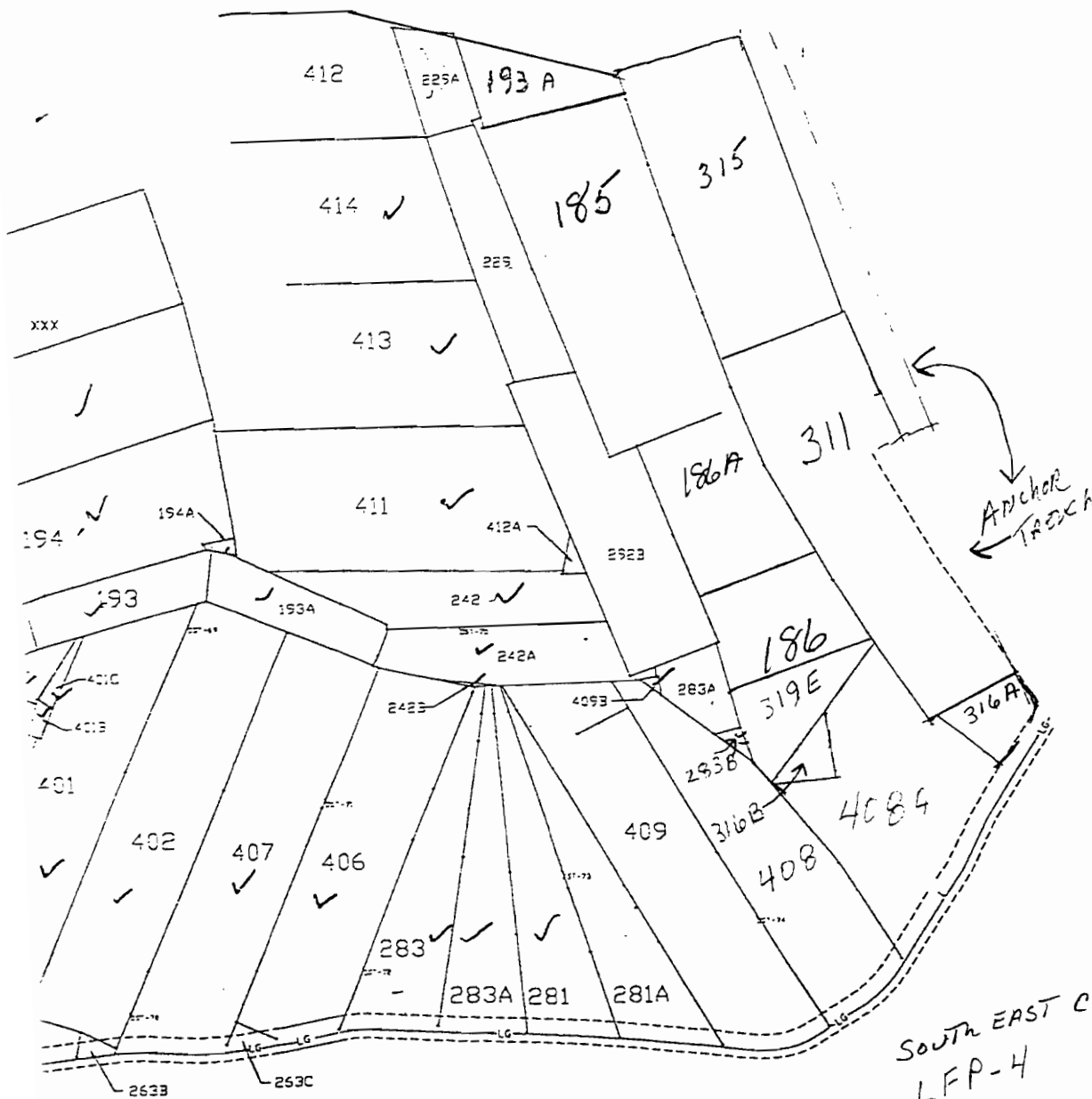
Remarks: PLACEMENT OF PVC BOOT, AIR LANCED STAINLESS STEEL BAND WITH GASKET THEN CAULK AROUND DL-2 ON BLANKET# 316 CHANNEL# 20 LFP-8. PLACEMENT OF BLANKET# 319 D WHICH TIED-IN BLANKETS# 315 AND 319 A THEN AIR LANCED SOUTH OF CHAMBER# 7. SEE PAGE: (2) FOR DIAGRAM. PLACEMENT OF BLANKETS# 316 A WHICH TIED-IN SOUTH OF # 311 - BLANKET# 319 E TIED-IN SOUTH OF # 786 AND BLANKET# 316 B TIED-IN NORTH OF # 408 A. SEE PAGE: (3) FOR DIAGRAM, AT THE SOUTH EAST COR. OF LFP-4. PLACEMENT OF EMBOSSED BLANKETS NORTH OF THE FLARE STATION BLANKET# 238 C TIED-IN SOUTH OF EMB.# 423 AND TO THE EXSISTING LINER IN CHANNEL# 12, EMB. BLANKET 245 C TIED-IN SOUTH OF# 238 C AND # 156 THE BLANKET WHERE THE FLARE STATION IS DEPLOYED ON, EMB. BLANKET# 290 D TIED-IN SOUTH OF # 238 C TO THE EXSISTING LINER CHANNEL# 12 AND EMB. BLANKET# 290 E WHICH TIED-IN SOUTH OF # 290 D AND FLARE STATION BLANKET# 156. SEE PAGE: (4) FOR DIAGRAM

Start/finish time: 7:00/3:30

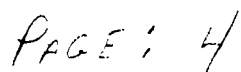
Page 1 of 5 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
Inspector's name

415



SOUTH EAST COR.
LFP-4



CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 5-29-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

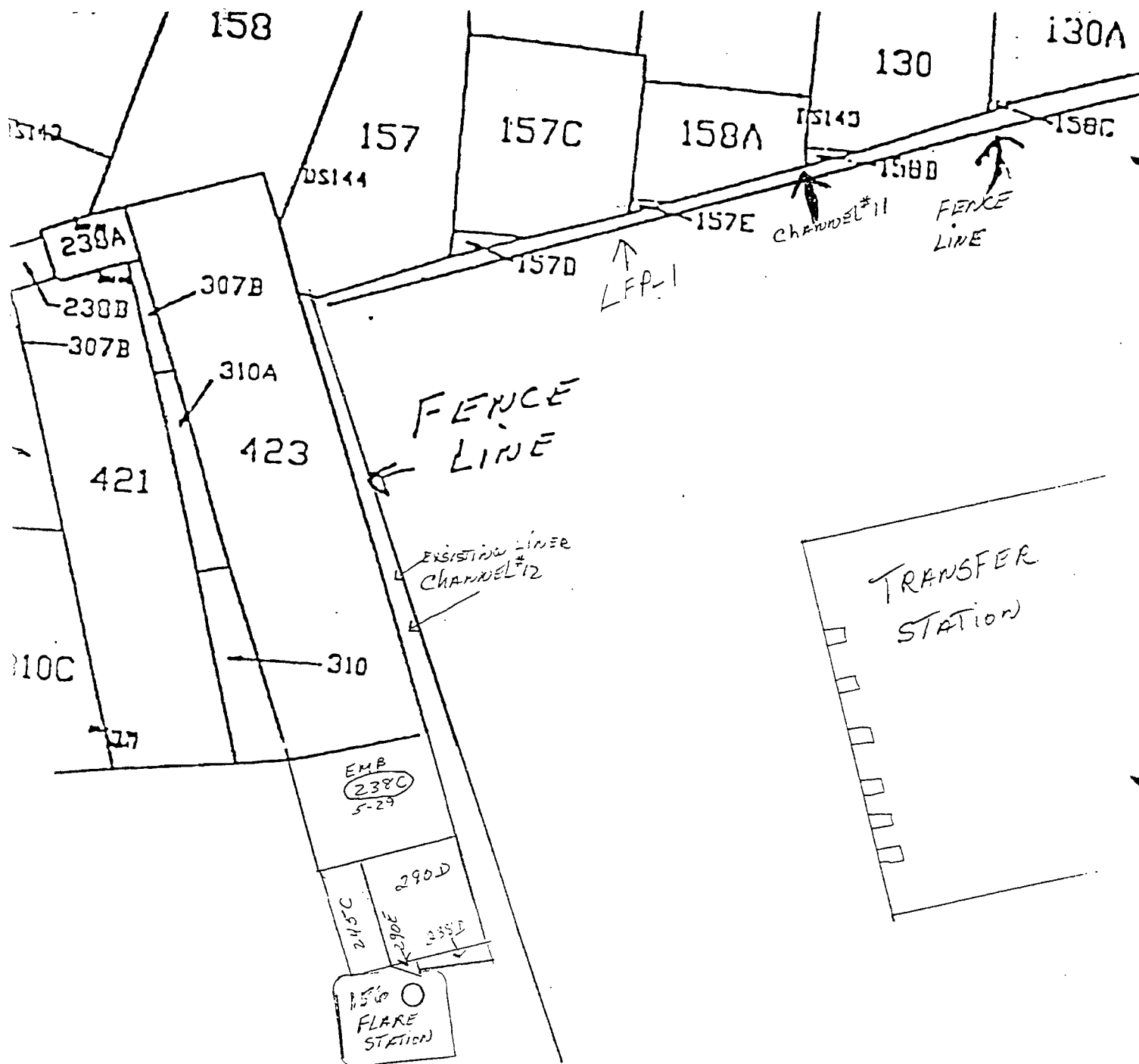
Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 61°			PM 85°
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

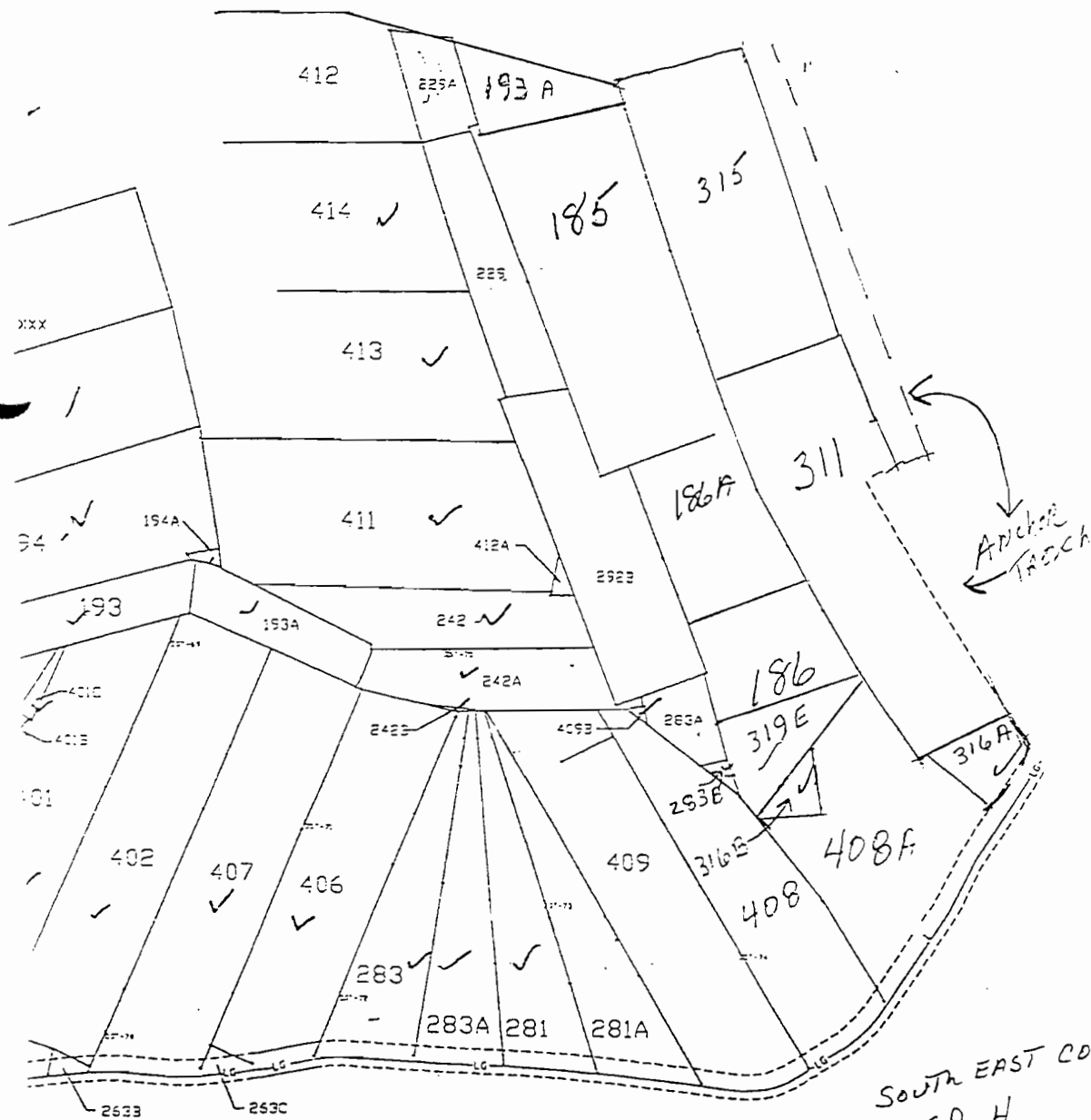
4. 1. 1.

Inspector's signature
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name



415



SOUTH EAST COR.
LFP-4

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MEASURED BLANKETS TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

NORTH OF FLARE STATION : SEE DIAGRAM ON PAGE: (2)

BLANKET # 238C

W L

$$37.8 \times 59.4 = 2245.3 \text{ (SF)} =$$

249.4 yd²

BLANKET # 245C

W L

$$37.1 \times 17 = 630.7 \text{ (SF)} =$$

70.0 yd²

BLANKET # 290D

W L

$$\begin{matrix} 33.4 \\ 18.4 \end{matrix} \left. \vphantom{\begin{matrix} 33.4 \\ 18.4 \end{matrix}} \right\} \text{ AVE.} = 25.9 \times 40.9 = 1059.3 \text{ (SF)} =$$

117.7 yd²

SOUTH EAST COR LFP-4 : SEE DIAGRAM PAGE: 3

BLANKET # 316A



W L

$$35 \times 41 = 717.5 \text{ (SF)} =$$

79.7 yd²

BLANKET # 319E



W L

$$9.2 \times 23.7 = 109.0 \text{ (SF)} =$$

12.1 yd²

BLANKET # 316B

W L

$$5.5 \times 10.7 = 29.4 \text{ (SF)} =$$

3.2 (yd²)

S M T W TH F S

Date: 6-3-98

IDR #: 631

Weather	High	Low
CLOUDY / CLOUDY	74°	54°

Description of work performed and inspected

[illegible]

Remarks: BECAUSE OF HIGH WINDS > 20 TO > 25 (EL) THE LINER CONTRACTOR COULDN'T WORK AND THE LABORER FORCE WENT HOME. NEAR DAY'S END JIM BATES (OGDEN REP.) INFORMED HIS MEN TO CUT THE GEOMEMBRANE AND ALL TYPE III GEOTEXTILES ATTACHED TO BLANKETS # 310D AND # 314A FOR A REVISION OF CHANNEL # 19 WHICH WAS SOUTH OF THE DRAWINGS AND ALREADY CONSTRUCTED CHANNEL. BRUCE LA PENTA (WESTON ENGINEER REP.) INFORMED JIM BATES TO EXCAVATE INTO THE ANCHOR TRENCH AND PEEL BACK GEOMEMBRANE AND GEOTEXTILES AND AFTER NEW CHANNEL WAS EXCAVATED LAY THE MATERIAL BACK IN PLACE, BUT JIM BATES DIDN'T COMPLY WITH WESTON'S CONCERN. MIKE DIANA AND MYSELF WENT TO REMEASURE THE EXCESS CUT OFF. THE LINER SYSTEM WAS CUT TO THE REVISED CHANNEL # 1.

Start/finish time: 7:00 / 3:30

Page 1 of 1 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
506 S. CHASE
Inspector's name

Inspector's signature
JOE SCHULTZ
Inspector's name

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH **F** S

Job No: 03228-018-001-0003-00

Date: 6-5-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 633

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLDY	72°	55°

Description of work performed and inspected

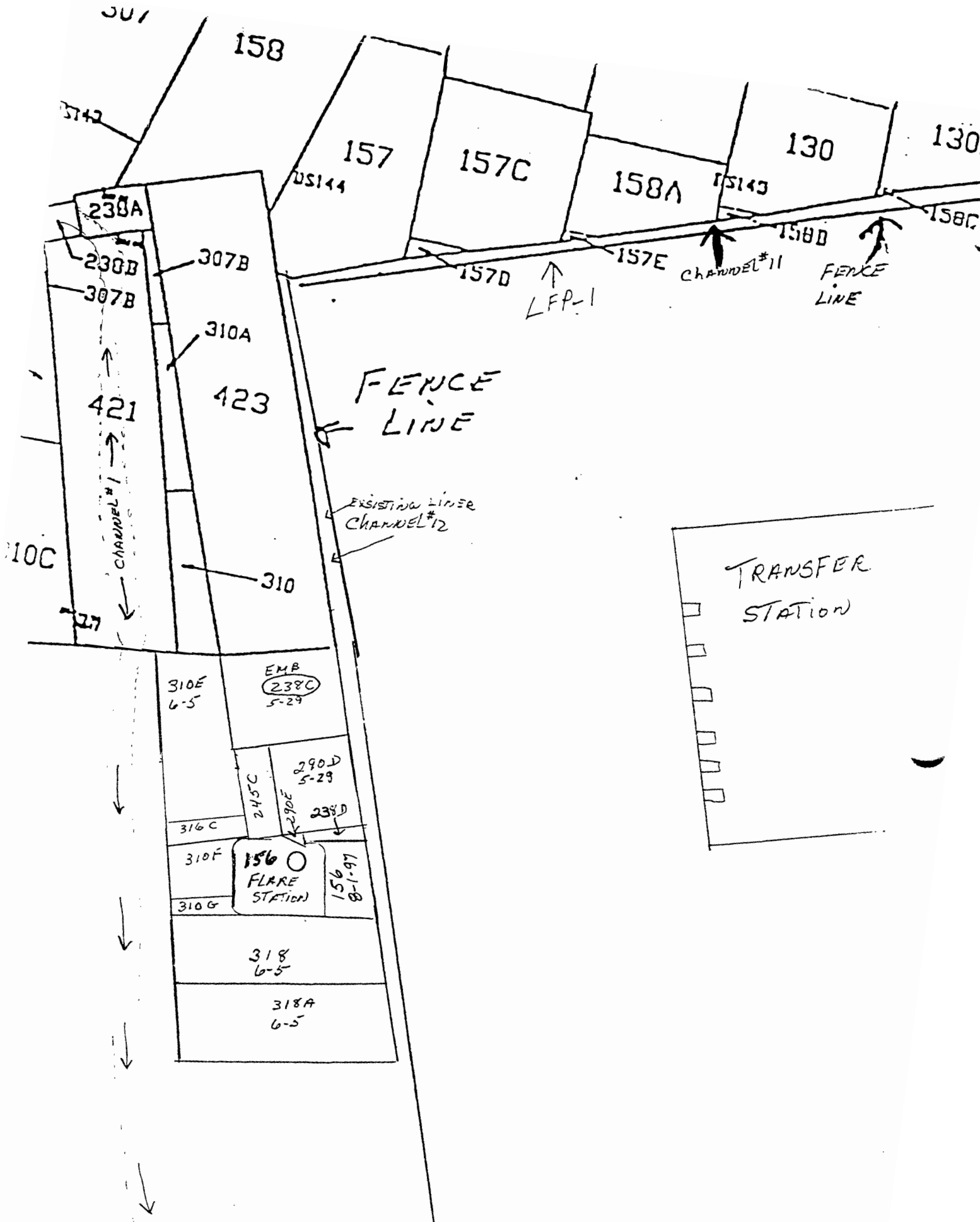
[illegible]

Remarks: PLACEMENT OF PVC BLANKETS AROUND THE FLARE STATION ARE: BLANKET # 310E WAS SOUTH OF BLANKETS # 421 AND # 310, - BLANKET # 316C TIED-IN SOUTH OF BLANKET # 310E AND # 156 NORTH WEST END WHICH FLARE STATION IS PLACED, - BLANKET # 238D TIED-IN SOUTH OF # 290D AND NORTH EAST END OF # 156 FLARE STATION BLANKET, - BLANKET # 156 EAST END WAS FOLDED BACK AND INTO CHANNEL # 12 AND TIED-IN TO THE EXSISTING LINER, - BLANKET # 310F TIED-IN SOUTH OF # 316C AND WEST OF # 156, - BLANKET # 310G TIED-IN SOUTH OF # 310F AND WEST OF # 156, - BLANKET # 318 TIED-IN SOUTH OF THE FLARE STATION AND INTO CHANNEL # 12 TO THE EXSISTING LINER, - AND BLANKET # 318A TIED-IN SOUTH OF # 318 AND INTO CHANNEL # 12 TO THE EXSISTING LINER. AT DAY'S END ALL SEAMS WERE AIR LAUNCHED EXCEPT FOR PATCHES AND REPAIRS. SEE PAGE: (2) FOR DIAGRAM. PLACEMENT OF 602. FABRIC OVER COMMON FILL SUBGRADE AT THE INBOUND SCALE HOUSE AREA THEN DRAINAGE NET OVER 602. FABRIC FOR TYPE III LINER COVER SYSTEM.

Start/finish time: 7:00/4:30

Page / of 3 pages
s:\clarktw\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name



ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-5-98

INSPECTOR: JOE SCHOFIELD

LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy <u>AM / PM</u>	Overcast AM / PM	Rain AM / PM
<u>55</u> AM		<u>72</u> PM	
Still AM / PM	L. Breeze AM / PM	Moderate <u>AM / PM</u>	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate <u>AM / PM</u>	Humid AM / PM	

SEAM NO.	PANEL NO.	PRESSURE (PSI)	LENGTH	COMMENTS
<u>421-310E</u>	<u>310E</u>	<u>85-90 PSI</u>	<u>20 FT.</u>	
<u>310-310E</u>	<u>310E</u>		<u>41</u>	
<u>310-238C</u>	<u>238C</u>		<u>1</u>	
<u>423-238C</u>	<u>238C</u>		<u>57</u>	
<u>238C-290D</u>	<u>290D</u>		<u>42</u>	
<u>238C-245C</u>	<u>245C</u>		<u>17</u>	
<u>238C-310E</u>	<u>310E</u>		<u>37</u>	
<u>245C-310E</u>	<u>310E</u>		<u>19</u>	
<u>245C-316C</u>	<u>316C</u>		<u>17</u>	
<u>245C-290E</u>	<u>290E</u>		<u>4</u>	
<u>245C-290D</u>	<u>290D</u>		<u>33</u>	
<u>156-316C</u>	<u>316C</u>		<u>14</u>	
<u>156-245C</u>	<u>245C</u>		<u>17</u>	
<u>290D-290E</u>	<u>290E</u>		<u>12</u>	
<u>238D-290E</u>	<u>290E</u>		<u>8</u>	
<u>156-290E</u>	<u>290E</u>		<u>12</u>	
<u>290D-290D</u>	<u>290D</u>		<u>32</u>	
<u>156-238D</u>	<u>238D</u>		<u>30</u>	
<u>310E-316C</u>	<u>316C</u>		<u>43</u>	
<u>316C-310F</u>	<u>310F</u>		<u>40</u>	
<u>310F-310G</u>	<u>310G</u>		<u>39</u>	
<u>310G-318</u>	<u>318</u>		<u>48</u>	
<u>318-318A</u>	<u>318A</u>		<u>116</u>	
<u>156-318</u>	<u>318</u>		<u>63</u>	
<u>156-EXISTING LINER 156</u>			<u>102</u>	
<u>156-310F</u>	<u>310F</u>		<u>61</u>	
<u>156-310G</u>	<u>310G</u>		<u>27</u>	
				<u>TODAY'S</u>
				<u>TOTAL WELD SEAMS</u>
				<u>952 FT.</u>

Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MEASUREMENTS FOR FLARE STATION TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

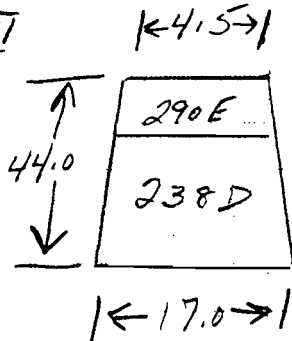
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

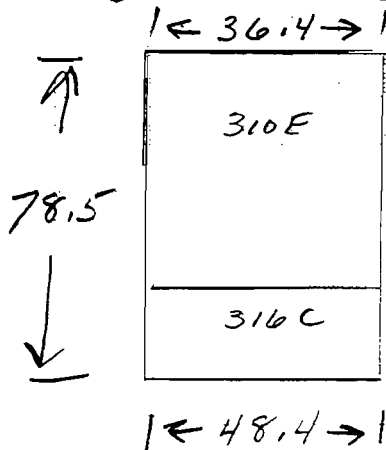
BLANKETS # 290E AND 238D

TYPE II



$$\begin{array}{l} W \\ 4.5 \\ 17.0 \end{array} \left] \begin{array}{l} W \\ L \end{array} \begin{array}{l} \text{AVE. } 10.75 \times 44 = 473 \text{ (SF)} = \end{array} \boxed{52.5 \text{ (YD}^2\text{)}}$$

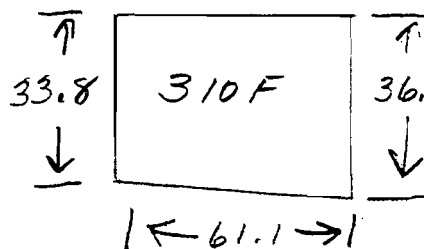
BLANKETS # 310E AND 316C



$$\begin{array}{l} W \\ 36.4 \\ 48.4 \end{array} \left] \begin{array}{l} W \\ L \end{array} \begin{array}{l} \text{AVE. } 42.4 \times 78.5 = 3328.4 \text{ (SF)} = \end{array} \boxed{369.8 \text{ (YD}^2\text{)}}$$

TYPE III

BLANKET # 310F



$$\begin{array}{l} W \\ 33.8 \\ 36.5 \end{array} \left] \begin{array}{l} W \\ L \end{array} \begin{array}{l} \text{AVE. } 35.15 \times 61.1 = 2147.6 \text{ (SF)} = \end{array} \boxed{238.6 \text{ (YD}^2\text{)}}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MEASUREMENTS FOR FLARE STATION TASK NO. _____

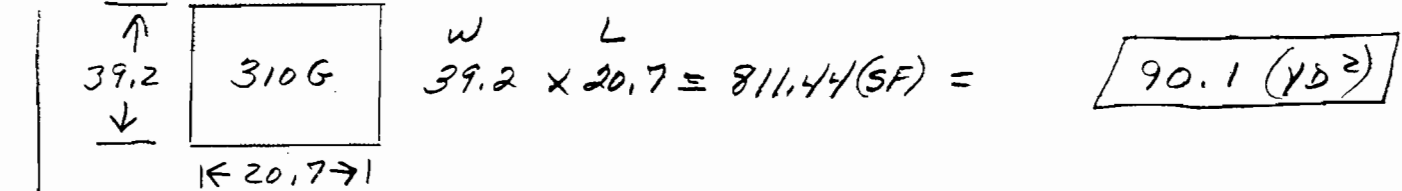
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

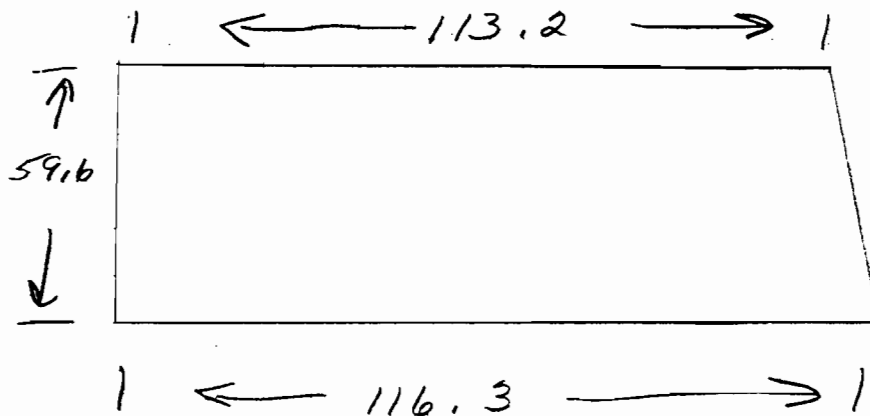
METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

TYPE III BLANKET # 310 G



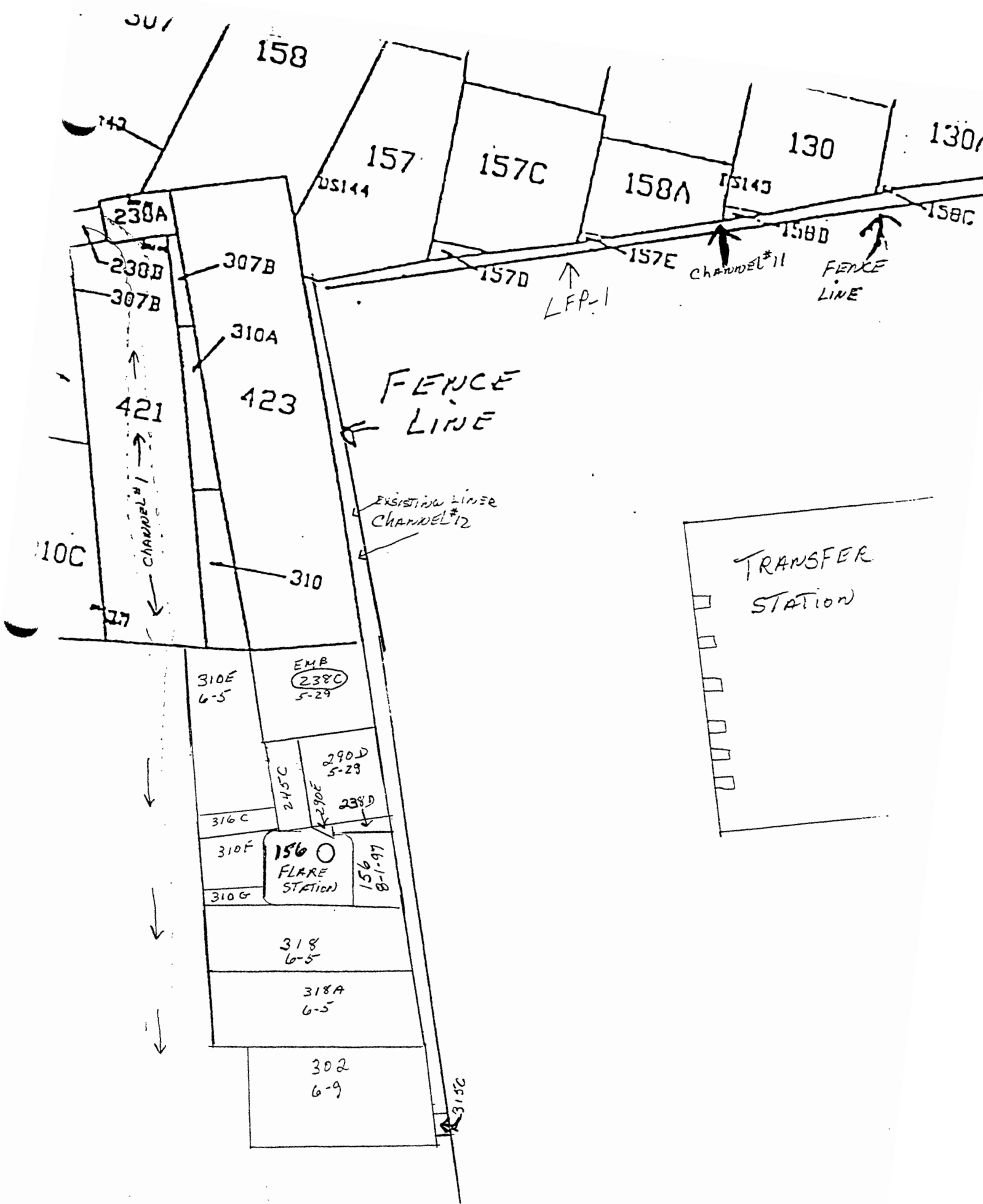
BLANKET # 318



$$\begin{array}{rcl} W & & L \\ 59.6 & \times & 113.2 \\ & & 116.3 \end{array} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \text{AVE. } 114.7$$

$$\begin{array}{rcl} W & & L \\ 59.6 & \times & 114.7 \end{array} = 6839.1 (SF) = 759.9 (YD^2)$$

Inspector's signature
JOE SCHOFIELD
Inspector's name





SHEET ____ of ____

CLIENT/SUBJECT NORTH OF FLARE STATION W.O. NO. _____TASK DESCRIPTION DRAINAGE COMPOSITE TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____

COMPOSITE NORTH OF THE FLARE STATION OVER BLANKETS #

310E - 238C - 316C - 245C - 290D - 290E AND 238D

$$\begin{array}{c} W \\ 102.8 \\ 98.0 \end{array} \left[\begin{array}{c} W \\ AVE. 100.4 \\ \end{array} \right] \times \begin{array}{c} L \\ 68 \end{array} = 6827.2(SF) = \boxed{758.5(YD^2)}$$

$$\begin{array}{c} W \\ 24.3 \end{array} \times \begin{array}{c} L \\ 72.6 \end{array} = 1764.18(SF) = \boxed{196.0(YD^2)}$$

PAGE 3

S M T (W) TH F S

Job No: 03228-018-001-0003-00

Date: 6-10-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 638

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLDY	82°	51°

Description of work performed and inspected

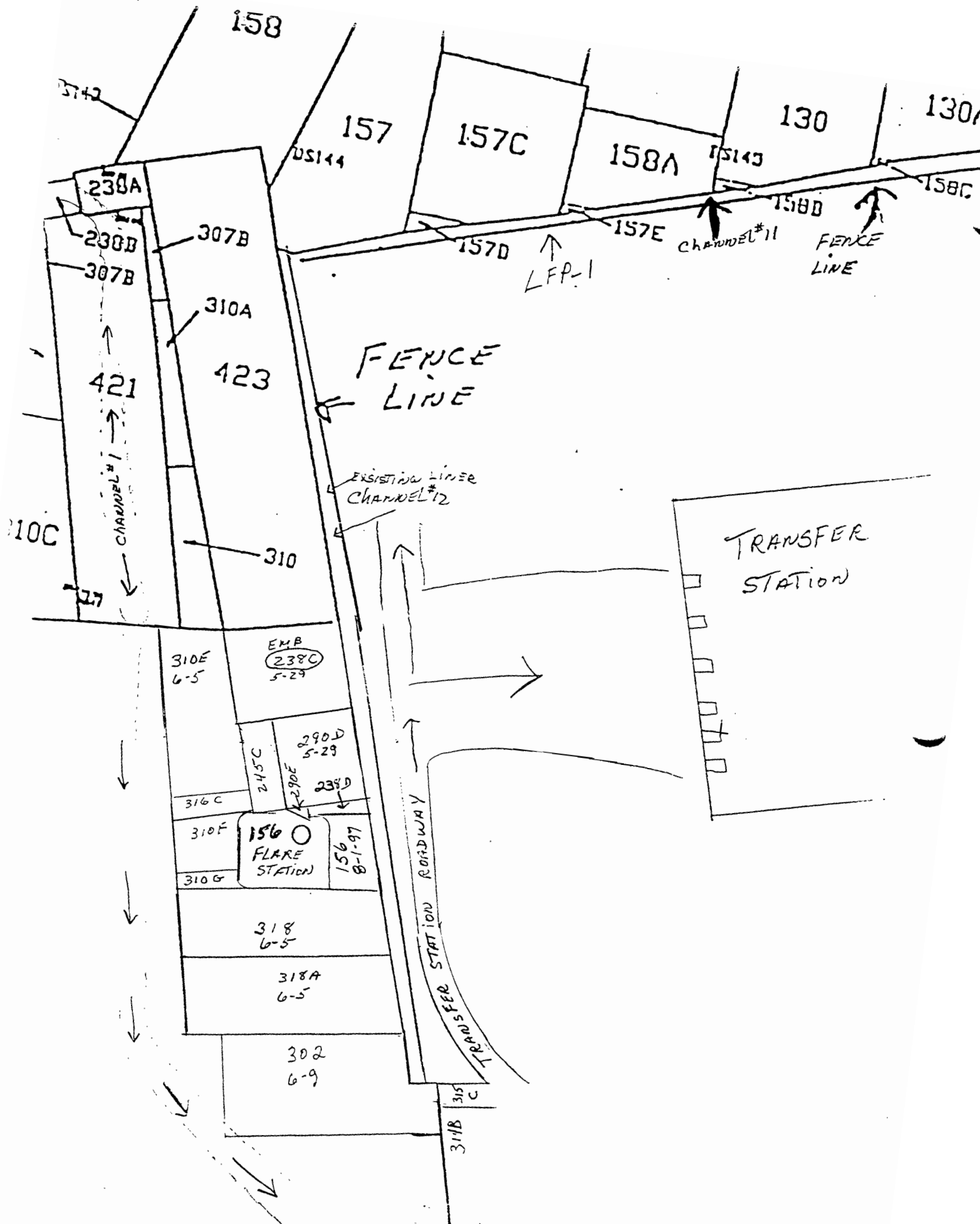
[illegible]

Remarks: AIR LANCED SEAM #318A-302 THEN PLACEMENT OF DRAINAGE NET AND 602: FABRIC FOR TYPE III COVER SYSTEM AT LFP-8 FROM CHANNEL #1 TO CHANNEL #12 AREA H6 AND I6. MIKE, DIANA AND MYSELF THEN MEASURED BLANKETS #318A-#302. PLACEMENT OF PVC LINER $\approx$ 7' FT. WIDE USED FOR BOOT AROUND THE INBOUND SCALE AND SCALE HOUSE WALL, NEOPRENE GASKET AGAINST CONCRETE WALL, LINER PLACED, STAINLESS STEEL BATTEN WITH 1' FT. PRE DRILLED HOLES, SECOND LAYER OF NEOPRENE GASKET OVER HILTI KWIK BOLT TO THE BATTEN AND THEN TIGHTEN DOWN. SEE PAGE: (4) FOR DIAGRAM. PLACEMENT OF PVC BLANKET #317 WAS EAST OF THE INBOUND SCALE AND TIED-IN TO #314C FROM OUT BOUND SCALE TO THE EXISTING LINER SOUTH OF THE TRANSFER STATION. BLANKET #317A WAS WEST OF THE INBOUND SCALE AND TIED-IN TO 314B OUT BOUND SCALE TO THE EXISTING LINER. BLANKET #317B WAS NORTH OF THE INBOUND SCALE AND TIED-IN TO THE EXISTING LINER. VISUALLY OBSERVED THE RETESTING OF FAILED DESTRUCTIVE TEST #153 A TOTAL OF (4) COUPONS USED AS IN THE SPECIFICATIONS LAY OUT AND TESTED ACCEPTABLE

Start/finish time: 7:00 / 5:30

Page 1 of 6 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION MEASURED BLANKETS LFA-8 H6+I6 TASK NO. _____

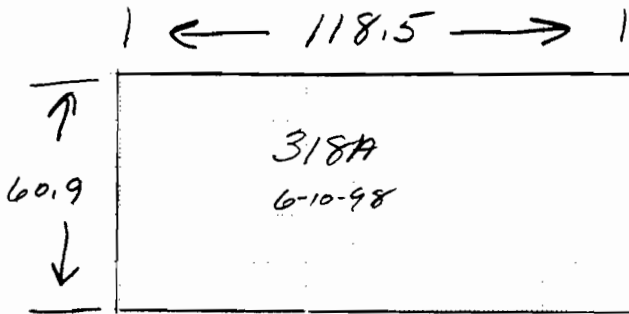
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 318A

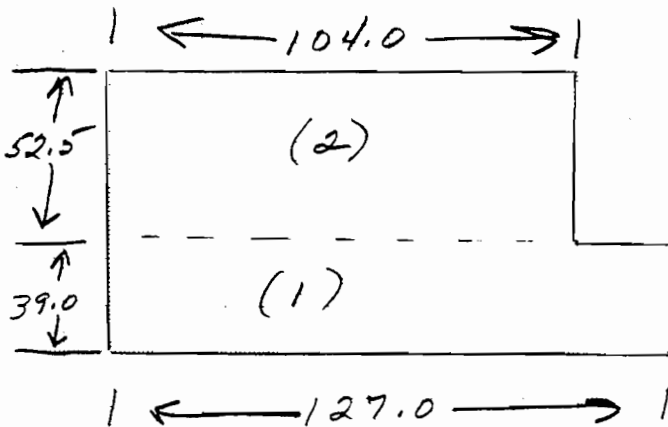


$$W \quad L \\ 60.9 \times 118.5 = 7216.65 (SF) =$$

$$801.8 (yd^2)$$

Blanket # 302

(2) MEASUREMENTS



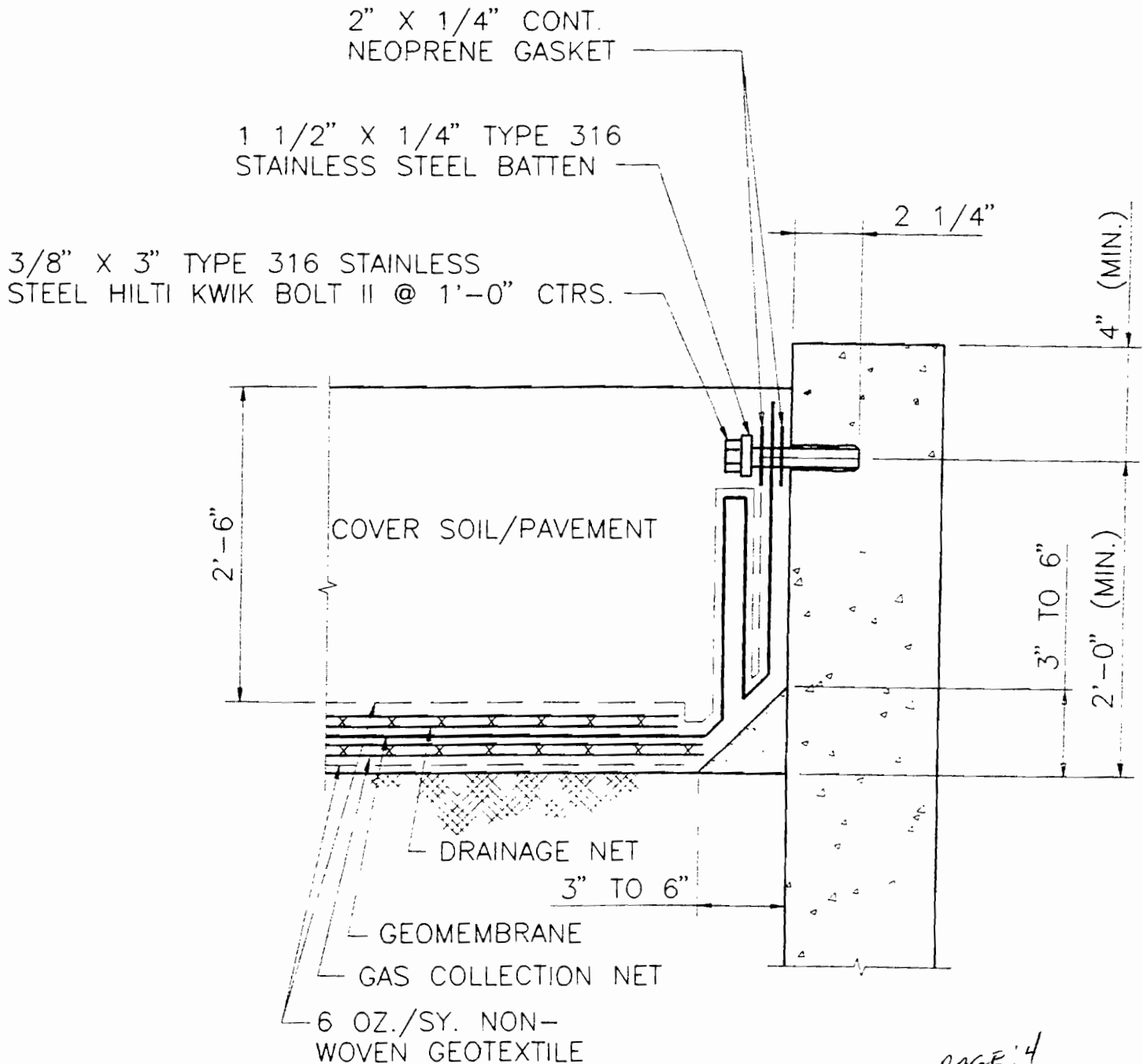
$$(1) \quad W \quad L \\ 39.0 \times 127.0 = 4953 (SF) =$$

$$550.3 (yd^2)$$

$$(2) \quad W \quad L \\ 52.5 \times 104.0 = 5460 (SF) =$$

$$+ \quad 606.6 (yd^2)$$

$$1156.9 (yd^2)$$



NOTE:

1. NO HEAVY EQUIPMENT COMPACTION SHALL BE ALLOWED WITHIN THREE FEET OF THE STRUCTURE, HAND COMPACTION SHALL BE REQUIRED.

FINAL COVER SYSTEM (TYPE III) CROSS SECTION
AT EXISTING SCALES TIE-IN

PAGE: 4

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

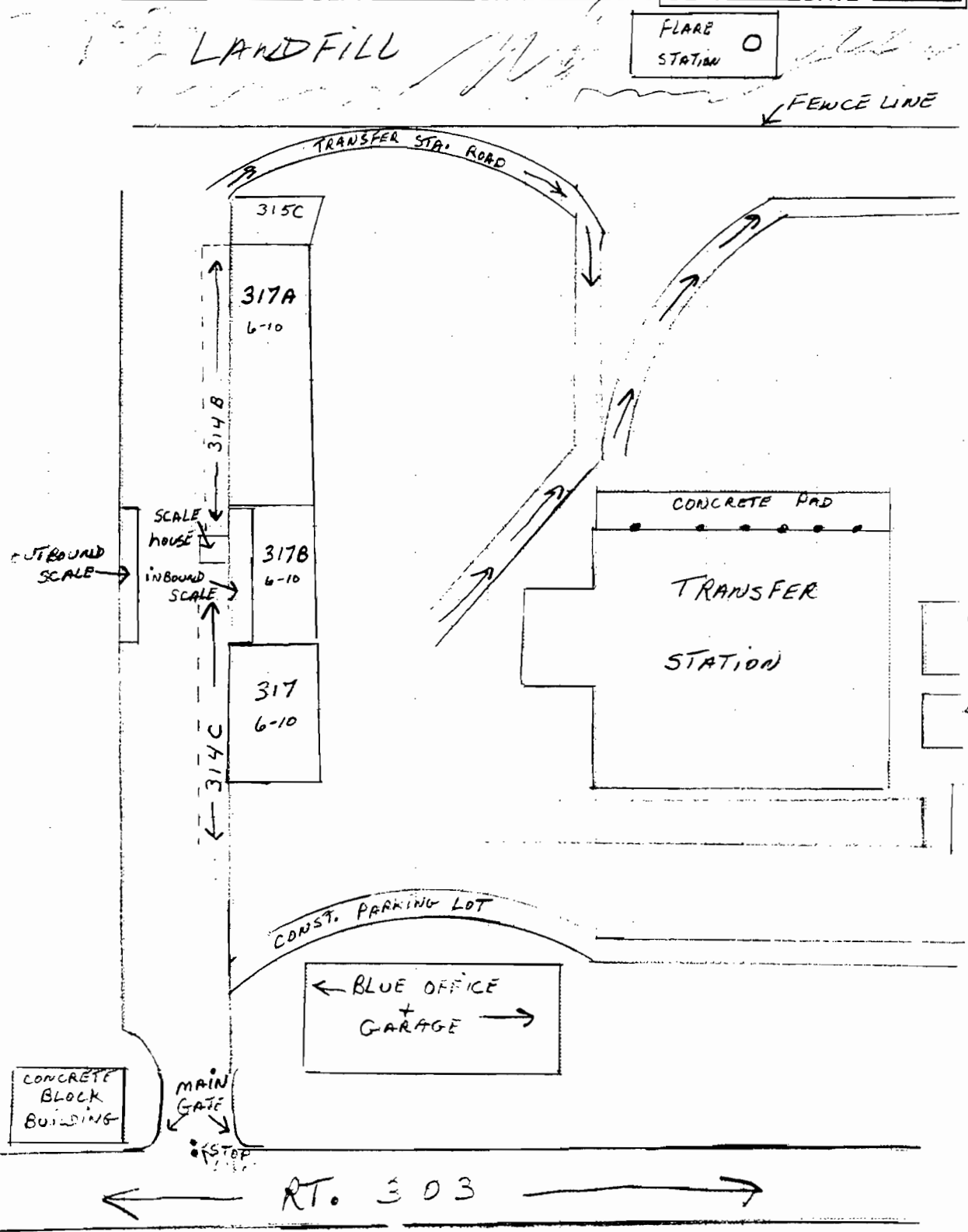
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

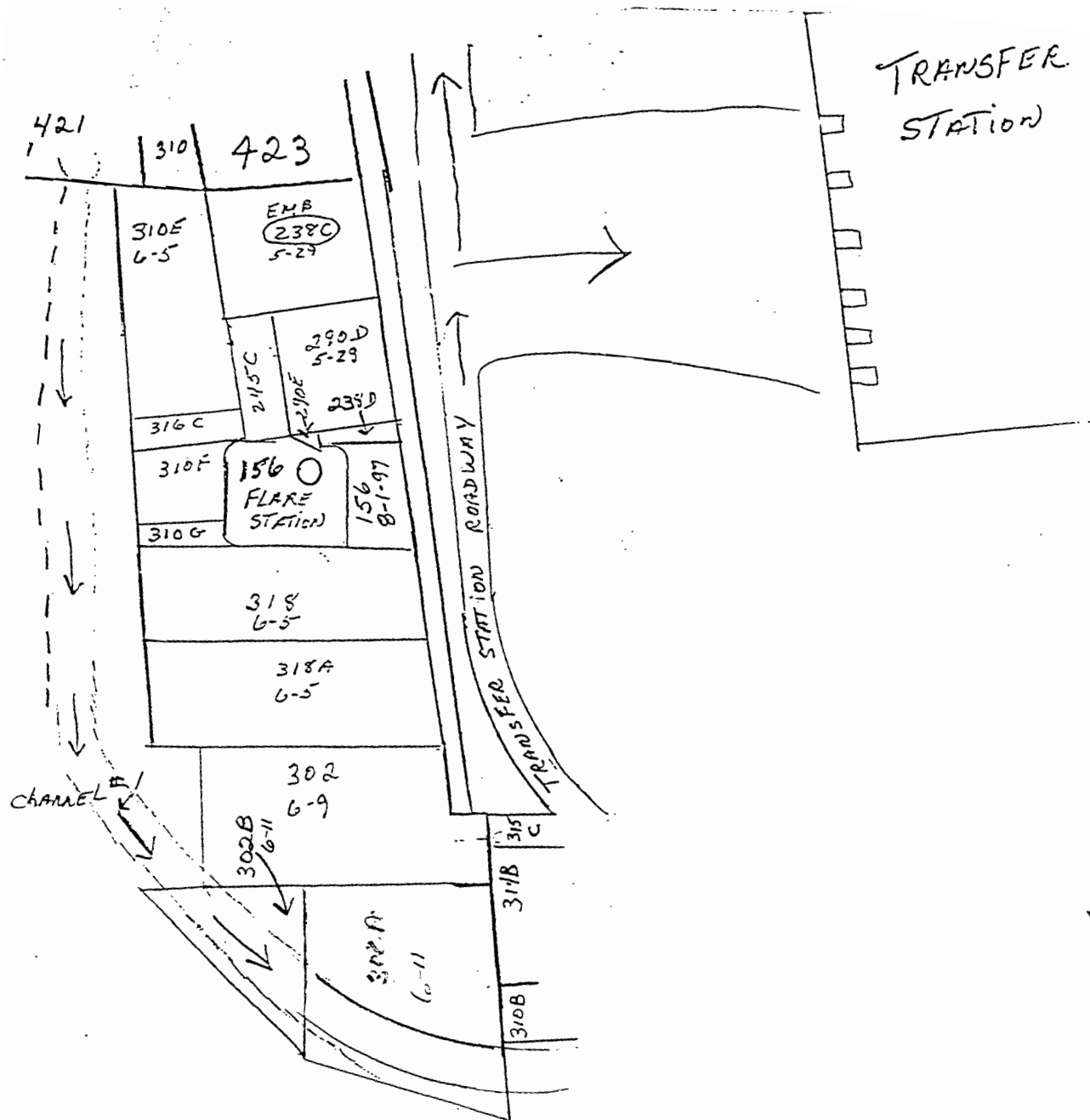
APPROVED BY	
DEPT _____	DATE _____

FLARE
STATION ○



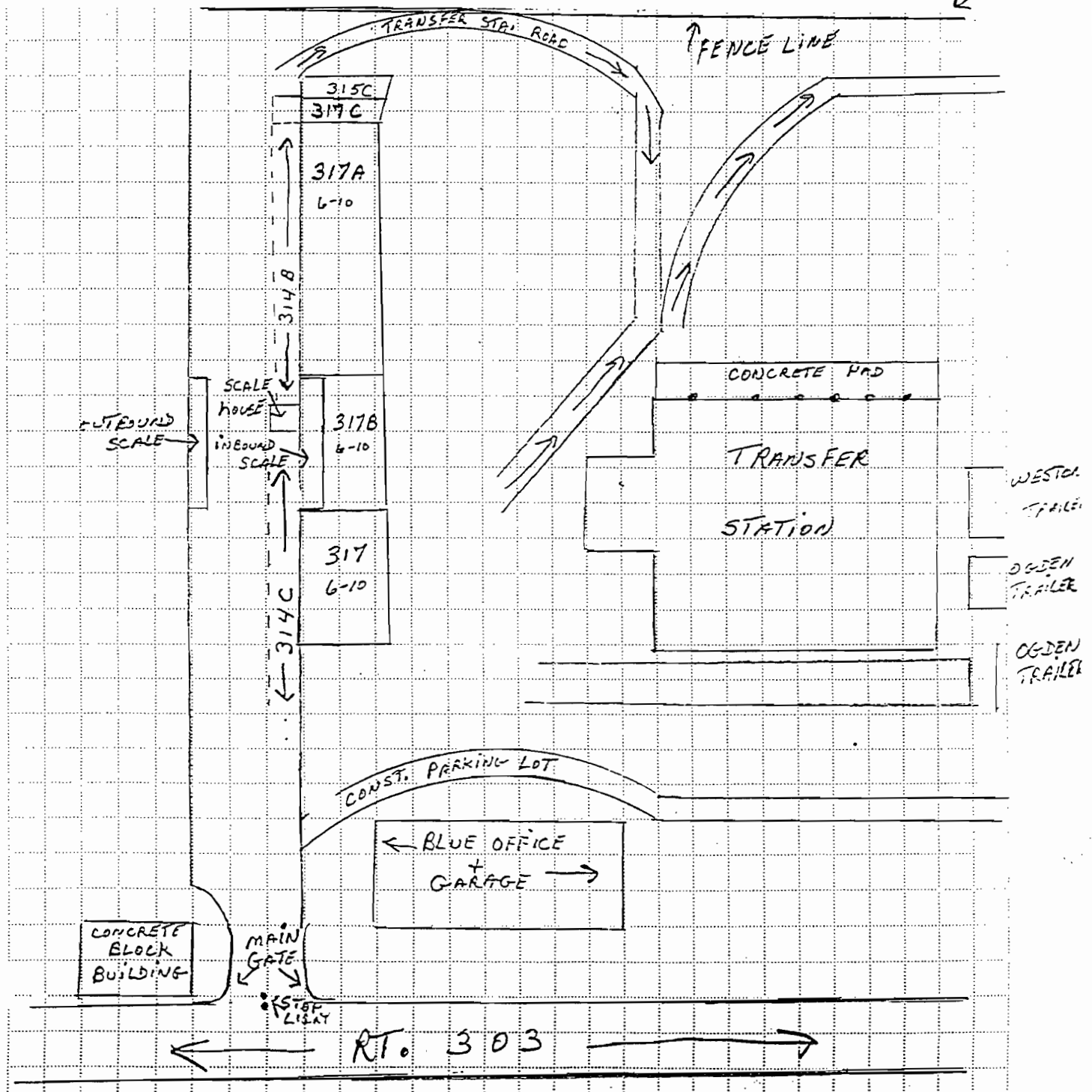
WESTON
TRAILER
OGDEN
TRAILER
OGDEN
TRAILER

Inspector's signature
JOE SCHOFIELD
Inspector's name



FLARE
STATION 0

CHANNEL 12



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

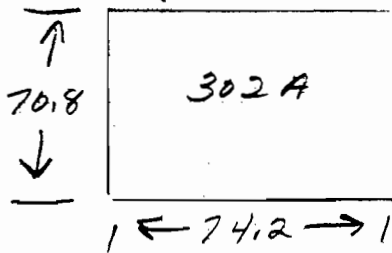
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

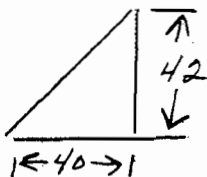
APPROVED BY	
DEPT _____	DATE _____

BLANKET # 302A



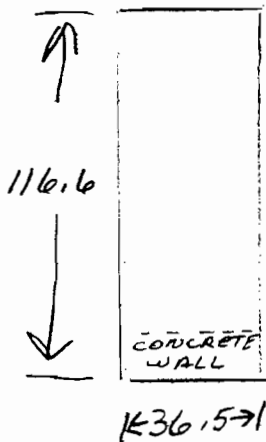
$$\begin{matrix} W & L \\ 70.8 & \times & 74.2 = 5253.36(SF) = \boxed{583.7(YD^2)} \end{matrix}$$

BLANKET # 302B



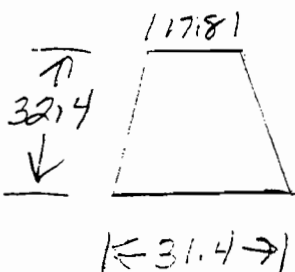
$$\begin{matrix} W & L \\ 40 & \times & 42 = 840(SF) = \boxed{93.3(YD^2)} \end{matrix}$$

BLANKET # 317A - INBOUND 314B



$$\begin{matrix} W & L \\ 36.5 & \times & 116.6 = 4255.9(SF) = \boxed{472.9(YD^2)} \end{matrix}$$

BLANKET # 317C



$$\begin{matrix} W & L \\ 31.4 & \text{AVE.} = 24.6 \times 32.4 = 797.04(SF) = \boxed{88.6(YD^2)} \\ 17.8 & \end{matrix}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

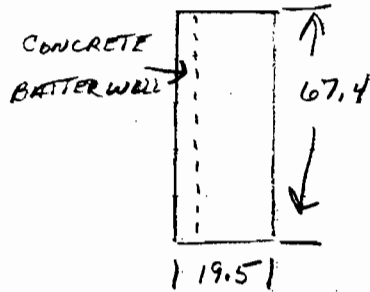
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

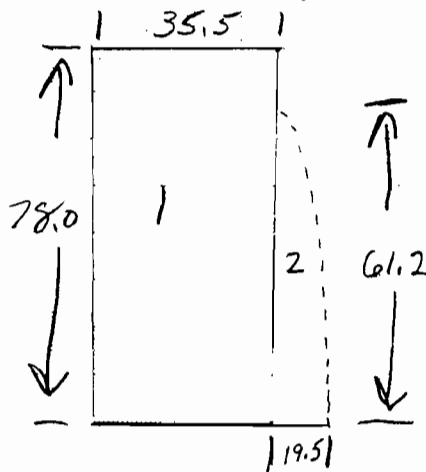
BLANKET# 317B



$$19.5 \times 67.4 = 1314.3 (SF) =$$

146.0 (YD²)

Blanket # 317



(2) MEASUREMENTS BECAUSE OF CHANNEL IN THE EXISTING LINER

$$\begin{aligned}
 (1) \quad & 35.5 \times 78 = 2769 (SF) = 307.7 (YD^2) \\
 (2) \quad & 19.5 \times 61.2 = 1193.4 (SF) = 132.6 (YD^2)
 \end{aligned}$$

TOTAL =

440.3 (YD²)

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH **F** S

Job No: 03228-018-001-0003-00

Date: 6-12-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 640

Contractor: Ogden Remedial Services Corporation

Weather

High

Low

RAIN / RAIN

64

59

Description of work performed and inspected

[illegible]

Remarks: RAIN ALL DAY, AND THE FORECAST WAS RAIN OVER THE WEEKEND AND THROUGH WEEK. JOHN CUCKIE (EL) THE LINER CONTRACTOR DECIDED TO LAY-OFF THE LABORERS TO COLLECT UNEMPLOYMENT BECAUSE OF THE RAIN AND THE WEEK FORECAST AND THE LACK OF PREPAID SUBGRADE FOR ANY PVC LINER PLACEMENT. IT WAS IN THE BEST INTEREST OF BOTH PARTYS AND HOPEFULLY OGDEN CAN PREPAID ACCEPTABLE STRUCTURAL FILL SUBGRADE AREAS + PREPAID FOR THE MONTH OF MAY THE TOTAL (\$22) IN PVC LINER AND ALL GEO SYNTHETICS DEPLOYED TO SPECIFICATIONS FOR RECONSTRUCTION PAY PERIOD.

Start/finish time: 7:00/5:30

age 1 of 1 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's Signature

Inspector's name

_____ of _____ pages
s:\clarktwn\fldforms\ldr.xls





S M T W TH F S

Date: 6/16/98

IDR #: 644

Weather	High	Low
Fog, Cloudy	85°	65°

[illegible]

Remarks: The DBM Dozer spread the 2nd 6" lift of I-4 material for the gravel road in LFA3 & LFP 6. The Grader Fine graded I-4 material in southeast LFA1. The Grader dressed up the existing riprap in Channel C-6 at the headwall. The DBM Dozer also rough graded the remaining section of Drainage Dike D-18 which runs into the headwall at PC-9 with wet X from the stockpile. 8' FEL bucket loads were used at D-18. $8 \text{ loads} \times 7 \text{ cy/load} = 56 \text{ cy} \times 0.8 = 44.8 \text{ cy}$.

[illegible]

Inspector's signature
Eric J. Cifaldi
Inspector's name

—

—

—

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 6-16-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 644

Contractor: Ogden Remedial Services Corporation

Weather		High	Low
CLDY	FOG	85°	65°
PM	AM		

Description of work performed and inspected

[illegible]

Remarks: REVIEWED DATA AND MY PERSONAL DRAWINGS FOR ANY DEDUCTIONS ON CUT BLANKETS ALONG WITH JASON COUSINS ALSO A DIRECTOR SUPERVISOR EMPLOYEE. MIKE DIANA (ORDERS REP.) DELIVERED HIS FIRST DRAFT OF THE MONTH OF MAY'S RECONCILIATION DURING THE FIVE FIVE BLANKETS AND GEOSYNTHETIC PLACED FOR PAYMENT. JASON COUSINS AND MYSELF BOTH NOTICED THERE WERE NO DEDUCTIONS FROM HIS SHEETS AND INFORMED MIKE DIANA, WHICH BLANKETS NEEDED DEDUCTIONS BECAUSE OF CUT BLANKETS AND REPLACED BLANKETS FROM EXISTING BLANKETS WHICH WAS DAMAGED.

Start/finish time: 7:00 / 4:00

age of pages
s:\clarktw\fldforms\ldr.xls

Inspector's signature
Joe Schaffner
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

S M T W TH F S

'-b No: 03228-018-001-0003-00

Date: 6-18-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 646

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLDY	89°	64°

Description of work performed and inspected

[illegible]

Remarks: RECONCILIATION FOR LINER AND GEDS VITRIFIED FOR THE MONTH OF MAY WAS ACCEPTED BY MIKE DIAMIA (OGDEN REP) TODAY. VISUAL OBSERVATION ON THE REMAINING UNLINED AREA'S ON EROSION CONTROL AND STRUCTURAL FILL DAMAGE BECAUSE OF RAIN ALL WEEK SHOWED, THAT THE FINES WASHED AWAY INTO THE CHANNELS AND TO THE LOW POINTS. CHANNELS SHOWED DEEP RIVULETS ALONG THE BANKS, STRUCTURAL FILL SHOWED IT WAS BOUNCY WITH SHARP ROCKS, GLASS AND DEBRIS. OGDEN EXCAVATED FOR MUD FLAP WEST OF CHAMBER #7 FROM GE-19 TO GE 15.

Start/finish time: 7:00 / 4:00

Page 1 of 1 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's Signature
JOE SCHOFIELD
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

ORSC PROJECT NO. 34-1996

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 6-19-78

Trial Seam Sample Log

☒ Destructive Seam Log

Q.A. 516N

[illegible]

Inspector's signature
JOE SCHOFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-23-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM <u>OVER</u>	PM <u>OVER</u>
TEMP DEG F	HI <u>76°</u>	LO <u>67°</u>
WIND	AM <u>< 10</u>	PM <u>< 10</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

[illegible]

COMMENTS: SUBGRADE 60Z. FABRIC DIMENSIONS WILL BE MEASURED ONCE PVC BLANKETS ARE PLACED.

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 6-24-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 652

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
OVER / OVER AM 3:00 RAIN	90°	69

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL PVC LINER SOUTH OF FLARE STATION AREA H 6		SEE PAGE: (2) FOR DIAGRAM
	BLANKET # 317 D	94.4 (YD ²)	
	# 317 E	19.2 (YD ²)	PAGE: (3) MATH
	# 316 C	26.4	
6 B	PERIMETER DRAINAGE PIPE NORTH WEST INBOUND SCALE HOUSE AREA I 5	28 FT.	
	GEOSYNTACTIC CLAY LINER (GCL)		
	NORTHWEST INBOUND SCALE HOUSE AREA I 5		
	W L		
	$2.5 \times 26.4 = 66(SF) =$	7.3 (YD ²)	

Remarks: PLACEMENT OF (3) BLANKETS SOUTH OF THE FLARE STATION BLANKET #317 D TIED-IN SOUTH OF #318 A AND WEST OF #302, BLANKET # 317 E WAS SOUTH OF 317 D AND WEST OF #302, BLANKET # 316 C WAS SOUTH OF #318 A AND WEST OF 317 D. AFTER AIR LANCEING ALL SEAMS MIKE DIANA AND MYSELF MEASURED THE BLANKETS, THEN DRAINAGE NET AND 602 FABRIC WAS PLACED OVER BLANKETS FOR TYPE III COVER SYSTEM. PLACEMENT OF GCL AT THE NORTH WEST END OF THE IN BOUND SCALE HOUSE AREA OVER BLANKETS # 315 C AND 317 C THEN 602 FABRIC WITH STONE BEDDING FOR PERFORATED DRAINAGE PIPE OVER THE TYPE III COVER SYSTEM OVER THE SAME BLANKETS # 315 L AND 317 C. IN LFP-8 CHANNEL # 2 AREA PLACEMENT OF BLANKETS # 320 TIED-IN SOUTH OF 127A - #143 AND EAST OF #165 AND #139, BLANKET # 327 TIED-IN SOUTH OF #127A - #138 EAST OF #320, BLANKET # 327A TIED-IN SOUTH OF #327 AND EAST OF #320.

Start/finish time: 7:00/5:00

Joe Schafeld
Inspector's signature
JOE SCHAFELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

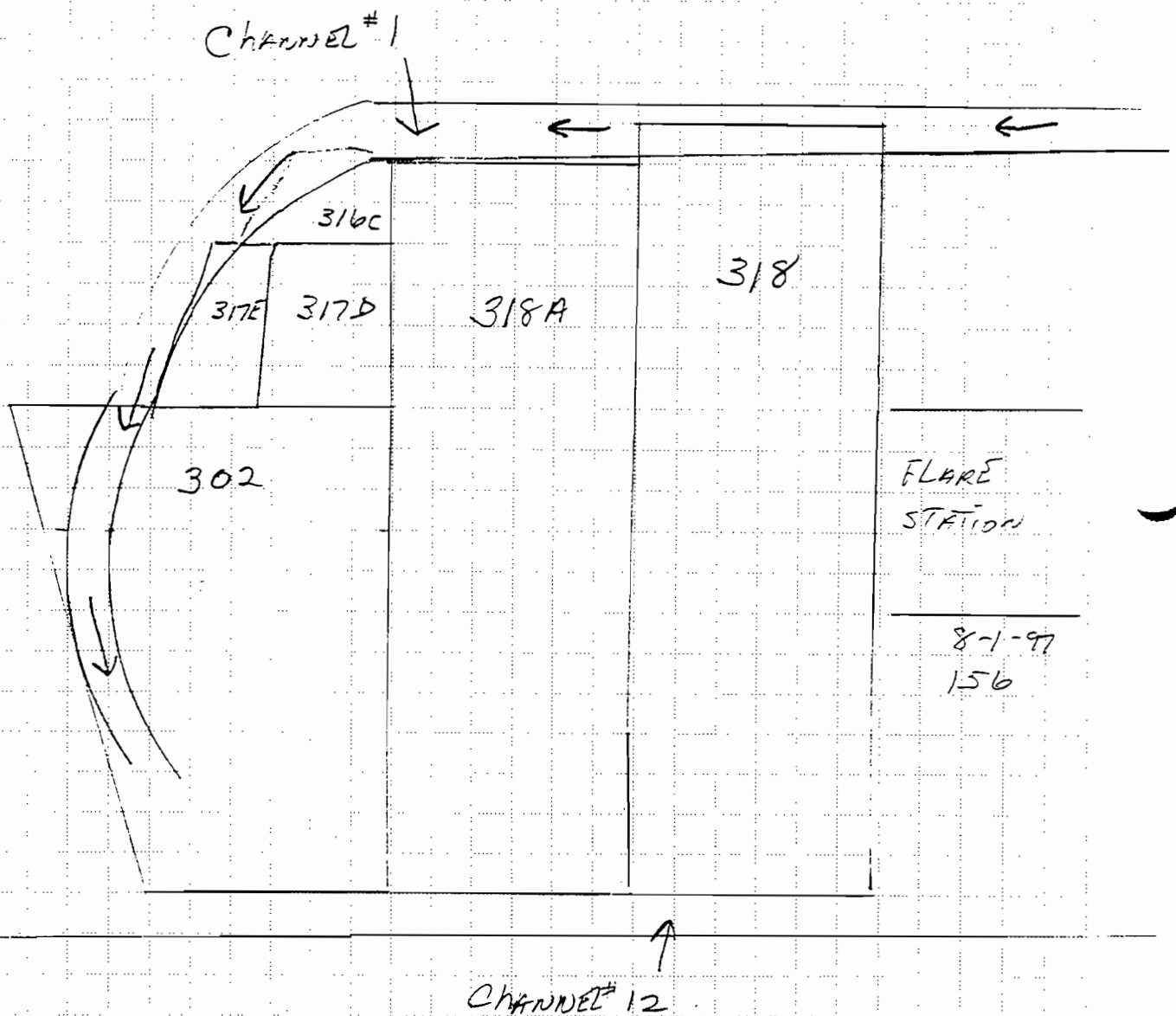
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION SOUTH OF FLARE STATION AREA H6 TASK NO. _____

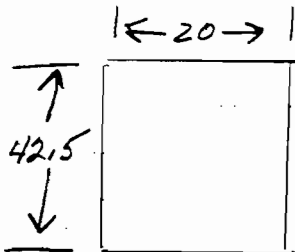
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

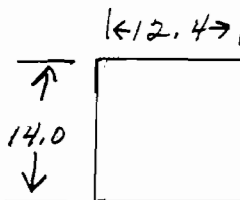
BLANKET # 317 D



$$W \quad L \\ 20 \times 42.5 = 850.0 (SF) =$$

$94.4 (YD^2)$

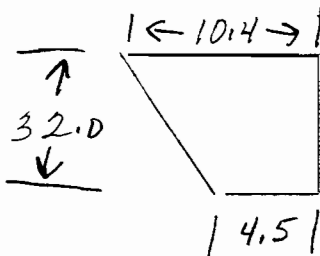
BLANKET # 317 E



$$W \quad L \\ 12.4 \times 14 = 173.6 (SF) =$$

$19.2 (YD^2)$

BLANKET # 316 C



$$W \quad W \quad L \\ 10.4 \quad 4.5 \quad] \text{ AVE. } 7.45 \times 32 = 238.4 (SF) =$$

$26.4 (YD^2)$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ **TASK NO.** _____

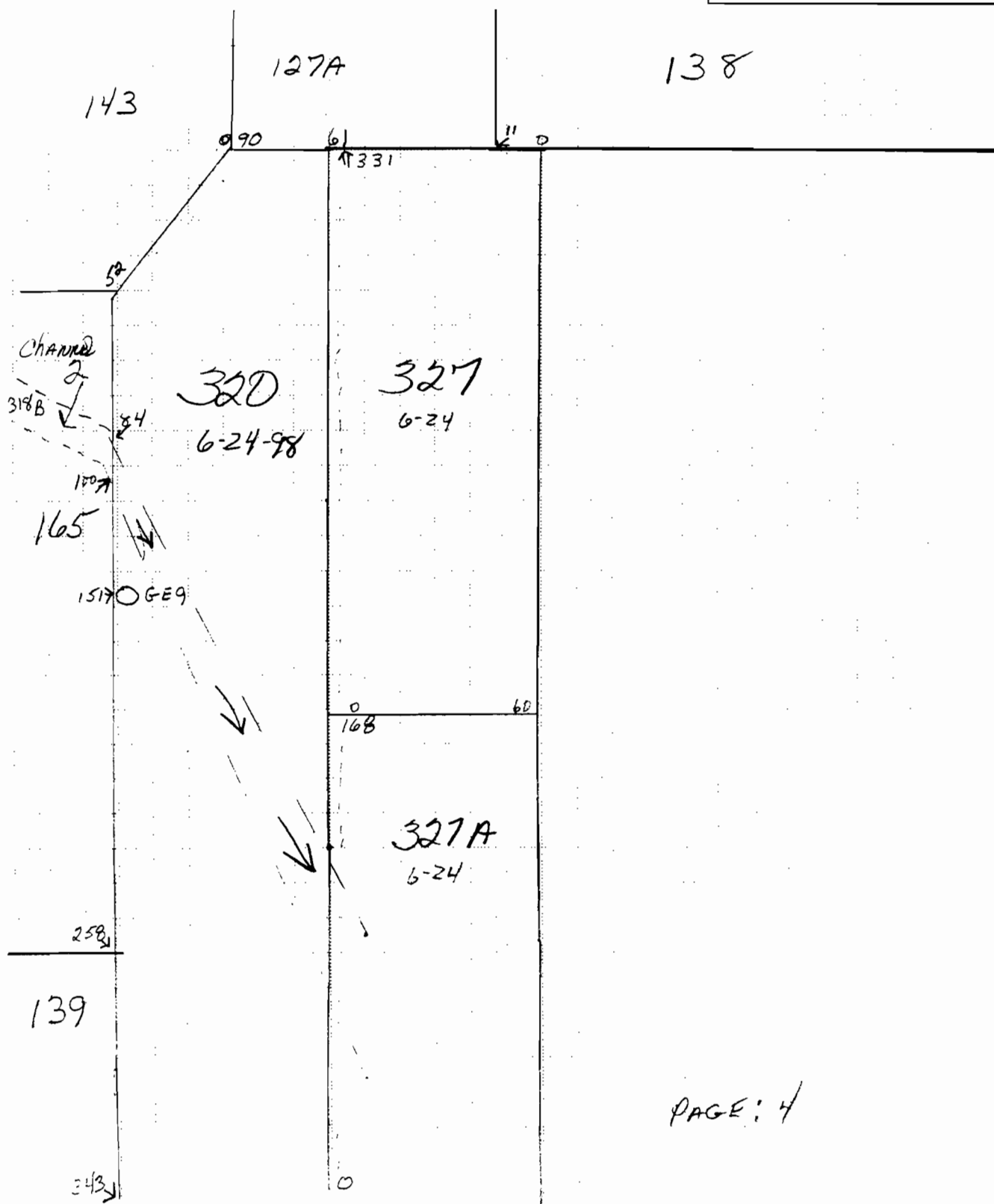
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____



ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-24-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 69°		PM 90°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 6-25-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 653

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLDY	94°	69°

Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL. PVC LINER LFP-8 G-6 AND G-5		
			SEE MATH PAGES!
	BLANKET # 320	2162.6 (YD ²)	2-3
	# 138 B	82.1 (YD ²)	
	# 327	1102.0 (YD ²)	DIAGRAM 4-5
	# 327 A	1113.3 (YD ²)	
	DEDUCTION BLANKET # 143 TIE-IN SEAM # 320 (A ₂) MATH PAGE: (2)	76.5 (YD ²)	
	GEOSYNTHETIC CLAY LINER (GCL) INBOUND SCALE NORTH END TIE-IN AREA I 5	73.6 (YD ²)	2.5 X 265 FT.
6B	PERIMETER DRAINAGE PIPE INBOUND SCALE OVER (GCL) I 5 SOUTH LEG CHANNEL # 12	2650 FT. 58.0 FT.	

Remarks: AIR LANCED ALL SEAMS ON BLANKETS PLACED YESTERDAY AND BLANKET #318B WHICH WAS PLACED TODAY INSIDE CHANNEL #2, USED AS CAP STRIP FOR BLANKET #165. AIR LANCED ALL PATCHES AND REPAIRS PLUS PVC BOOTS FOR GE-9 AND 10" IN HEADER PIPE WITH DL-2. PLACEMENT OF BLANKET #321 TIE-IN SOUTH OF #320 AND EAST OF 139. PLACEMENT OF DRAINAGE NET EAST OF THE REVISED CHANNEL #2 AREA FOR TYPE III COVER SYSTEM. ROBERT (OGDEN REP.) AND MYSELF MEASURED BLANKETS #320-138B-#327 AND #327A WHICH IS IN LFP-8 AREA G-6 AND G-5. PLACEMENT OF GCL AS SPECIFICATIONS REQUIRED FROM THE INBOUND SCALE HOUSE AREA I 5 NORTH TIE-IN FROM BLANKETS #317A-#317B AND #317 TO THE EXISTING LINER, THEN 602. FABRIC PLACED OVER TYPE III COVER SYSTEM STONE BEDDING AND PERIMETER DRAINAGE PIPE, WHICH WAS NOW WRAPPED OVER THE GCL AREA. PLACEMENT OF PERIMETER DRAINAGE PIPE WRAPPED IN 602. FABRIC AND STONE BEDDING AT THE SOUTH LEG IN CHANNEL #12 SOUTH OF THE FLARE STATION.

Start/finish time: 7:00/6:00

page 1 of 6 pages

s:\clarktown\fldforms\idr.xls

Joe Schafeld
Inspector's signature
JOE SCHAFFELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION LFP-8 EAST OF GE-9 CHANNEL #2 TASK NO. _____

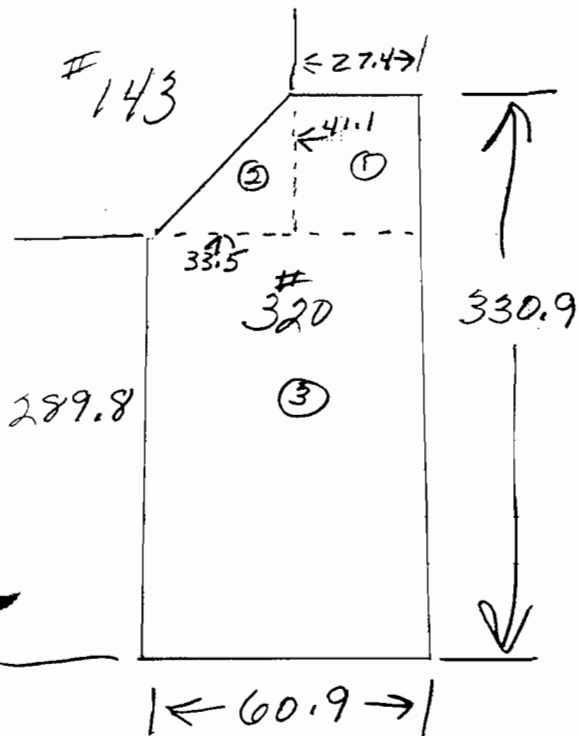
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 320



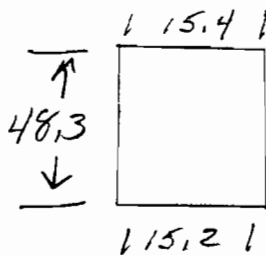
$$A_1 \quad w \quad L \\ 27.4 \times 41.1 = 1126.146(F) = \boxed{125.1(YD^2)}$$

$$A_2 \quad \triangle \div 2 \quad w \quad L \\ 33.5 \times 41.1 = 688.42(SF) = \boxed{76.5(YD^2)}$$

$$A_3 \quad w \quad L \\ 60.9 \times 289.8 = 17648.82(SF) = \boxed{1961(YD^2)}$$

$$TOTAL = 2162.6(YD^2)$$

BLANKET # 138B



$$w \quad L \\ 15.2 \quad 15.4 \quad] \quad AVE. = 15.3 \times 48.3 = 738.99(SF) = \boxed{82.1(YD^2)}$$

CLIENT/SUBJECT _____ W.O. NO. _____

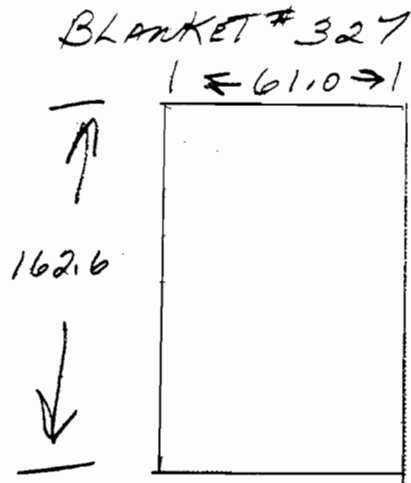
TASK DESCRIPTION LEF-8 EAST OF GE9 CHANNEL 2 AREA TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

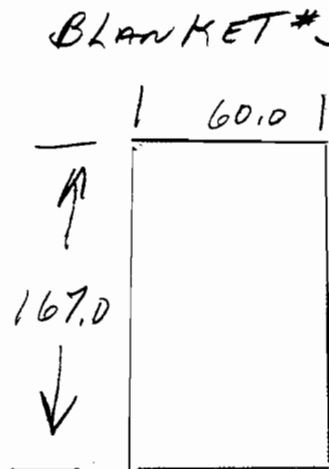
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



$$W \times L = 61.0 \times 162.6 = 9918.6 (SF) = \boxed{1102.0 (YD^2)}$$



$$W \times L = 60.0 \times 167.0 = 10020.0 (SF) = \boxed{1113.3 (YD^2)}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

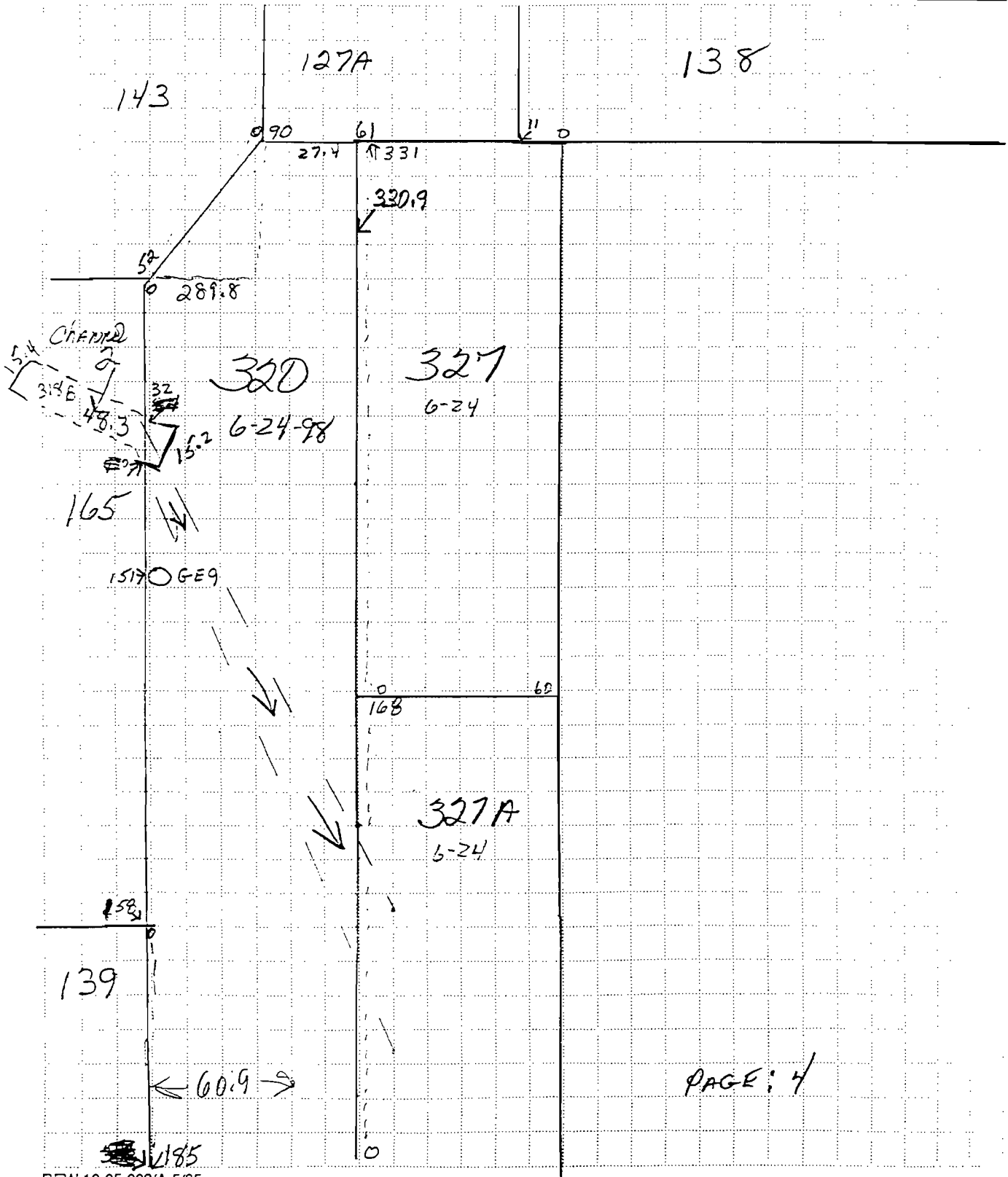
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



PAGE: 4



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

APPROVED BY _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____

320
6-24

327A
6-24

139

321
6-25

319

PAGE 15

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-25-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 6 9 0		PM 9 7 0	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's signature
JOE SCHOFIELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

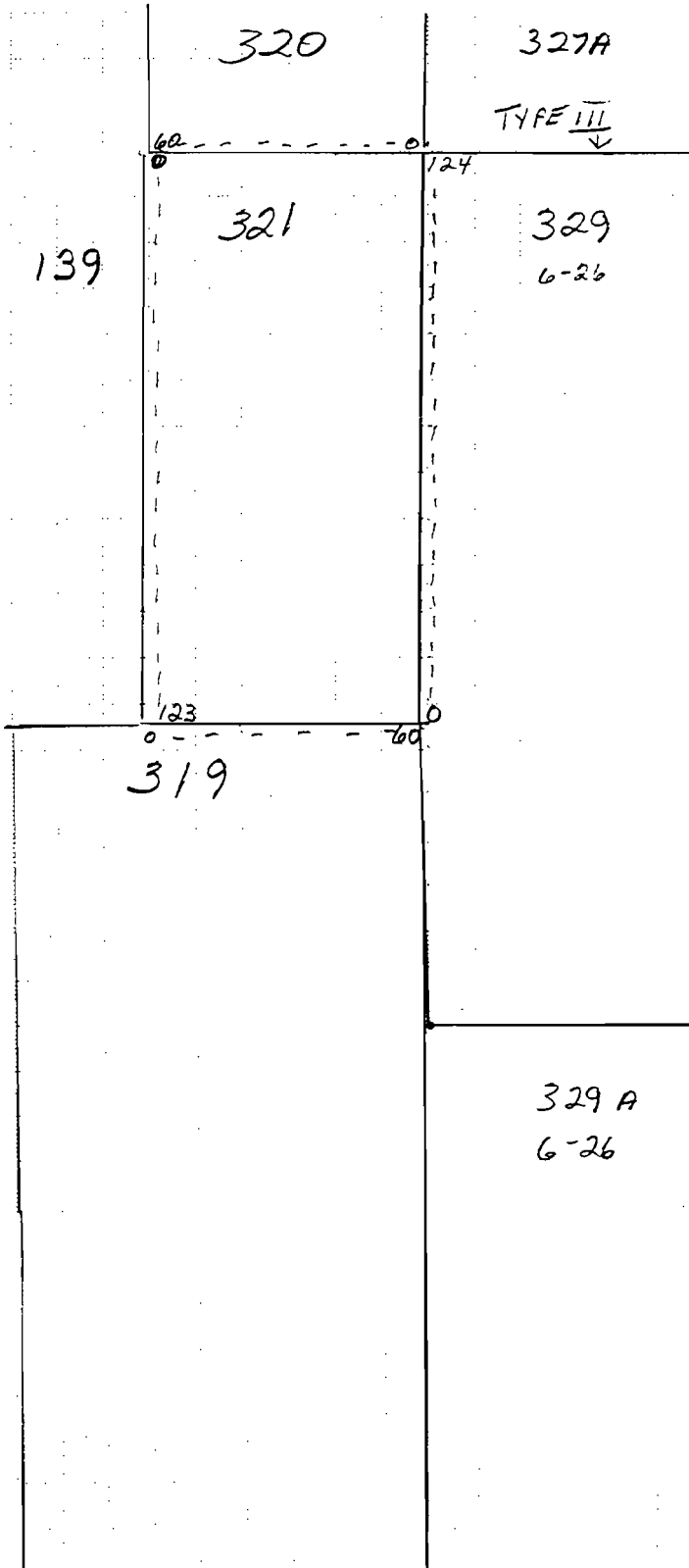
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

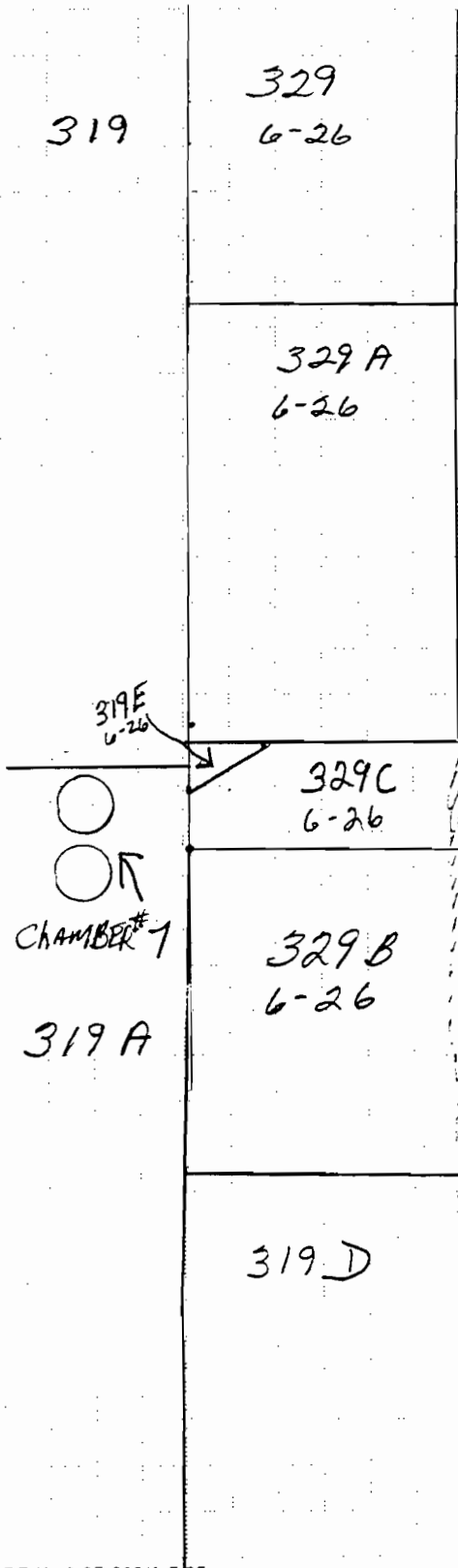
✓ TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



← RAIA →

TREES

BALL
FIELD

← ANCHOR
TRENCH

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-26-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 75°			PM
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

PAGE: 4

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S (M) T W TH F S

Job No: 03228-018-001-0003-00

Date: 6-29-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 657

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
OVN / OVR	71 °	65 °

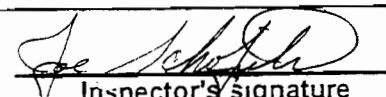
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL PVC LINER LFP-8 EAST OF GE9-GE11 AND CHAMBER #7		SEE PAGES: 2, 3 AND 4 FOR DIAGRAM AND MATH ALSO INCLUDES THE TRANSITION FROM TYPE I AND TYPE III
	BLANKET # 321	850 YD ²	
	# 329	1284.7 YD ²	
	# 329 A	596.9 YD ²	
	# 319E - # 329C - # 329B	242.3 YD ²	
	# 319 D	130.4 YD ²	
24 A	DRAINAGE NET (THE TRANSITION BETWEEN TYPE I AND TYPE III) LFP-8 EAST OF GE-9-GE11 AND CHAMBER #7		
	BLANKET # 321 TYPE I	850 YD ²	
	# 329 TYPE I	398.2 YD ²	TYPE III 886.4 YD ²
	# 329A TYPE I	265.7 YD ²	TYPE III 331.2 YD ²
	# 319E-329C-329B TYPE I	242.3 YD ²	
	# 319D TYPE I	130.4 YD ²	
	# 327A TYPE I	510.6 YD ²	TYPE III 602.7 YD ²

* Remarks: PLACEMENT OF DRAINAGE NET THEN 602 FABRIC OVER PVC BLANKETS # 143-127A-165-320-327-139 AND 327A. PLACEMENT OF PVC BOOT ON "2" IN. DL-1 PIPE THEN AIR LANDED THE (2) "10" IN HEADER PIPES AND THE "2" IN DL-1 PIPE OVER BLANKET # 327A IN LFP-8 EAST OF GE-9. AFTER AIR LANDED THE (2) "10" IN HEADER PIPE AND THE "2" IN DL PIPE NEOPRENE CASSET, STAINLESS STEEL BANDS THEN CAULK ON TOP OF PVC BOOTS WAS PLACED. MIKE, DIANA AND MYSELF MEASURED PVC BLANKETS # 321 - # 329 - # 329A - # 319E # 329C # 329B AND # 319D

Start/finish time: 7:00/6:30

Page 1 of 5 pages
s:\clarktown\ldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION LFP-8 EAST OF GE 11 AND CHAMBER #7 TASK NO. _____

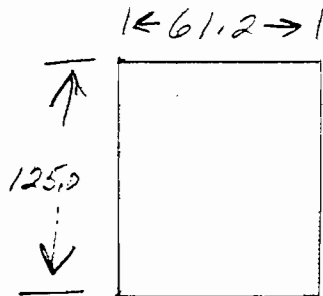
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 321 (TYPE I)



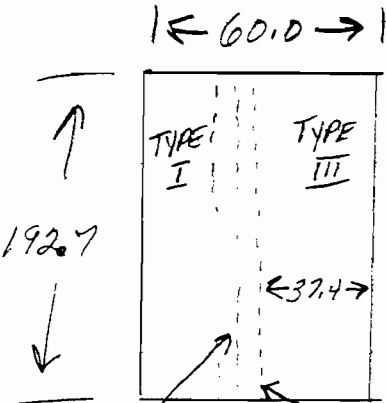
$$W \quad L$$

$$61.2 \times 125.0 = 7650 (SF) = \boxed{850 (YD^2)}$$

BLANKET # 329

$$TYPE I = 398.3 \quad YD^2$$

$$TYPE III = 886.3 \quad YD^2$$



$$W \quad L$$

$$60 \times 192.7 = 11562.0 (SF) = \boxed{1284.7 (YD^2)}$$

$$TYPE III \quad W \quad L$$

$$37.4 \times 192.7 = 7206.98 (SF) = 800.8 (YD^2)$$

$$+ 4.0 \times 192.7 = 770.8 (SF) = + 85.6 (YD^2)$$

CHANNEL #2 FACTORY SEAM 4' FT TO CHANNEL #2

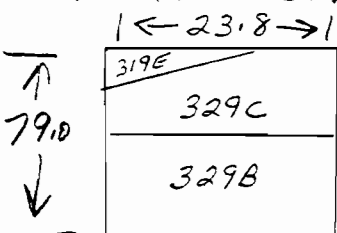
$$TYPE III TOTAL = 886.4 (YD^2)$$

$$Blanket \# 329 = 1284.7 \quad YD^2$$

$$TYPE III = - 886.4 \quad YD^2$$

$$TYPE I = 398.3 \quad YD^2$$

LANDFILLS 319E-329C-329B = TYPE I



$$W \quad L$$

$$23.8 \quad 79.0 \quad AVE. = 27.6 \times 79.0 = 2180.4 (SF) = \boxed{242.3 (YD^2)}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION LFP-8 EAST OF GE-11 AND CHAMBER #7 TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

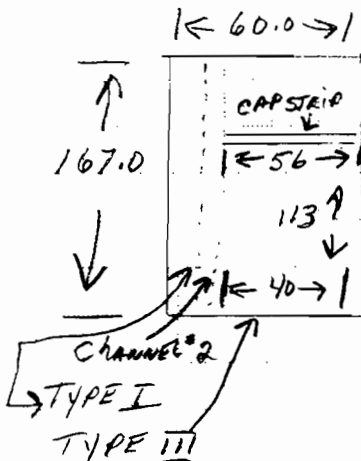
APPROVED BY

DEPT _____ DATE _____

BLANKET # 327A

TYPE I = 510.7 YD²

TYPE III = 602.6 YD²



W L
60 x 167 = 10020(SF) =

1113.3 (YD²)

TYPE III W L

56 AVE. = 48 x 113 = 5424(SF) = 602.7 (YD²)

BLANKET # 327A = 1113.3 YD²

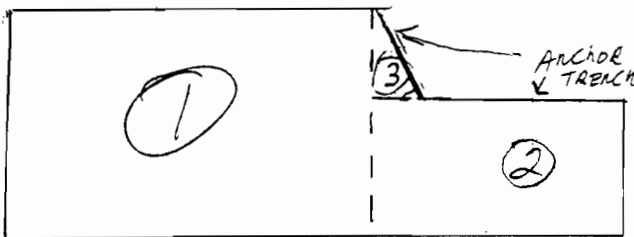
TYPE III = 602.7 YD²

TYPE I = 510.6 YD²

BLANKET # 329A = 596.9 YD²

N

TYPE III = 331.2
TYPE I = 265.7

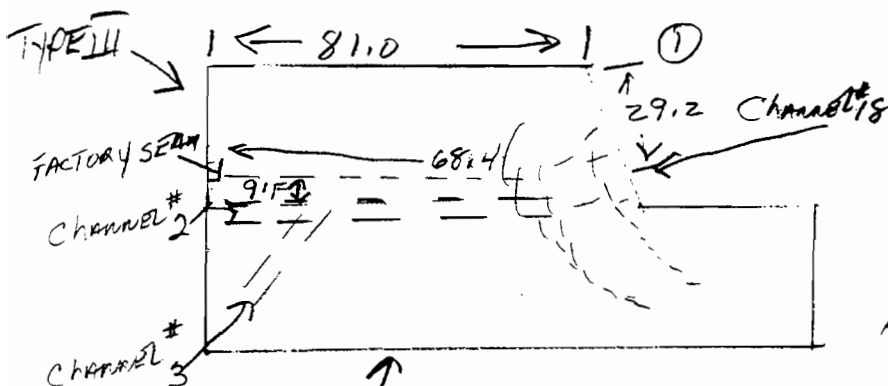


W L
A₁ = 78.9 x 60.0 = 4734(SF) = 526 (YD²)

W L
A₂ = 19.1 x 23.7 = 452.67(SF) = 50.3 (YD²)

A₃ = $\frac{\Delta}{2}$
W L
10 x 37 = 185(SF) = 20.6 (YD²)

TOTAL (YD²) = 596.9 (YD²)



A₁ = W L
29.2 x 81.0 = 2365.2(SF) = 262.8 (YD²)

A₂ = W L
9 x 68.4 = 615.6(SF) = 68.4 (YD²)

TYPE I = 596.9 - 331.2 = 265.7

TYPE III TOTAL = 331.2 YD²

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION LEF-4 SOUTHEAST OF CHAMBER# 7 TASK NO. _____

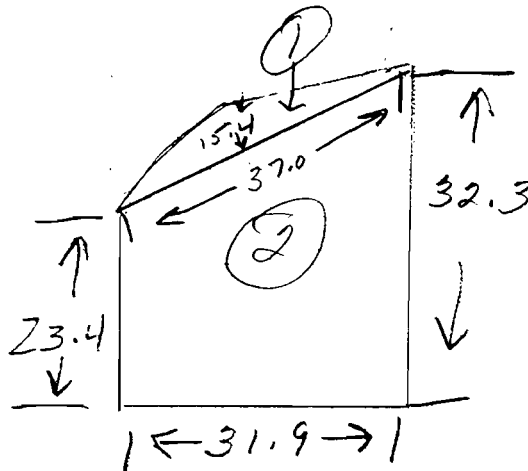
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____ DATE _____	

BLANKET # 319 D TYPE I



$$A_1 \quad W \quad L \quad \triangle \div 2$$

$$37.0 \times 15.4 = 284.9 (SF) = \boxed{31.7 (YD^2)}$$

$$A_2 \quad W \quad L$$

$$\begin{matrix} 23.4 \\ 32.3 \end{matrix} \quad \left[\quad \right] \quad AVE. 27.85 \quad +$$

$$A_2 \quad W \quad L$$

$$27.85 \times 31.9 = 888.4 (SF) = \boxed{98.7 (YD^2)}$$

$$A_1 = 31.7$$

$$A_2 = 98.7$$

$$TOTAL = \boxed{130.4 YD^2}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 6-29-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 65°		PM 71°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's signature
JOE SCHOFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-1-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM	<u>CLR</u>	PM	<u>CLDY</u>
TEMP DEG F	HI	<u>87</u>	LO	<u>63</u>
WIND	AM	<u>410</u>	PM	<u>710</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W (TH) F S

Job No: 03228-018-001-0003-00

Date: 7-2-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 660

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
---------	------	-----

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF 602. FABRIC OVER THE SUBGRADE IN LFP-8 SOUTH OF BLANKET # 136, AND EAST OF BLANKET # 138 BUT AT THIS TIME, INSIDE CHANNEL # 1 SUBGRADE, WEST OF THE FLARE STATION WAS UNACCEPTABLE FOR 602. FABRIC. PLACEMENT OF PVC LINER USED FOR MID FLAP WEST OF CHAMBER # 7 AND EAST OF GE-19, TO DATE A 21' FT WIDE X 60' FT LONG SECTION WAS WELDED TO THE EXISTING LINER.

Start/finish time: 7:00/3:30

Page 1 of 1 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION	TASK NO.
-------------------------	-----------------

PREPARED BY _____ DEPT _____ DATE _____

APPROVED BY

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____

EMBOSS
421

136

310

138

 $8 \leq 0$

26 GEN 18

328A
7-7-98

326 B
7-7-98

EMB OSS
429
7-7-98

316 E

1-^{max}
Stack $\rightarrow$

316C

310F

3:05

318

EW BOSS
429A
7-7-98

318A

60

71

959

874

328
7-7-98

326
7-7-98

325
7-7-98

327

GENI
OK

326A
7-7-98

150

327A

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-7-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN CUCKIE

WEATHER	AM	<u>CLDY</u>	PM	<u>CLDY</u>
TEMP DEG F	HI	<u>85</u>	LO	<u>63</u>
WIND	AM	<u>210</u>	PM	<u>210</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

602. FABRIC PLACED 7-6-98 UNDER BLANKET

[illegible]

COMMENTS: TO DATE BLANKETS NOT MEASURED YET.

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 7-8-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 666

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
RAIN / RAIN	70°	65°

Description of work performed and inspected

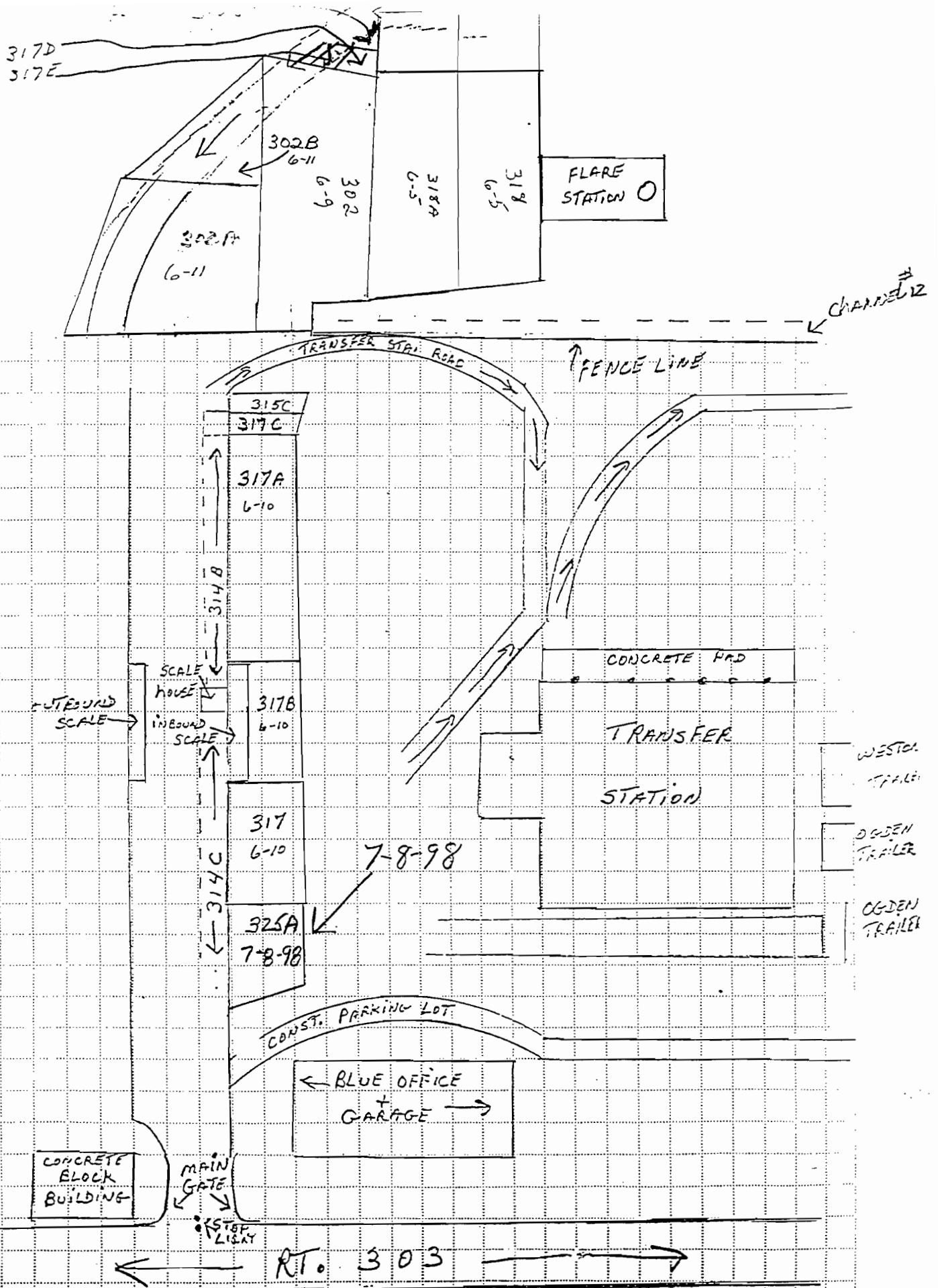
ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
<u>22 E</u>	<u>SMOOTH 40 MIL. PVC LINER</u> <u>AREA H6 AND PART OF H7</u>		<u>SEE PAGE: 3</u> <u>FOR DIAGRAM</u>
	<u>BLANKET# 328</u>	<u>1626.3 YD2</u>	
	<u>326 - 326A</u>	<u>1517.5 YD2</u>	<u>PAGES: 4 - 5</u>
	<u>328A</u>	<u>516.5 YD2</u>	
	<u>326B</u>	<u>692.0 YD2</u>	<u>FOR MATH</u>
	<u>325</u>	<u>1366.7 YD2</u>	
<u>22 D</u>	<u>EMBOSSED 40 MIL. PVC LINER</u> <u>AREA H6 AND PART OF H7</u>		
	<u>BLANKET# 429</u>	<u>1053.6 YD2</u>	<u>SEE PAGE: 3</u>
	<u>429 A</u>	<u>855.5 YD2</u>	<u>FOR DIAGRAM</u>
			<u>PAGES: 5 - 6</u>
			<u>FOR MATH</u>

Remarks: PLACEMENT OF 602. FABRIC OVER SUBGRADE, DRAINAGE NET OVER
FABRIC THEN PVC LINER OVER NET FOR TYPE III COVER SYSTEM.
BLANKET# 325A WAS DEPLOYED AT THE INBOUND SCALE AREA J-5
WHICH TIED-IN EAST OF BLANKET #317 AND SOUTH OF #314C AND
314D. MIKE DIANA AND MYSELF MEASURED THE BLANKETS PLACED
YESTERDAY 7-7-98 AREA H-6 AND PART OF H-7 BLANKETS MEASURED
ARE: # 328 - 328A - 326 - 326A - 326B AND # 325.
THE EMBOSSED BLANKETS MEASURED WERE: # 429 AND # 429A.
BECAUSE OF RAIN SHOWERS THE LINER CREW WENT HOME, THEN
MIKE DIANA AND MYSELF MEASURED GRAVEL ROADS, TURE MATS,
AND RIP RAP.

Start/finish time: 7:00 / 7:00

Page 1 of 11 pages
s:\clarktwn\fldforms\idr.xls

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name



CLIENT/SUBJECT _____ W.O. NO. _____

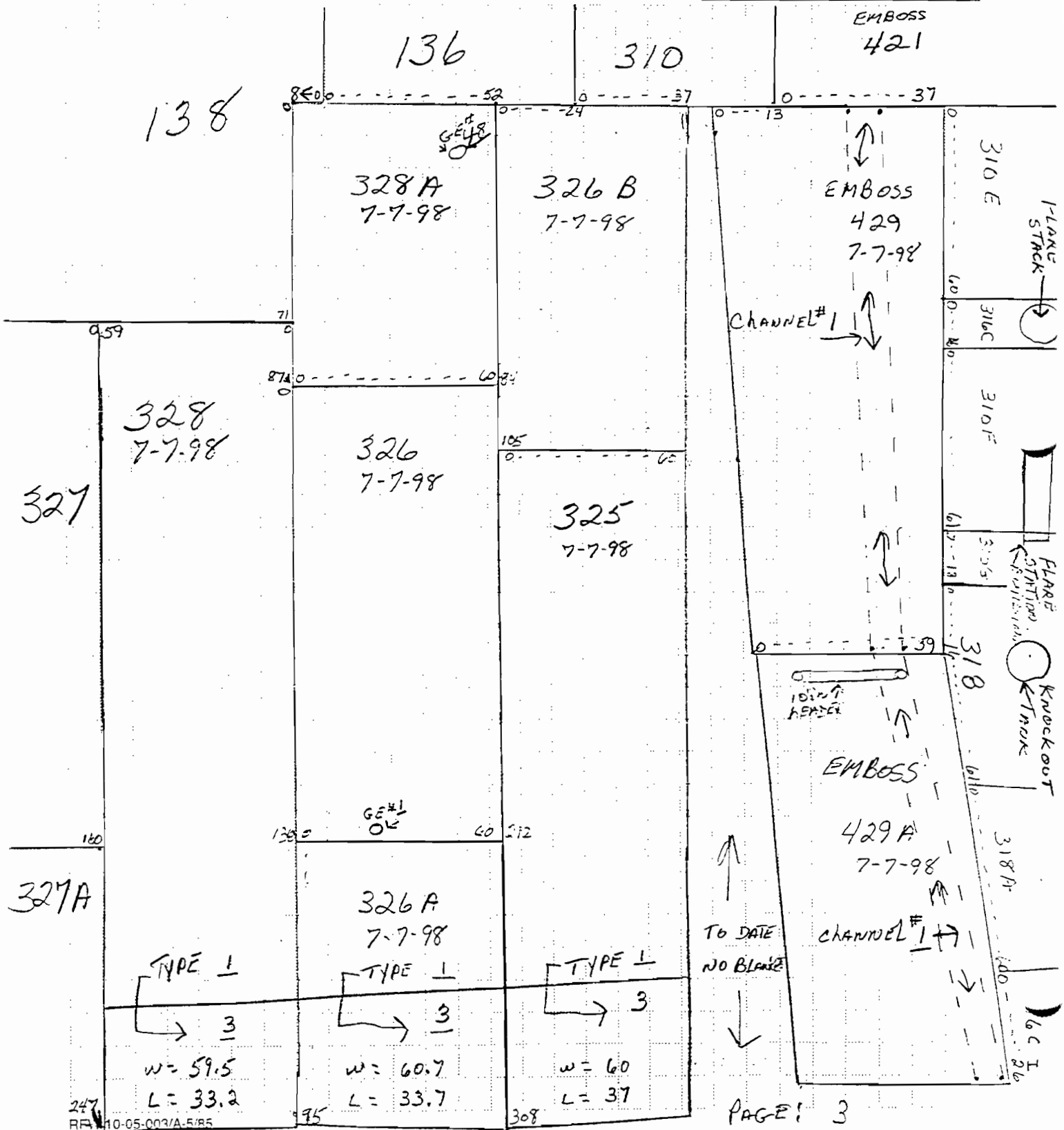
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION SMOOTH BLANKETS LFP-8 AREA H6-H7 TASK NO. _____

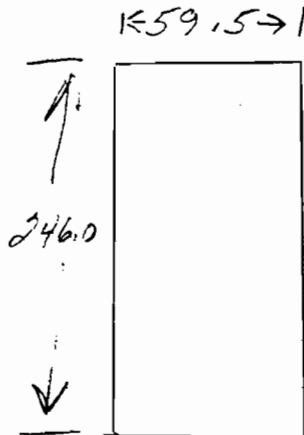
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 328

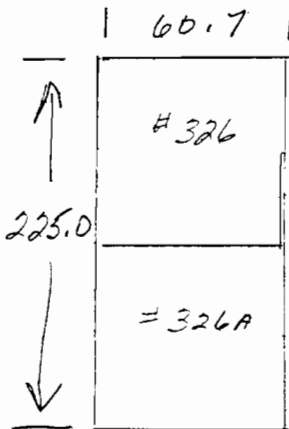


$$W \quad L$$

$$59.5 \times 246 = 14,637 (SF) =$$

$$1626.3 (YD^2)$$

BLANKETS # 326 - 326 A

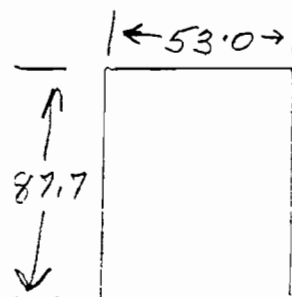


$$W \quad L$$

$$60.7 \times 225 = 13657.5 (SF) =$$

$$1517.5 (YD^2)$$

BLANKET # 328 A



$$W \quad L$$

$$53.0 \times 87.7 = 4648.1 (SF) =$$

$$516.5 (YD^2)$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION BLANKETS LFP-8 AREA H6-H-7 TASK NO. _____

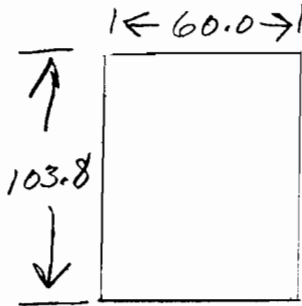
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 326 B

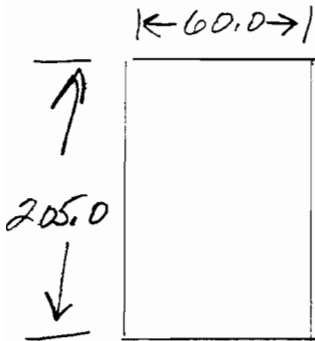


$$W \quad L$$

$$60 \times 103.8 = 6228 \text{ (SF)} =$$

$692 \text{ (YD}^2\text{)}$

BLANKET # 325

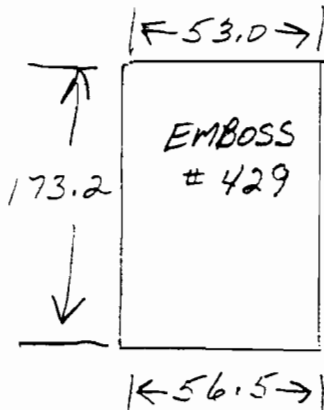


$$W \quad L$$

$$60 \times 205 = 12300 \text{ (SF)} =$$

$1366.7 \text{ (YD}^2\text{)}$

EMB. BLANKET # 429



$$W \quad L$$

$$W_1 = 53.0 \quad W_2 = 56.5 \quad \left[\text{AVE.} = 54.75 \times 173.2 = 9482.7 \text{ (SF)} = \right.$$

$1053.6 \text{ (YD}^2\text{)}$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION EMB. BLANKET LFP-8 GREY H6-H7 TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

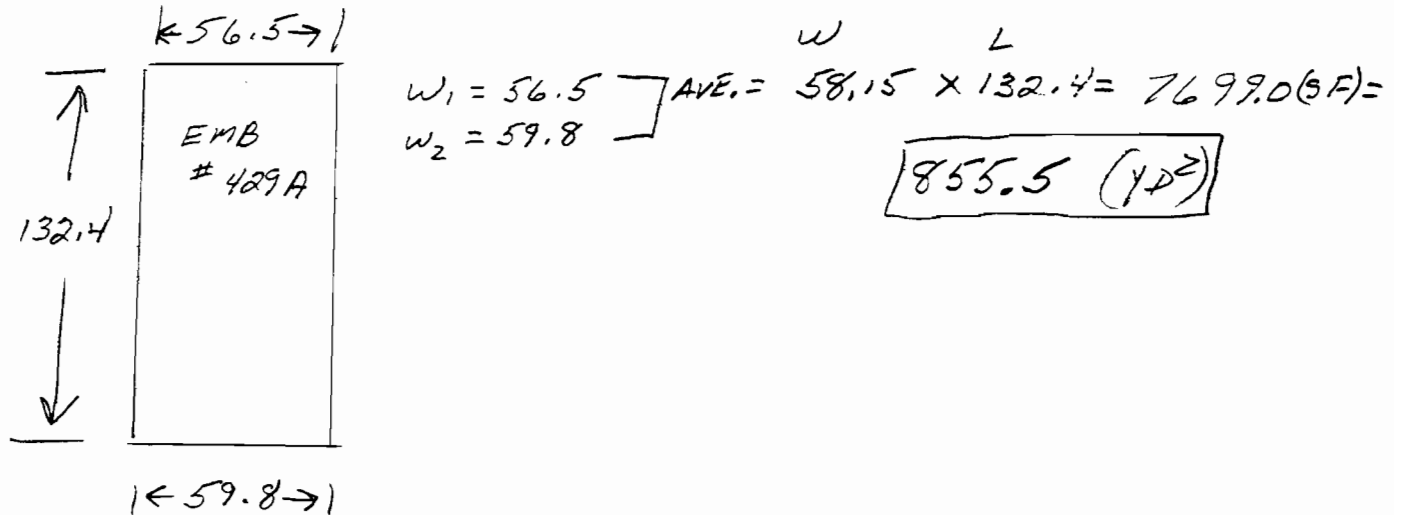
APPROVED BY

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____

EMBOSS BLANKET # 429 A



Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 7-8-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 566

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
RAIN / RAIN	70°	65°

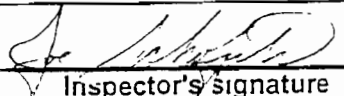
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
9A	GRAVEL ROAD LFP-4 SOUTH SLURRY WALL AND SED BASIN #2	1007.3 YD ²	SEE PAGES:
9A	NORTH GRAVEL ROAD LFP-4 SED BASIN #2 SOUTH OF DL-7	304.0 YD ²	9-10- AND 11 FOR MATH.
18	TURF MAT CHANNEL #3 NORTH OF DIVERSION DIKE #7	52.2 YD ²	
18	LFP-1 RIP RAP EAST OF TROUGH	47.0 YD ²	
9A	GRAVEL ROAD PC#9 NORTH OF DL-12	387.0 YD ²	CHANGE ORDER?
9A	GRAVEL ROAD PC#9 LOWER ROAD LFP-3	555.4 YD ²	CHANGE ORDER?
8A	RIP RAP PC#9 OUTLET	30.2	CHANGE ORDER?

Remarks:

Start/finish time: 7:00/7:00

Page of pages
s:\clarktown\fldforms\idr.xls


Inspector's signature
JOE SCHOTFIELD
Inspector's name

PAGE 7

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 7-8-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 666

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
RAIN / RAIN	70°	65°

Description of work performed and inspected

[illegible]

Remarks: _____

Start/finish time: 7:00/7:00

age____of____pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

GRAVEL ROAD LFP-4 SOUTH SLURRY WALL AND SED BASIN #2

$$\begin{array}{rcl}
 A_1 & \begin{array}{cc} W & L \\ 15 & \times 354 \end{array} & = 5310 \text{ (SF)} = 590 \text{ (YD}^2\text{)} \\
 & + & \\
 A_2 & \begin{array}{cc} W & L \\ 12 & \times 313 \end{array} & = 3756 \text{ (SF)} = 417.3 \text{ (YD}^2\text{)} \\
 & & \text{TOTAL (YD}^2\text{)} = 1007.3 \text{ (YD}^2\text{)}
 \end{array}$$

1007.3 YD^2

NORTH GRAVEL ROAD LFP-4 SED BASIN #2 SOUTH OF DL-7

$$\begin{array}{rcl}
 A_1 & \begin{array}{cc} W & L \\ 15 & \times 127 \end{array} & = 1905 \text{ (SF)} = 212 \\
 & + & \\
 A_2 & \begin{array}{l} W_1 = 51 \\ W_2 = 15 \end{array} \left. \begin{array}{c} \text{AVE. W} \\ 33 \end{array} \right\} \begin{array}{cc} L \\ \times 25 \end{array} & = 825 \text{ (SF)} = 92 \text{ (YD}^2\text{)} \\
 & & \text{TOTAL (YD}^2\text{)} = 304 \text{ (YD}^2\text{)}
 \end{array}$$

$304.0 \text{ (YD}^2\text{)}$

TURF MAT SED BASIN #2

$$\begin{array}{rcl}
 A_1 & \begin{array}{cc} W & L \\ 6 & \times 40 \end{array} & = 240 \text{ (SF)} = 27.0 \text{ (YD}^2\text{)} \\
 & + & \\
 A_2 & \begin{array}{cc} W & L \\ 6 & \times 60 \end{array} & = 360 \text{ (SF)} = 40.0 \text{ (YD}^2\text{)} \\
 & & \text{TOTAL (YD}^2\text{)} = 67 \text{ (YD}^2\text{)}
 \end{array}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

TURF MAT CHANNEL #3 NORTH OF DIVERSION DIKE #7

$$\begin{matrix} W & L \\ 10 & \times & 47 = 470 \text{ (SF)} = \boxed{52.2 \text{ (YD}^2\text{)}} \end{matrix}$$

LFP-1 RIP RAP EAST OF TROUGH

$$\begin{matrix} W_1 = 17 \\ W_2 = 30 \end{matrix} \left[\begin{matrix} \text{AVE.} = W & L \\ 23.5 & \times & 14 = 329 \text{ (SF)} = \boxed{37 \text{ (YD}^2\text{)}} \end{matrix} \right.$$

GRAVEL ROAD PC #9 NORTH OF DL-12

$$\begin{matrix} W & L \\ 15 & \times & 232 = 3480 \text{ (SF)} = \boxed{387.0 \text{ (YD}^2\text{)}} \end{matrix}$$

GRAVEL ROAD PC #9 LOWER ROAD LFP-3

$$\begin{matrix} W_1 = 41.0 \\ W_2 = 15.0 \end{matrix} \left[\begin{matrix} \text{AVE.} = W & L \\ 28 & \times & 22 = 616 \text{ (SF)} = 68.4 \text{ (YD}^2\text{)} \\ + \\ 15 & \times & 292 = 4380 \text{ (SF)} = 487.0 \text{ (YD}^2\text{)} \end{matrix} \right.$$

$$\text{TOTAL (YD}^2\text{)} = \boxed{555.4}$$

RIP RAP PC #9 OUTLET

$$\begin{matrix} W_1 = 23 \\ W_2 = 9 \end{matrix} \left[\begin{matrix} \text{AVE.} = W & L \\ 16 & \times & 17 = 272 \text{ (SF)} = \boxed{30.2 \text{ (YD}^2\text{)}} \end{matrix} \right.$$



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____

RIP RAP PC# 7 INLET

$$\begin{array}{rcll} W & L & & \\ 28 & \times 12 & = 336 \text{ (SF)} & = 37.3 \text{ (YD}^2\text{)} \\ + & & & + \\ \triangle \div 2 & 28 \times 11 & = 154 \text{ (SF)} & = 17.1 \text{ (YD}^2\text{)} \\ & & \text{TOTAL (YD}^2\text{)} & = \boxed{54.4} \end{array}$$

TURF MAT DIVERSION DIKE 5

$$\begin{array}{rcll} W & L & & \\ 10 & \times 134 & = 1340 \text{ (SF)} & = \boxed{149.0 \text{ (YD}^2\text{)}} \end{array}$$

TURF MAT CHANNEL# 21

$$\begin{array}{rcll} W & L & & \\ 10 & \times 264 & = 2640 \text{ (SF)} & = \boxed{293.3 \text{ (YD}^2\text{)}} \end{array}$$

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH F S

b No: 03228-018-001-0003-00

Date: 7-9-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 667

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY / CLDY	89°	61°

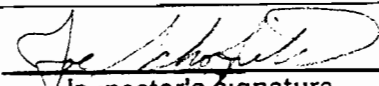
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL PVC LINER INBOUND SCALE, AREA J-5		TYPE III
	BLANKET # 325A	440.1 YD ²	SEE PAGE 1(2) FOR DIAGRAM
	(GCL) GEOSYNTHETIC CLAY LINER OVER #325A		PAGE 1(3) MATH
	2.5 x 70 = 75(SF) =	8.3 YD ²	
60B	PERMETER DRAINAGE PIPE IN BOUND SCALE OVER NORTH END OF BLANKET #325A AND EXISTING LINER AREA J5	60.0 FT.	

Remarks: AIR LANCED BLANKET #325A INBOUND SCALE AREA J-5.
PLACEMENT OF GCL NORTH SIDE OF BLANKET #325A AND WAS
SANDWICH BETWEEN THE EXISTING LINER IN AREA J5. JIM BATES
(OGDEN REP.) AND MYSELF MEASURED BLANKET #325A AND
WAS A TYPE III COVER SYSTEM AND WE ALSO MEASURED THE
PERMETER DRAINAGE PIPE WHICH WAS WRAPPED IN 602. FABRIC AND
STONE BEDDING AT THE NORTH END OF #325A AND PLACED INSIDE
THE EXISTING UNDER DRAIN PIPE. AFTER PIPE WAS IN PLACE DRAINAGE
NET WAS PLACED OVER THE LINER THEN 602. FABRIC OVER THE NET
FOR A TYPE III FINAL COVER SYSTEM. AIR LANCED ALL SMOOTH PVC
LINER PLACED 7-7-98 IN LFP-8 AREA H6- AND H-7. PLACEMENT OF
602. FABRIC OVER SUBGRADE THEN DRAINAGE NET OVER FABRIC FOR
THE START OF TYPE III COVER SYSTEM EAST OF CHANNEL #2 OVER
THE RAIA SUBGRADE AREA H5

Start/finish time: 7:00 4:30

Page 1 of 4 pages
J:\clarktown\fldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

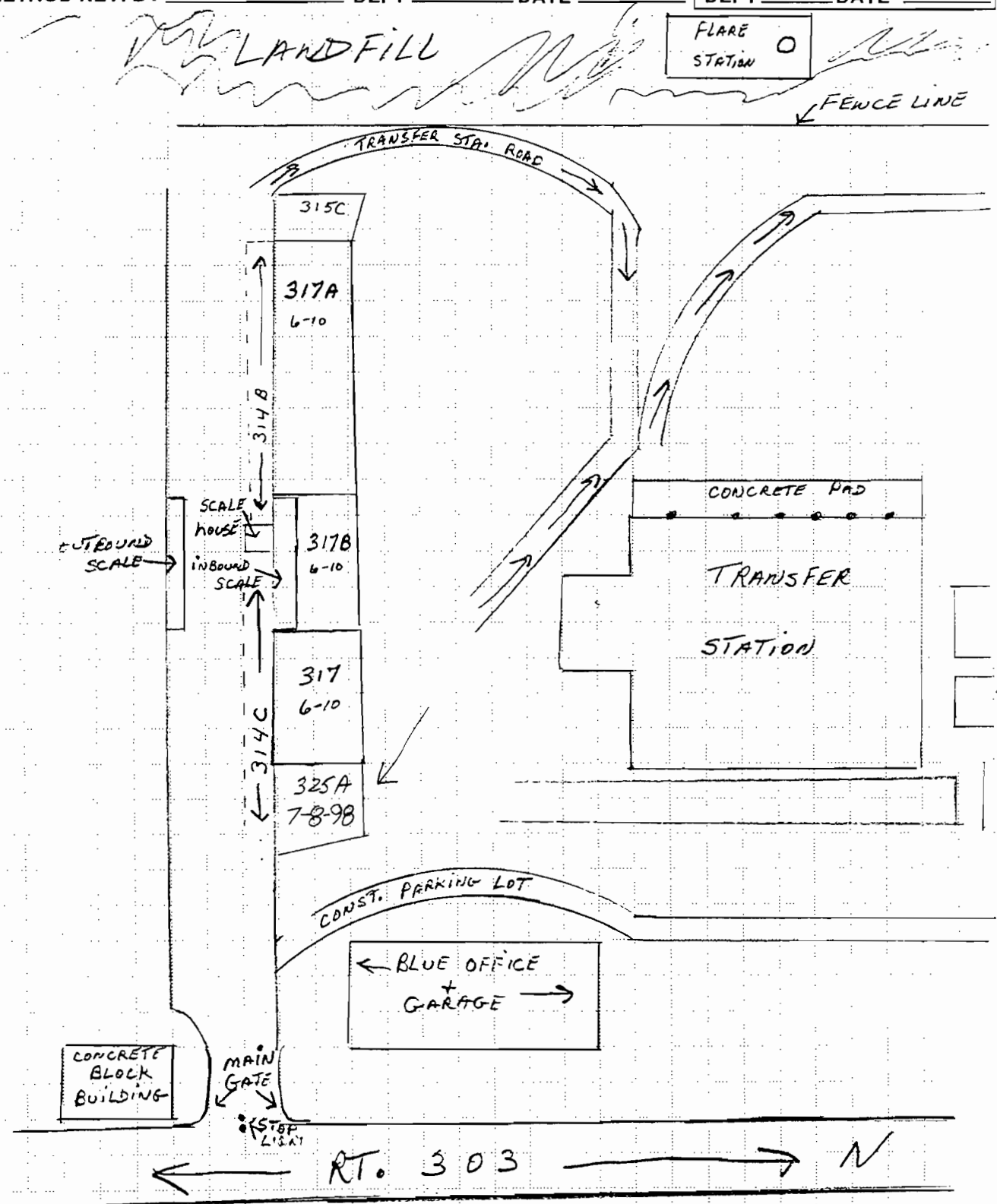
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

FLARE
STATION ☐



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION INBOUND SCALE AREA 55 TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

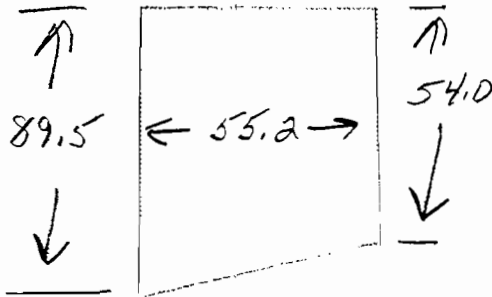
METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	

DEPT _____	DATE _____

BLANKET # 325A

TYPE III



$$\begin{array}{l} W \\ 55.2 \times L, 89.5 \\ L, 54 \end{array} \left. \vphantom{\begin{array}{l} W \\ 55.2 \times L, 89.5 \\ L, 54 \end{array}} \right\} \text{AVE. } 71.75$$

$$W \quad L \\ 55.2 \times 71.75 = 3960.6 \text{ (SF)} =$$

$$\boxed{440.1 \text{ (YD}^2\text{)}}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-9-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 610		PM 890	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH **F** S

Job No: 03228-018-001-0003-00

Date: 7-10-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 668

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY/CLDY	89°	64°

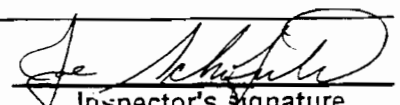
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
24A	DRAINAGE NET LFP-8 WEST OF CHANNEL #1 AREA H5-H4		SEE PAGE: 3 FOR DIAGRAM
	DRAINAGE NET TYPE I		
	BLANKET # 328	1406.8 YD ²	PAGES: 4 AND 5 FOR MATH
	# 326-326A	1290.2 YD ²	
	# 325	1120.0 YD ²	
	DRAINAGE NET TYPE III		
	BLANKET # 328	439.0 YD ²	2 LAYERS
	# 326-326A	454.6 YD ²	2 LAYERS
	# 325	493.4 YD ²	2 LAYERS
23A	602 NONWOVEN GEOTEXTILE LFP-8 WEST OF CHANNEL #1		
	BLANKET # 328	3252.6 YD ²	
	# 326-326A	3035.0 YD ²	
	# 325	2733.4 YD ²	

Remarks: PLACEMENT OF PVC BLANKETS # 330 WHICH TIED-IN SOUTH OF # 328 AND EAST END OF # 327A - # 329, BLANKET # 330A TIED-IN SOUTH OF # 330 AND EAST END OF # 329 - # 329A, BLANKET # 324 TIED-IN SOUTH OF # 326A AND EAST END OF # 330 AND PART OF # 330A, AND BLANKET # 324A TIED-IN SOUTH OF # 324 AND EAST END OF # 330A. ALL BLANKETS PLACED TODAY WERE IN LFP-8 AND LFP-5 OVER THE RAIA SUBGRADE AREA H5 AND H6. PLACEMENT OF PVC BOOT OVER GE AT THE NORTHWEST END OF RAIA FILL. MIKE DIANA AND MYSELF MEASURED BLANKETS PLACED ON 7-7-98 BLANKETS # 328 - # 326A AND # 325 SOUTH END STARTED THE DIFFERENCE BETWEEN TYPE I AND TYPE III COVER SYSTEM, SEE PAGE: (3) FOR DIAGRAM. PLACEMENT OF DRAINAGE NET OVER LINER PLACED 7-7-98 FOR TYPE I AND TYPE III COVER SYSTEM THEN 1002 FABRIC OVER NET.

Start/finish time: 7:00/3:30

Page 1 of 5 pages
 c:\ciarktown\fldforms\ldr.xls


 Inspector's signature
JOE SCHOFIELD
 Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

APPROVED BY _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____

327A 04	328 7-7-98 60	326A 7-7-98	325 7-7-98
82 0	330 7-10-98 TYPE 3	324 7-10-98 TYPE 3	
329 TYPE 3 66	148 08	150 155	
124	330A 7-10-98 TYPE 3	324A 7-10-98 TYPE 3	
329A TYPE 3 177		169	

CLIENT/SUBJECT _____ W.O. NO. _____

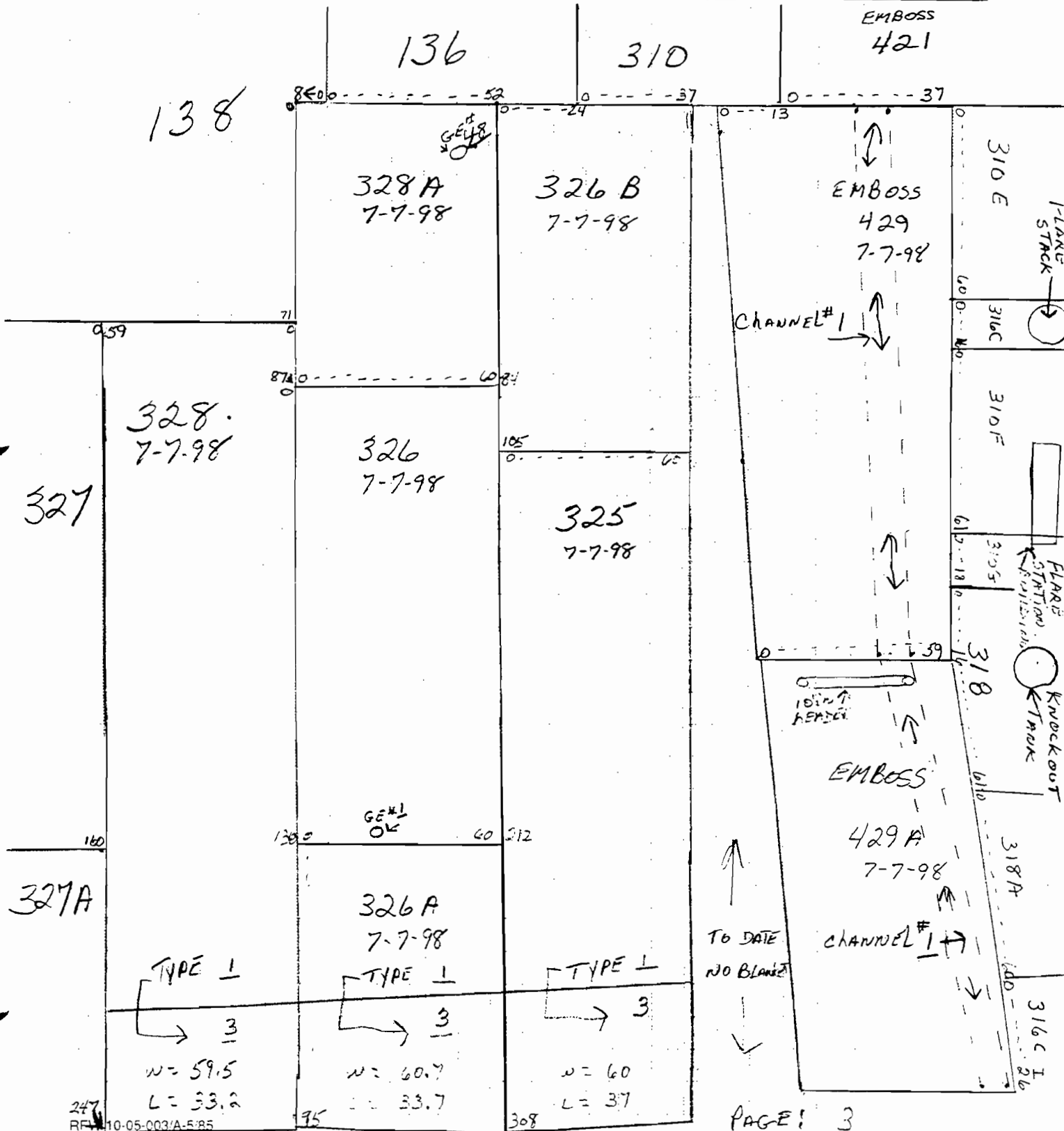
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

MATH FOR TYPE I AND TYPE III COVER SYSTEM ON BLANKETS
PLACED 7-7-98. DIAGRAM ON PAGE: 3

SMOOTH PVC BLANKET #328 IS → 1626.3 YD²
 ★ TYPE III IS (2) LAYERS OF DRAINAGE NET. - 219.5 TYPE III
1406.8 TYPE I ★

TYPE III MEASURED (2) LAYERS

$$W \quad L$$

$$59.5 \times 33.2 = 1975.4 (SF) = \boxed{219.5 \text{ YD}^2} \times 2 \text{ LAYERS}$$

(24A) DRAINAGE NET BOTTOM LAYER = 219.5 YD²
 TOP LAYER = 219.5
 TOTAL NET = 439.0 YD² TYPE III ★

(23A) 60Z. FABRIC (2) LAYERS BOTTOM = 1626.3 YD²
 TOP = 1626.3
 TOTAL FABRIC = 3252.6 YD² ★

★ BLANKET #326-326A IS → 1517.5 YD²
 TYPE III MEASURED - 227.3 TYPE III
1290.2 TYPE I ★
 $W \quad L$
 $60.7 \times 33.7 = 2045.57 (SF) = \boxed{227.3 \text{ YD}^2} \times 2$

(24A) DRAINAGE NET BOTTOM LAYER = 227.3 YD²
 TOP LAYER = 227.3
 TOTAL NET = 454.6 YD² TYPE III ★

(23A) 60Z. FABRIC (2) LAYERS = BOTTOM LAYER 1517.5 YD²
 TOP LAYER 1517.5
 TOTAL FABRIC = 3035.0 YD² ★



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____

MATH FOR TYPE I AND TYPE III COVER SYSTEM ON BLANKETS
PLACED 7-7-98. DIAGRAM ON PAGE: 3

* BLANKET # 325 is $\longrightarrow 1366.7 \text{ YD}^2$
- 246.7 TYPE III
TYPE III MEASURED 1120.0 TYPE I *

$$\begin{matrix} W & L \\ 60 & \times 37 = 2220.0 (\text{SF}) = \boxed{246.7 \text{ YD}^2} \times 2 \end{matrix}$$

(24A) DRAINAGE NET BOTTOM LAYER = 246.7 YD²
TOP LAYER = 246.7
TOTAL NET = 493.4 TYPE III *

(23A) 602. FABRIC (2) LAYERS = BOTTOM 1366.7 YD²
TOP 1366.7
TOTAL FABRIC = 2733.4 YD² *

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-10-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: John Cuckie

WEATHER	AM	<u>CLDY</u>	PM	<u>CLDY</u>
TEMP DEG F	HI	<u> </u>	LO	<u> </u>
WIND	AM	<u>210</u>	PM	<u>210</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS: 602. FABRIC PLACED, TO DATE PVC
BLANKETS HAVE NOT BEEN MEASURED

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S (M) T W TH F S

Job No: 03228-018-001-0003-00

Date: 7-13-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 671

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	92°	60°

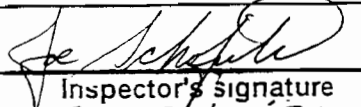
Description of work performed and inspected

ITEM NO.	DESCRIPTION & LOCATION	QUANTITIES	REMARKS
22E	SMOOTH 40 MIL. PVC LINER		SEE PAGE: (2)
	LFP-8 AREA H6		FOR DIAGRAM
	BLANKET # 317 C	99.9 YD ²	PAGES: 4-5 MATH
	317 B	133.3 YD ²	
	321 A	325.3 YD ²	
	321 B - 317 D	217.9 YD ²	TYPE I
		110.5 YD ²	TYPE III
	LFP-8 AND LFP-5 AREA		
	H5 - H4		
	BLANKETS # 330-330A	216.9.4 YD ²	TYPE III
	324-324A	2214.7 YD ²	SEE PAGE: (3)
			FOR DIAGRAM
			PAGE: (6) FOR MATH
	GRANULAR DRAINAGE LFP-1		
	TO LFP-3 WEST OF RIVERSO	132 FT.	

Remarks: AIR LANKED ALL SEAMS ON BLANKETS PLACED ON 7-10-98. PLACEMENT OF DRAINAGE NET OVER BLANKETS # 326B - # 325 THEN 602. FABRIC OVER NET. PLACEMENT OF SMOOTH PVC BLANKETS LFP-8 WEST OF THE FLARE STATION AND CHANNEL #1 AREA H6, BLANKET # 317C WHICH TIED-IN SOUTH OF # 310 AND EAST END OF # 326B, BLANKET # 317B TIED-IN SOUTH OF # 317C AND EAST END OF # 326B, BLANKET # 321A TIED-IN SOUTH OF 317B AND EAST END OF # 325, BLANKET # 321 B TIED-IN SOUTH OF # 321 A AND EAST END OF # 325 AND BLANKET # 317 D WAS PIE SHAPED AND TIED-IN EAST END OF # 321 B AND WEST END OF # 429A. MIKE DIANA AND MYSELF MEASURED THE BLANKETS AFTER THEY COMPLETED WEDGE WELDING SAID BLANKETS. MIKE DIANA AND MYSELF ALSO MEASURED BLANKETS PLACED 7-10-98 LFP-8 TO LFP-5 AREA H5 AND H4, BLANKETS # 330- 330A AND # 324-324A. THEN MIKE, DIANA AND MYSELF MEASURED THE GRANULAR DRAINAGE IN LFP-1 TO LFP-3 WEST OF RIVERSO PROPERTY LINE

Start/finish time: 7:00/6:30

Page 1 of 7 pages
J:\clarktown\ldforms\ldr.xls


Inspector's signature
JOE SCHAFELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____

327A 328 326A 325
7-7-98 7-7-98 7-7-98

330

7-10-98

TYPE 3

324

7-10-98

TYPE 3

329

TYPE 3

330A

7-10-98

TYPE 3

324A

7-10-98

TYPE 3

329A

TYPE 3

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

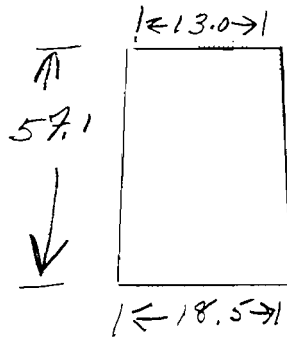
METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	

DEPT _____	DATE _____

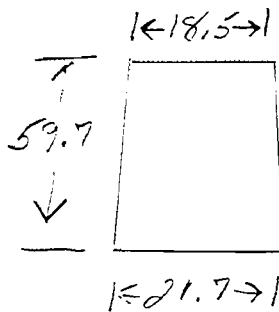
BLANKETS MEASURED LFP-8 AREA H6

BLANKET # 317 C TYPE I



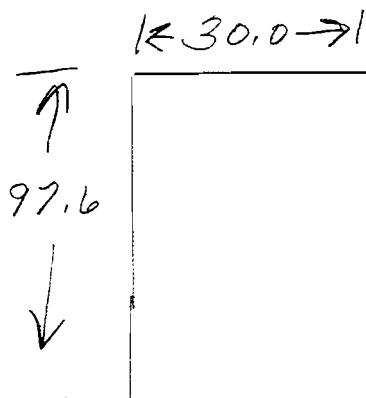
$$\begin{aligned} w_1 &= 13.0 \\ w_2 &= 18.5 \end{aligned} \quad \left[\begin{array}{l} W \\ L \end{array} \right] \text{AVE. } 15.75 \times 57.1 = 899.32 (SF) = \boxed{99.9 (YD^2)}$$

BLANKET # 317 B TYPE I



$$\begin{aligned} w_1 &= 18.5 \\ w_2 &= 21.7 \end{aligned} \quad \left[\begin{array}{l} W \\ L \end{array} \right] \text{AVE. } 20.1 \times 59.7 = 1199.97 (SF) = \boxed{133.3 (YD^2)}$$

BLANKET # 321 A TYPE I



$$\begin{array}{l} W \\ L \end{array} \quad 30.0 \times 97.6 = 2928.0 (SF) = \boxed{325.3 (YD^2)}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

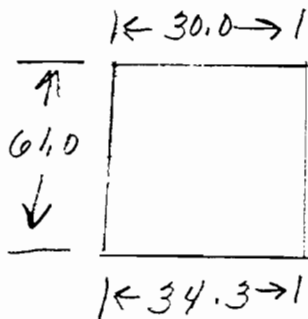
METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET MEASURED L.F.P. 8 AREA H6

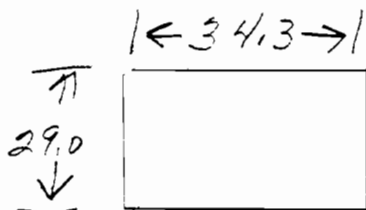
BLANKETS # 321B - # 317D TYPE I AND TYPE III

TYPE I



$$\begin{aligned}
 & \begin{matrix} W & L \\ W_1 = 30.0 & \\ W_2 = 34.3 & \end{matrix} \left[\begin{matrix} \text{AVE. } 32.15 \\ \end{matrix} \right] \times 61.0 = 1961.15 \text{ (SF)} = \\
 & \boxed{217.9 \text{ (YD}^2\text{)}}
 \end{aligned}$$

TYPE III



$$\begin{matrix} W & L \\ 34.3 & \times 29.0 = 994.7 \text{ (SF)} = \end{matrix} \boxed{110.5 \text{ (YD}^2\text{)}}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

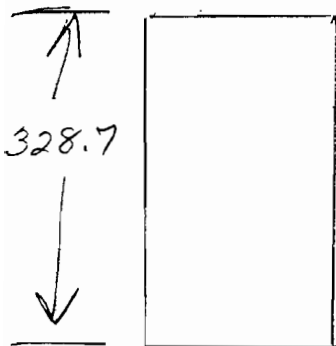
METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKETS PLACED 7-10-78 LFP-8 AND LFP-5 AREA H5-H4

BLANKETS # 330 - 330A TYPE III

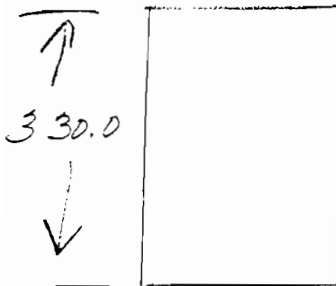
1 59.4 1



$$\begin{matrix} W & L \\ 59.4 & \times & 328.7 = 19524.78 \text{ (SF)} = \boxed{2169.4 \text{ (YD}^2\text{)}} \end{matrix}$$

BLANKETS # 324-324A TYPE III

1 60.4 1



$$\begin{matrix} W & L \\ 60.4 & \times & 330.0 = 19932 \text{ (SF)} = \boxed{2215 \text{ (YD}^2\text{)}} \end{matrix}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-13-98

INSPECTOR: JOE SCHOFIELD

LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 60°		PM 92°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-14-98

INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy <u>AM / PM</u>	Overcast AM / PM	Rain AM / PM
AM <u>66°</u>		PM <u>89°</u>	
Still AM / PM	L. Breeze <u>AM / PM</u>	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate <u>AM / PM</u>	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
NESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-14-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: John Cuckie

WEATHER	AM <u>CLDY</u>	PM <u>CLDY</u>
TEMP DEG F	HI <u>89°</u>	LO <u>66</u>
WIND	AM <u><10</u>	PM <u><10</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

COMPOSITE

[illegible]

COMMENTS:



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

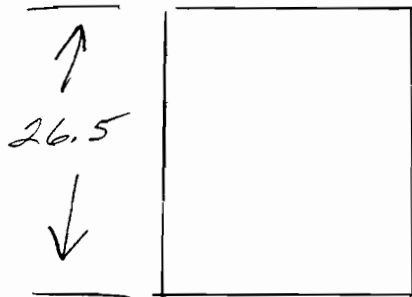
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____

LFP-5 BLANKET # 325B TYPE III ★
K15.7 → 1



$$\begin{matrix} W & L \\ 15.7 & \times 26.5 \end{matrix} = 416.05(\text{SF}) = \boxed{46.2(\text{YD}^2)}$$

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

APPROVED BY

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

DEPT _____ DATE _____

329
TYPE 3

330A
7-10-98
TYPE 3

329A
TYPE 3

325B-Type 3
7-15

[illegible]

LF4-5

CR 152K

AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-15-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 108°		PM 89°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

WEATHER	AM	<u>CLR.</u>	PM	<u>CLR.</u>
TEMP DEG F	HI	<u>89°</u>	LO	<u>69</u>
WIND	AM	<u><10</u>	PM	<u><10</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS:

Inspector's signature
JOE SCHOFIELD
Inspector's name

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-16-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: JOHN CUCKIE

WEATHER	AM <u>OVER</u>	PM <u>OVER</u>
TEMP DEG F	HI <u>90°</u>	LO <u>73°</u>
WIND	AM <u>LS</u>	PM <u>LS</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

[illegible]

COMMENTS:

TOWN OF CLARKSTOWN, WEST NYACK, NEW YORK

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 7-16-98

Q. A. S. K. N.

[illegible]



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

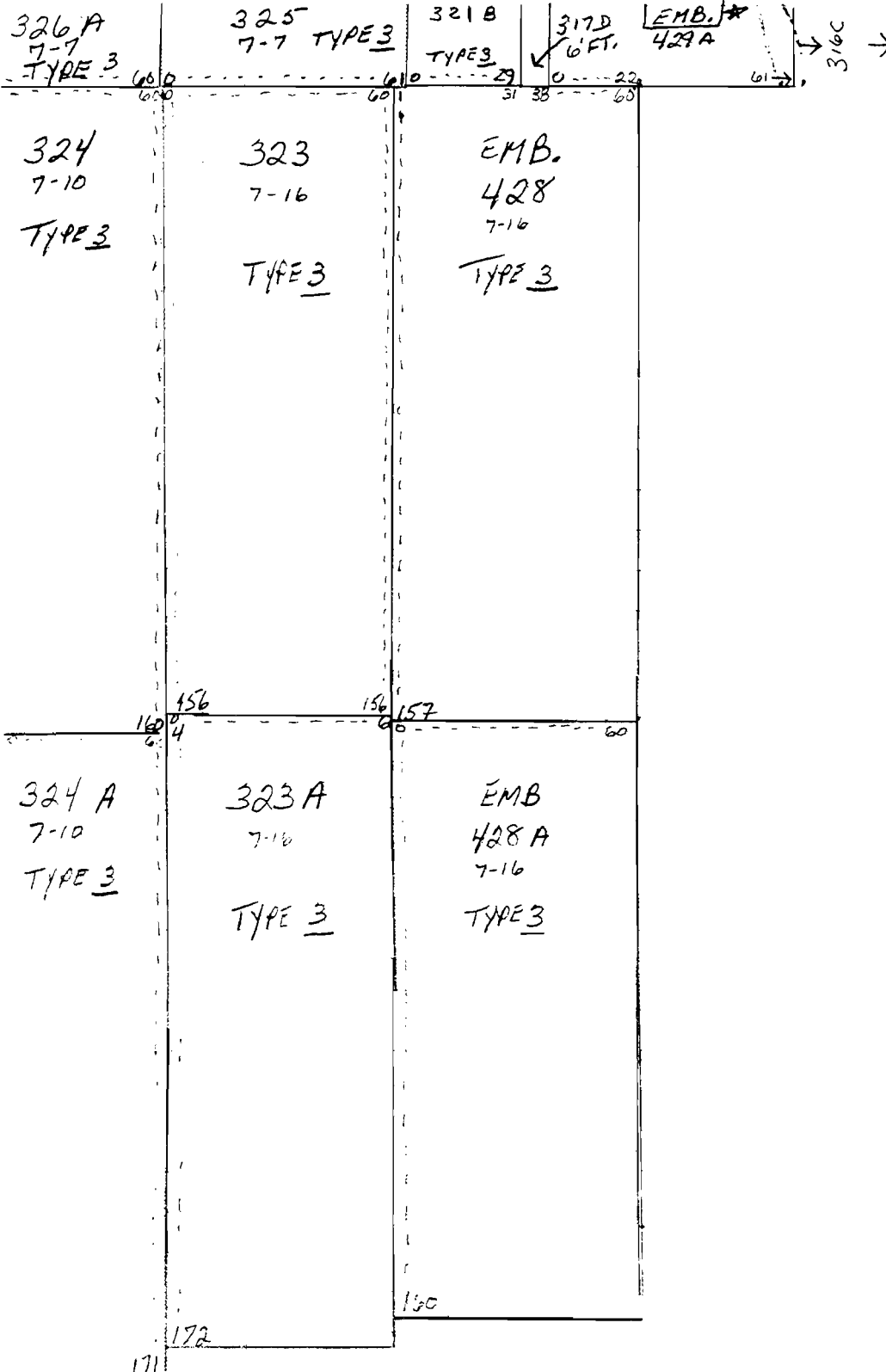
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____	TASK NO. _____
------------------------	----------------

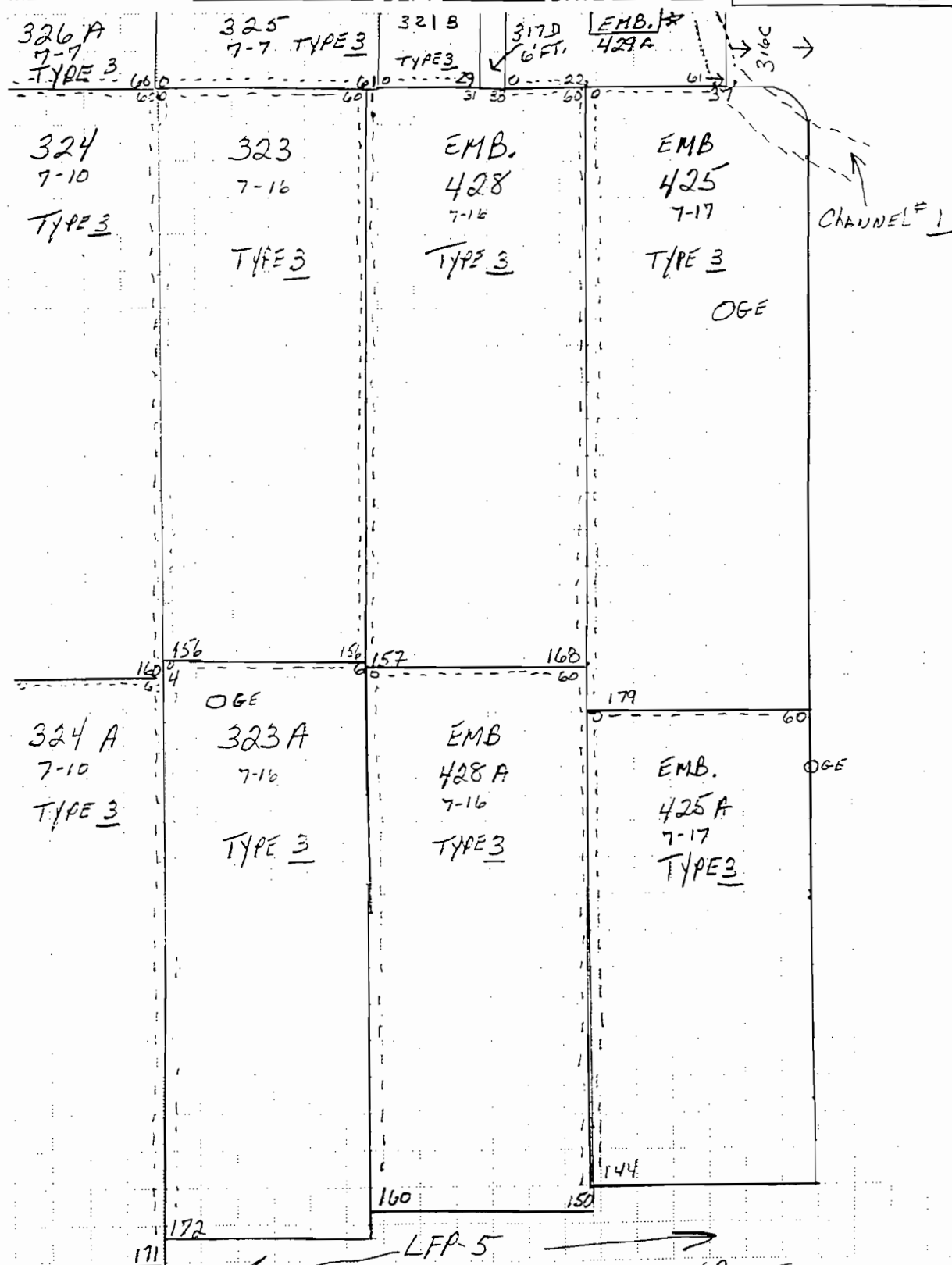
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____



AIR LANCE TEST FORM

WESTON W.O. # 03228-018-001-0003-00

LINER INSTALLER: Environmental Liners

LINER TECHNICIAN: GRANT MORGAN

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast <u>AM / PM</u>	Rain AM / PM
AM 7 / 1			PM
Still AM / PM	L. Breeze <u>AM / PM</u>	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate <u>AM / PM</u>	Humid AM / PM	

[illegible]

Inspector's signature
JOE SCHOFIELD
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

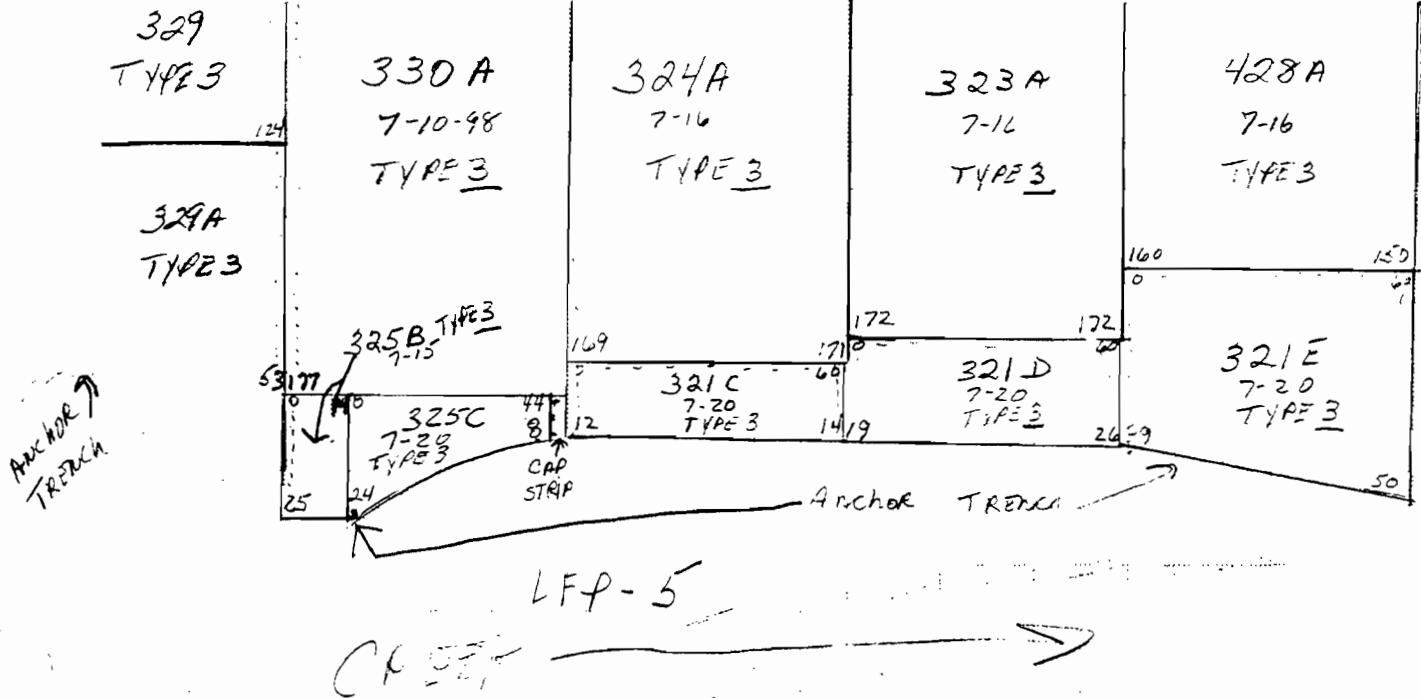
TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____





SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

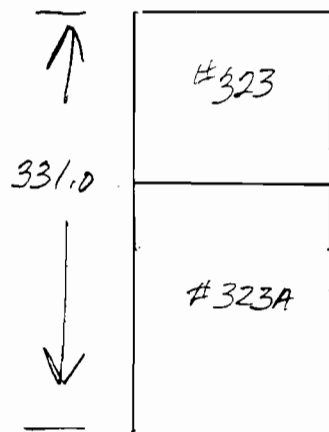
APPROVED BY _____

DEPT _____ DATE _____

BLANKETS PLACED 7-16 LFP-8 TO LFP-5 AREA H5 AND H4

BLANKETS # 323 - # 323A TYPE III ★

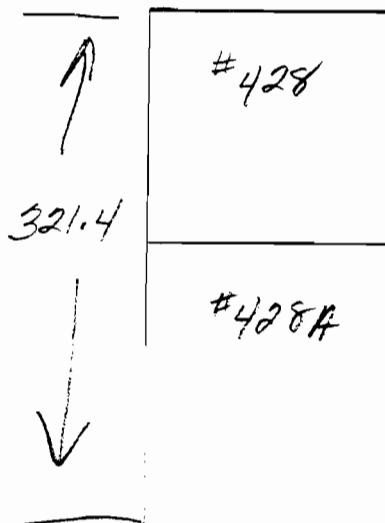
|←62.0→|



$$\begin{array}{cc} W & L \\ 62 & \times 331 = 20522 \text{ (SF)} = \boxed{2280.2 \text{ (YD}^2\text{)}} \end{array}$$

BLANKETS # 428 - 428A TYPE III ★

|←60.6→|



$$\begin{array}{cc} W & L \\ 60.6 & \times 321.4 = 19476.84 \text{ (SF)} = \boxed{2164.1 \text{ (YD}^2\text{)}} \end{array}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-20-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast <u>AM / PM</u>	Rain AM / PM
AM 71°		PM 84°	
Still <u>AM / PM</u>	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid <u>AM / PM</u>	

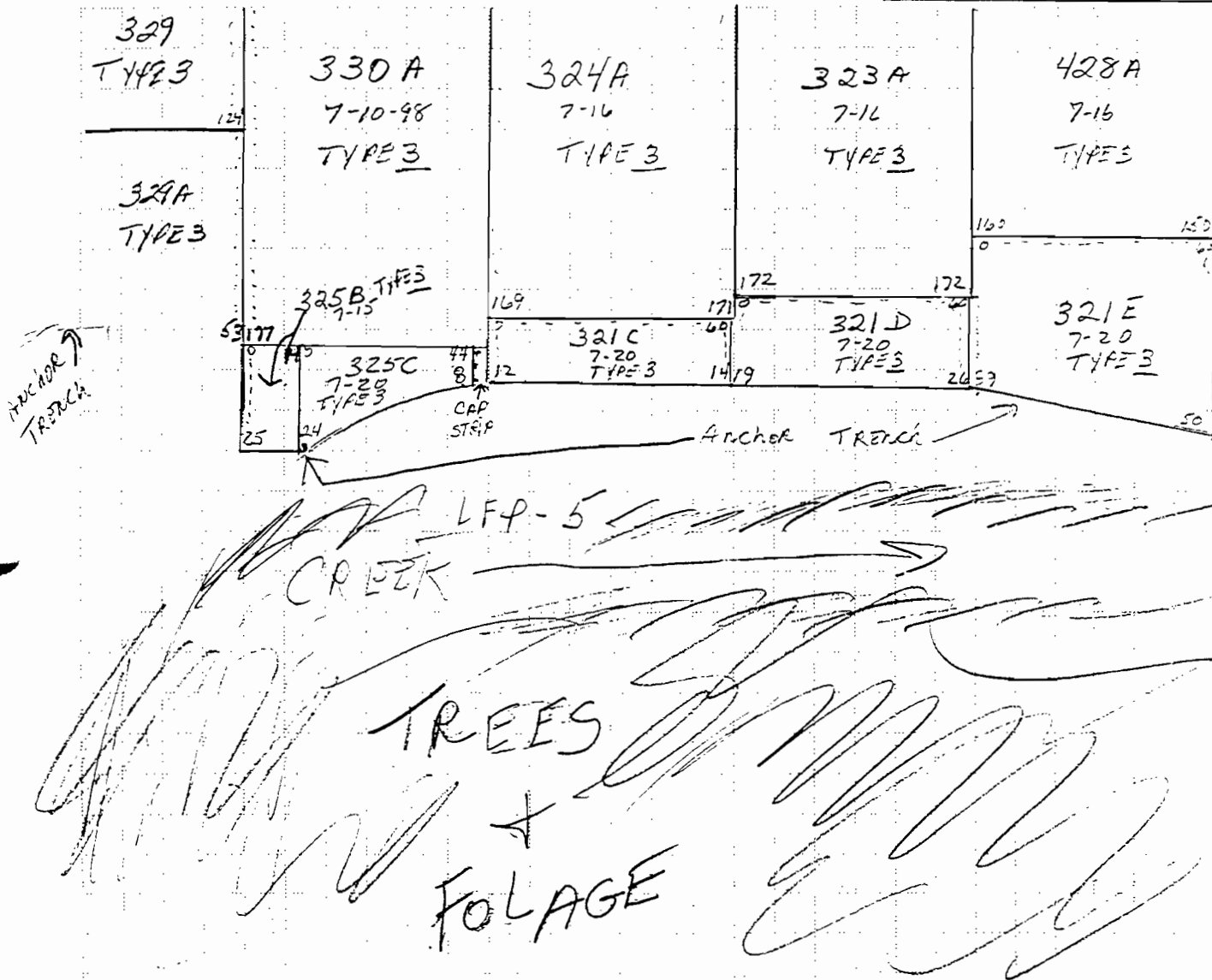
[illegible]

Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____	DEPT _____	DATE _____	APPROVED BY DEPT _____ DATE _____
MATH CHECK BY _____	DEPT _____	DATE _____	
METHOD REV. BY _____	DEPT _____	DATE _____	



PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

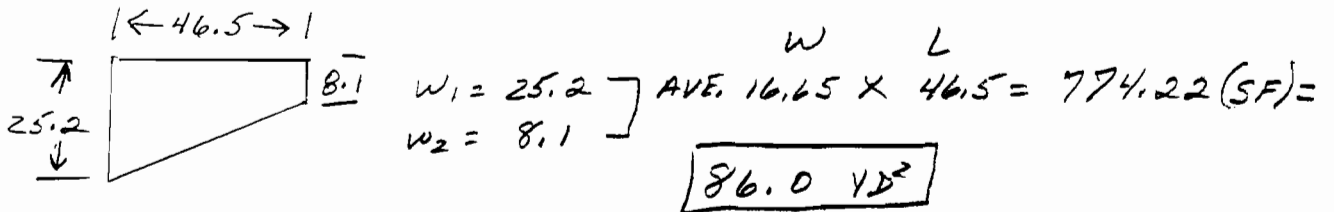
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

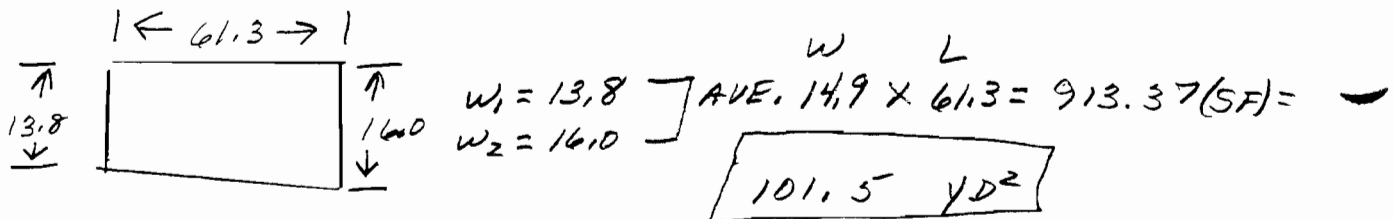
APPROVED BY	
DEPT _____	DATE _____

MEASURED BLANKETS LFP-5 AREA H4 INTO THE ANCHOR TRENCH.

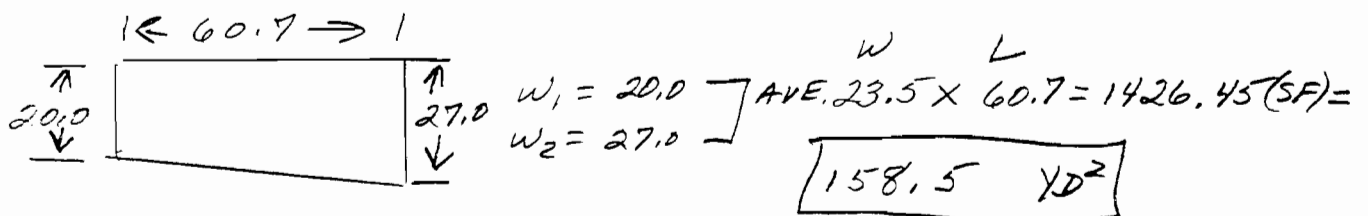
BLANKET # 325C TYPE III



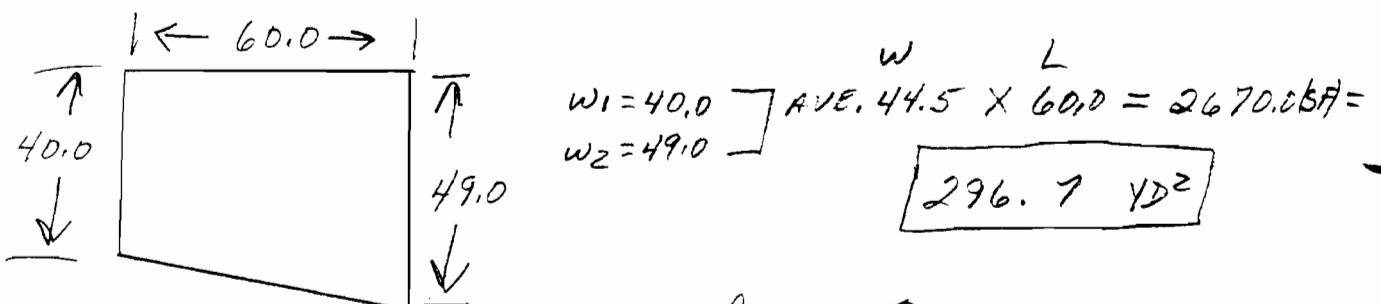
BLANKET # 321C TYPE III



BLANKET # 321D TYPE III



BLANKET # 321E TYPE III



TOWN OF CLARKSTOWN, WEST NYACK, NEW YORK

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO. 4818

Trial Seam Sample Log

Date:

☒ Destructive Seam Log

7-21-98

Q.A. SIGN

[illegible]

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

DATE: 7-21-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM <u>CLR</u>	PM <u>OVR</u>
TEMP DEG F	HI <u>96</u>	LO <u>62</u>
WIND	AM <u>110</u>	PM <u>110</u>
PRECIPITATION	AM <u>-</u>	PM <u>-</u>

[illegible]

COMMENTS:

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 7-22-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 680

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
OVER / CLDY AM / PM	97°	74°

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF DRAINAGE NET OVER BLANKETS # 428 AND # 428A
THEN 602. FABRIC OVER NET FOR FINAL TYPE III COVER SYSTEM. PLACEMENT
OF 602. FABRIC OVER THE SUBGRADE EAST OF BLANKETS # 425 AND
425A THEN DRAINAGE NET OVER FABRIC FOR FUTURE TYPE III LINER
PLACEMENT. MIKE, DIANA AND MYSELF MEASURED BLANKETS # 425 AND
425A IN LFP8 TO LFP5 AREA I 4, THEN MEASURED LIGHT
RIP RAP AT PC I LFP5 CHANNEL # 18

Start/finish time: 7:00 / 5:00

Page 1 of 3 pages
s:\clarktw\fldforms\ldr.xls


Inspector's signature
JOE SCHOFIELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

429A 317E 317E 302
317D

425
7-17
TYPE 3

179

425A
7-17
TYPE 3

144

PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

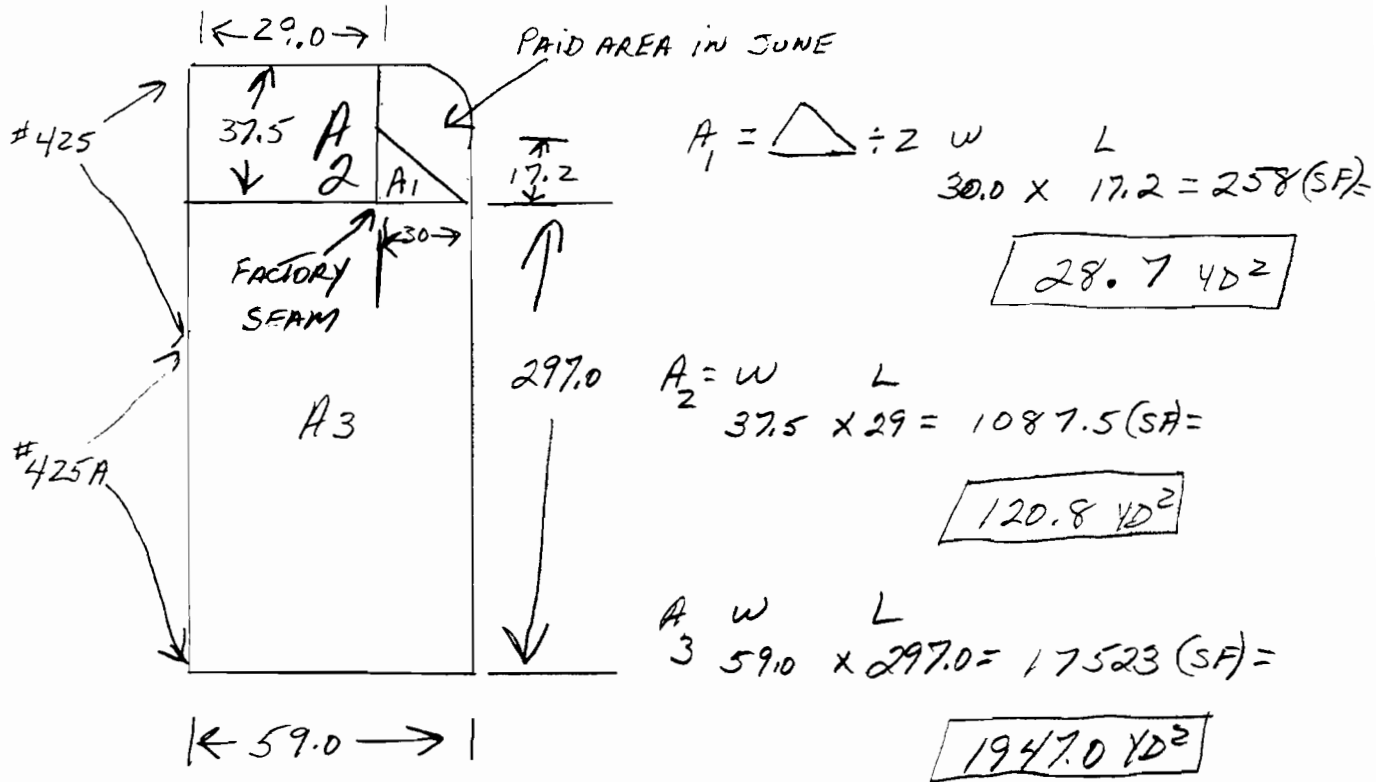
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKETS #425- #425A TYPE III



$A_1 = 28.7 \text{ yd}^2$
 $A_2 = 120.8$
 $A_3 = 1947.0$

TOTAL yd² = 2096.5

RIP RAP AT PC 1 CHANNEL #18

$W \quad L$
 $23.2 \times 23.8 = 552.16 \text{ (SF)} =$

61.4 yd²

Inspector's signature
JOE SCHOFIELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

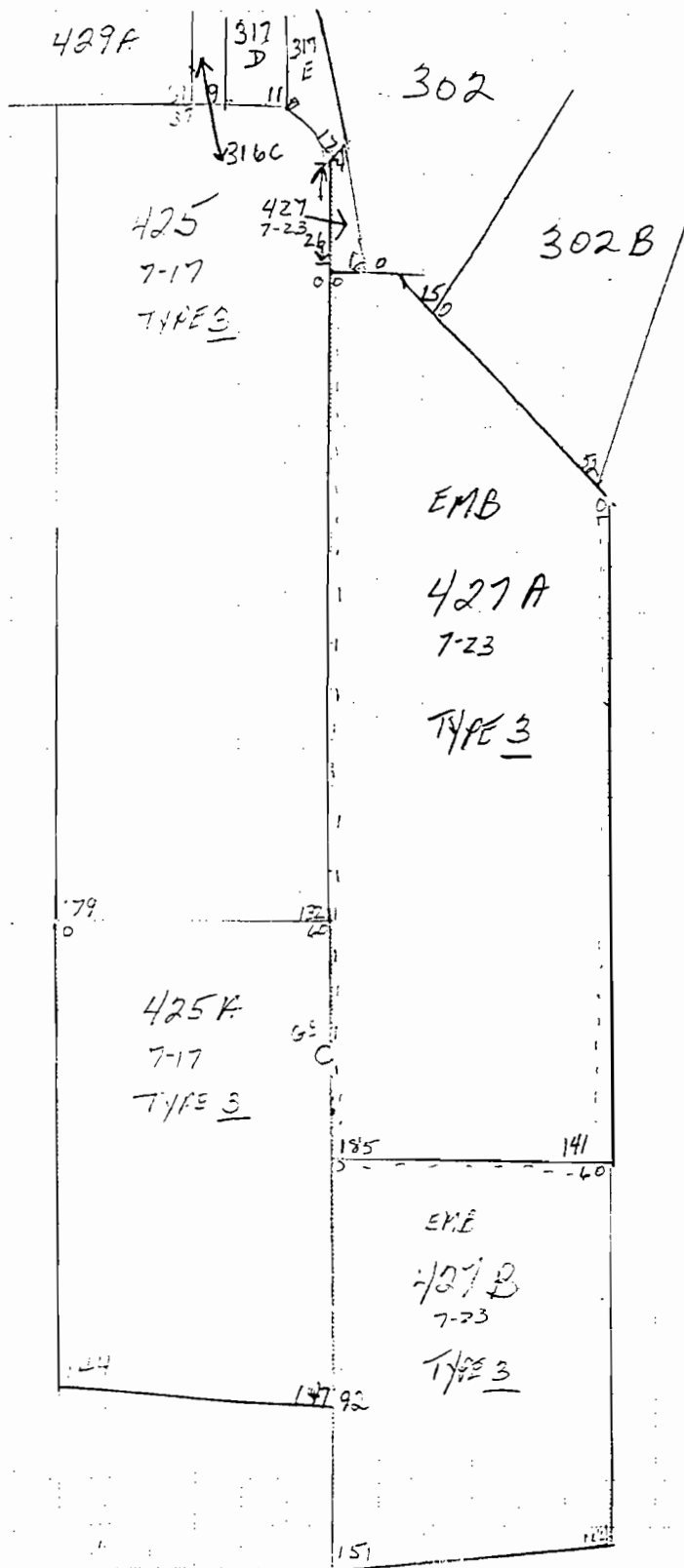
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



PAGE 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION LFP-8 TO LFP-5 AREA I 4 TASK NO. _____

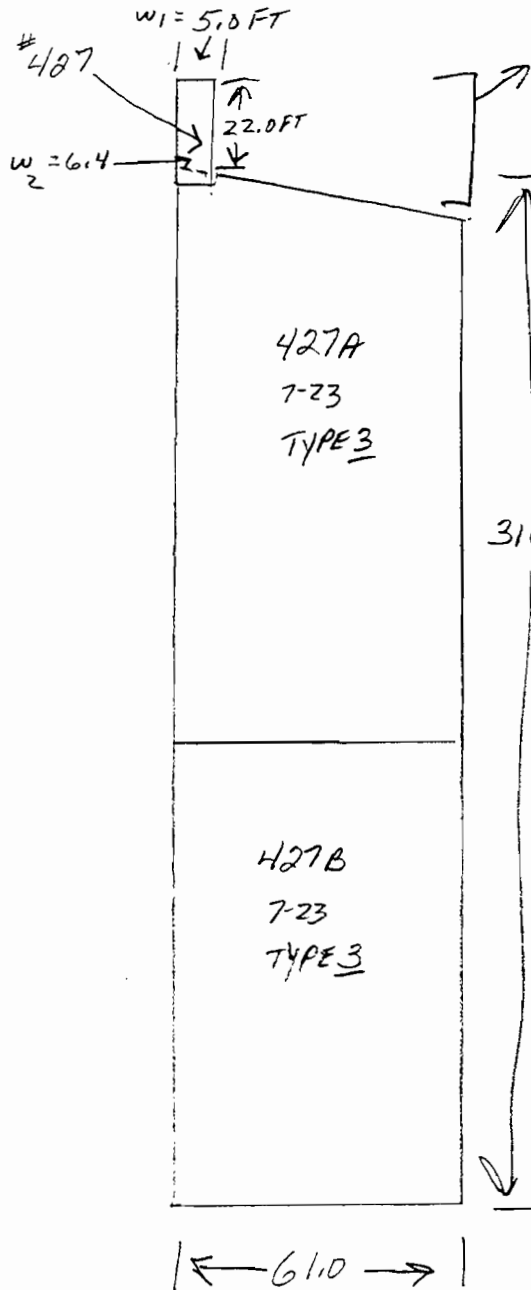
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____ DATE _____	

BLANKETS # 427 - # 427A AND # 427B TYPE III



$$A_1 = W \quad L$$

$$6.4 \text{ AVE. } 5.7 \times 22 = 125.4 (\text{SF}) =$$

$$5.0$$

$$\#427 = \boxed{14.0 \text{ YD}^2}$$

$$316.4 = A_2 \quad \#427 - \#427A \text{ AND } \#427B$$

$$A_2 = W \quad L$$

$$61.0 \times 316.4 = 19300.4 (\text{SF}) =$$

$$\boxed{2144.5 \text{ YD}^2}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-23-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F
WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast <u>AM / PM</u>	Rain AM / PM
AM <u>72°</u>		PM <u>86°</u>	
Still AM <u>PM</u>	Breeze <u>AM</u> / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM <u>PM</u>	Moderate <u>AM</u> / PM	Humid AM / PM	

[illegible]

Free:

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-23-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM <u>OUR</u>	PM <u>OUR</u>
TEMP DEG F	HI <u>86'</u>	LO <u>72'</u>
WIND	AM <u>110</u>	PM <u>15</u>
PRECIPITATION	AM <u>-</u>	PM <u>.5</u>

[illegible]

COMMENTS:

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

S M T W TH **F** S

Job No: 03228-018-001-0003-00

Date: 7-24-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 682

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY/CLDY	91	67

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF DRAINAGE NET OVER BLANKETS #427-#427A AND #427B, THEN 602. FABRIC OVER NET FOR FINAL TYPE III COVER SYSTEM.
PLACEMENT OF PVC BLANKETS #426 WHICH TIED-IN SOUTH OF #302B AND #302A AND EAST END OF #427A, BLANKET #426A TIED-IN SOUTH OF #426 AND #302A AND EAST END OF #427A AND #427B, BLANKET #426B TIED-IN SOUTH OF #426A AND EAST END OF #427B, BLANKET #426C TIED-IN SOUTH OF #425A AND WEST END OF #427B.
AIR LANCED SEAMS ON BLANKETS PLACED ON 7-24-98 EXCEPT FOR BLANKET #426. MIKE, DIANA AND MYSELF MEASURED BLANKETS (#426) (#426A - #426B) AND (#426C).

Start/finish time: 2:00/4:30

Page 1 of 4 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
JOE SCHOFIELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

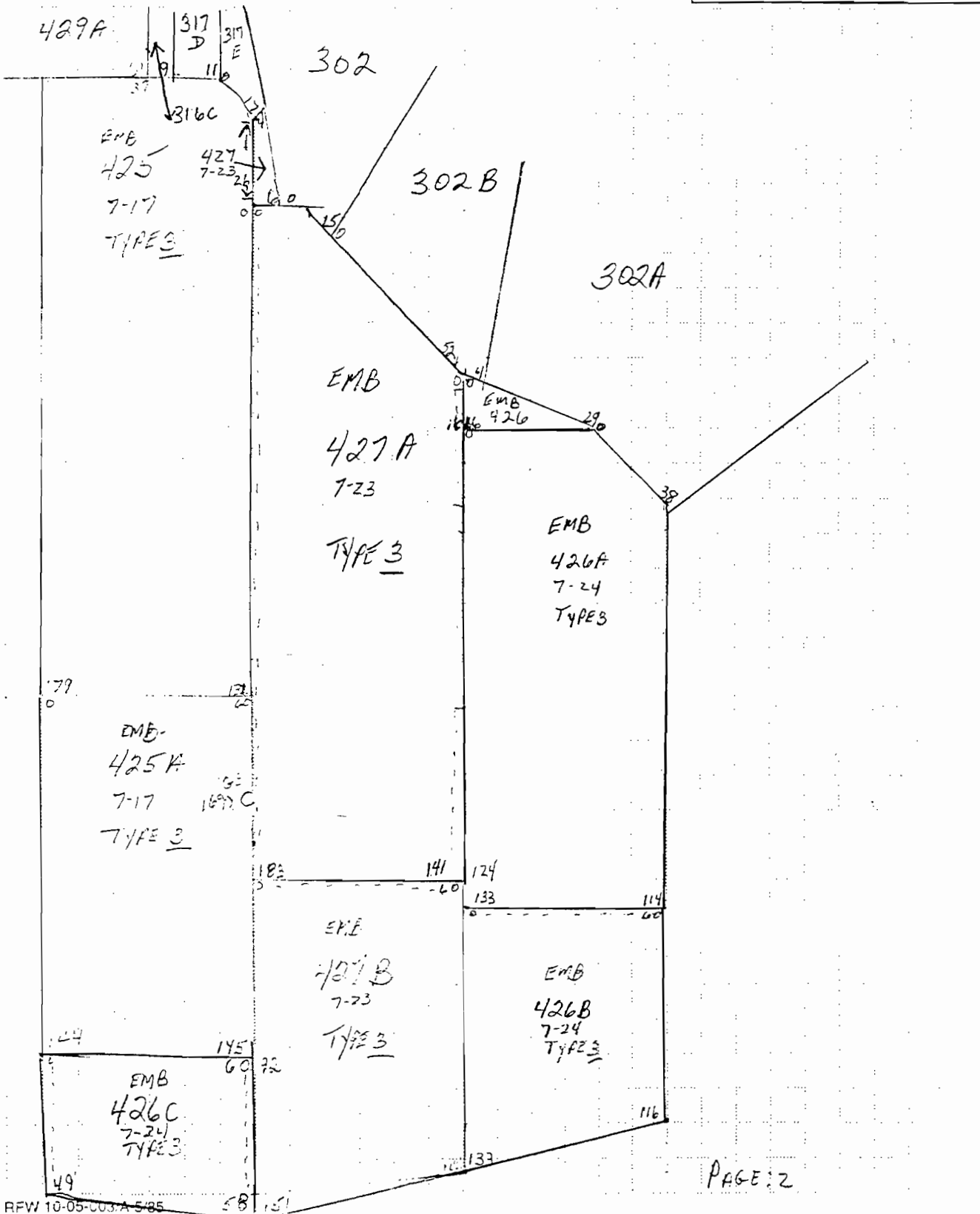
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION BLANKET MEASURED LFP-8 TO LFP5 TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

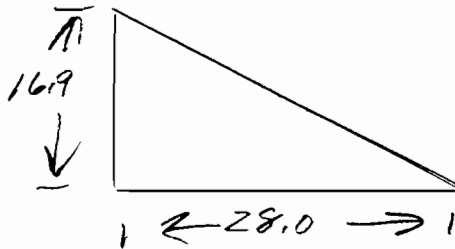
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKET # 426

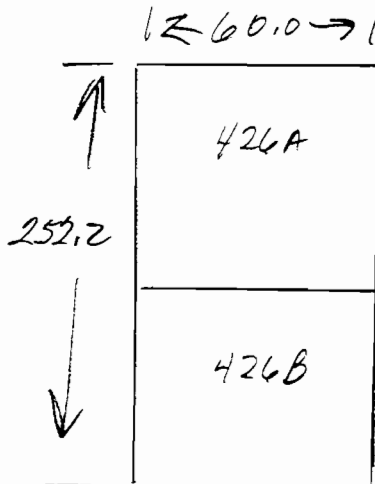
TYPE III ★



$$\begin{array}{c}
 W \quad L \\
 28.0 \times 16.9 = \frac{\triangle}{2} = \boxed{26.3 \text{ yd}^2}
 \end{array}$$

BLANKETS # 426A - # 426B

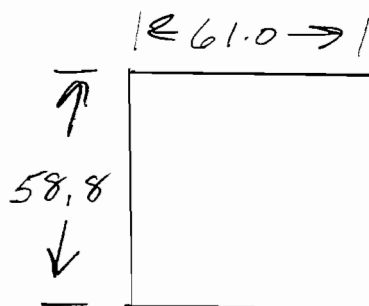
TYPE III ★



$$\begin{array}{c}
 W \quad L \\
 60.0 \times 252.2 = 15132.0(\text{SF}) = \boxed{1681.3 \text{ yd}^2}
 \end{array}$$

BLANKET # 426 C

TYPE III ★



$$\begin{array}{c}
 W \quad L \\
 61.0 \times 58.8 = 3586.8(\text{SF}) = \boxed{398.5 \text{ yd}^2}
 \end{array}$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-24-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER

TEMP. DEG F

WIND

HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM	67°		PM 91°
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

Inspector's Daily Report

Project: Remediation of Clarkstown Landfill and Landfill Capping

Job No: 03228-018-001-0003-00

Consultant: Roy F. Weston of New York, Inc.

Contractor: Ogden Remedial Services Corporation

S M T W TH F S

Date: 7-27-98

IDR #: 685

Weather	High	Low
OVR / OVR	88°	67°

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF 602. FABRIC EAST OF BLANKETS* 426 A
AND # 426 B, THEN DRAINAGE NET OVER FABRIC TO START TYPE III
TO LFG SURFACE COLLECTOR MONITOR POINT AT THE END OF CHANNEL # 1.

Start/finish time: 7:10 / 4:00

Page 1 of 1 pages
s:\clarktw\n\fldforms\ldr.xls

Joe Schofield
Inspector's signature
JOE SCHOFIELD
Inspector's name

S M (T) W TH F S

Date: 7-28-98

IDR #: 686

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
OVR / OVR	89°	66°

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF PVC BLANKETS # 430 WHICH TIED-IN SOUTH OF #302A -
#310D AND #314A AND EAST END OF #426A, BLANKET # 430A TIED-IN SOUTH
OF #430 AND EAST END OF # 426A AND # 425B, BLANKET # 147 TIED-IN
SOUTH OF #314A AND EAST END OF # 430, BLANKET #147A TIED-IN SOUTH OF
147 AND EAST END OF # 430A, BLANKET #144 TIED-IN SOUTH OF #314A
AND #314 AND THE EAST END OF #147 AND #147A, AND BLANKET
#144A TIED-IN SOUTH OF #144 AND EAST OF # 147A. AIR LANCED
ALL SEAMS ON BLANKETS # 426 AND THE WEST END OF #430 AND # 430A.
MIKE, DIANA AND MYSELF MEASURED PVC BLANKETS # 430 - # 430A - #147
AND #147A, THEN WE MEASURED THE PERIMETER DRAINAGE PIPE EAST
OF PC #1

Start/finish time: 7:00/6:00

Page 1 of 6 pages
s:\clarktw\fldforms\ldr.xls

Inspector's signature
505 Schofield
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

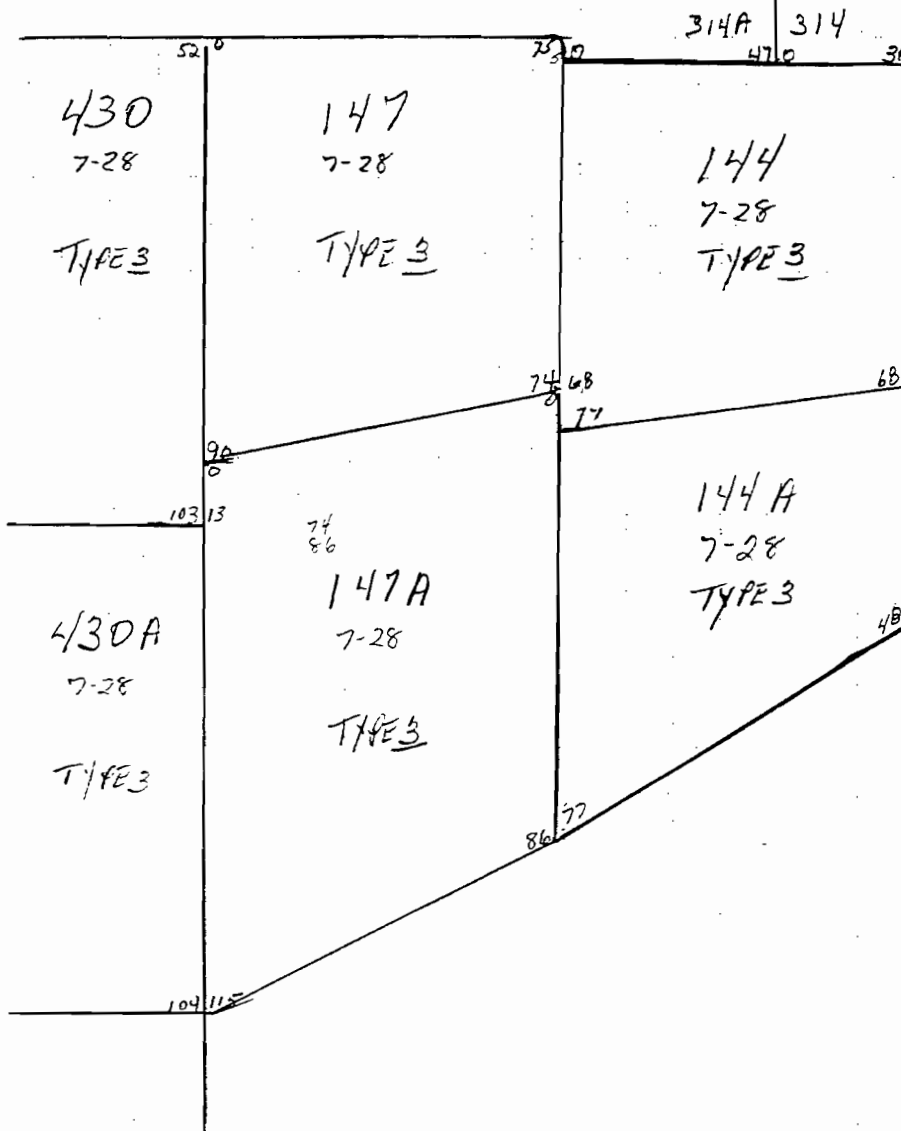
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
68 116	
DEPT _____	DATE _____

314A



CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION BLANKETS MEASURED IN 55-54 TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

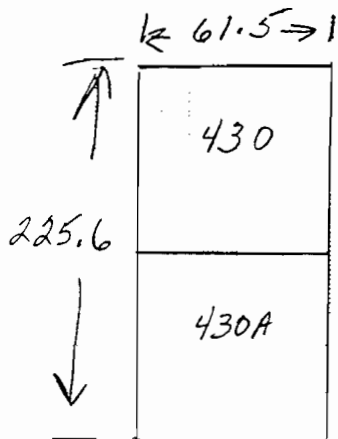
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

BLANKETS # 430 - # 430 A

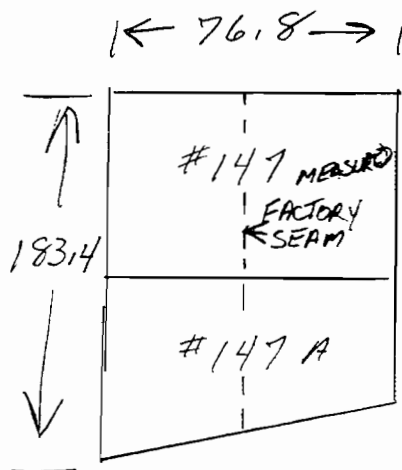
TYPE III



$$\begin{array}{c}
 W \quad L \\
 61.5 \times 225.6 = 13874.4 (SF) = \boxed{1541.06 YD^2}
 \end{array}$$

BLANKETS # 147 - # 147 A

TYPE III



$$\begin{array}{c}
 W \quad L \\
 76.8 \times 183.4 = 14085.12 (SF) = \boxed{1565.0 YD^2}
 \end{array}$$

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-28-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM	<u>OVR</u>	PM	<u>OVR</u>
TEMP DEG F	HI	<u>79</u>	LO	<u>66</u>
WIND	AM	<u>410</u>	PM	<u>410</u>
PRECIPITATION	AM	<u>---</u>	PM	<u>---</u>

[illegible]

COMMENTS: _____

Inspector's signature
JOE SCHOFIELD
Inspector's name



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

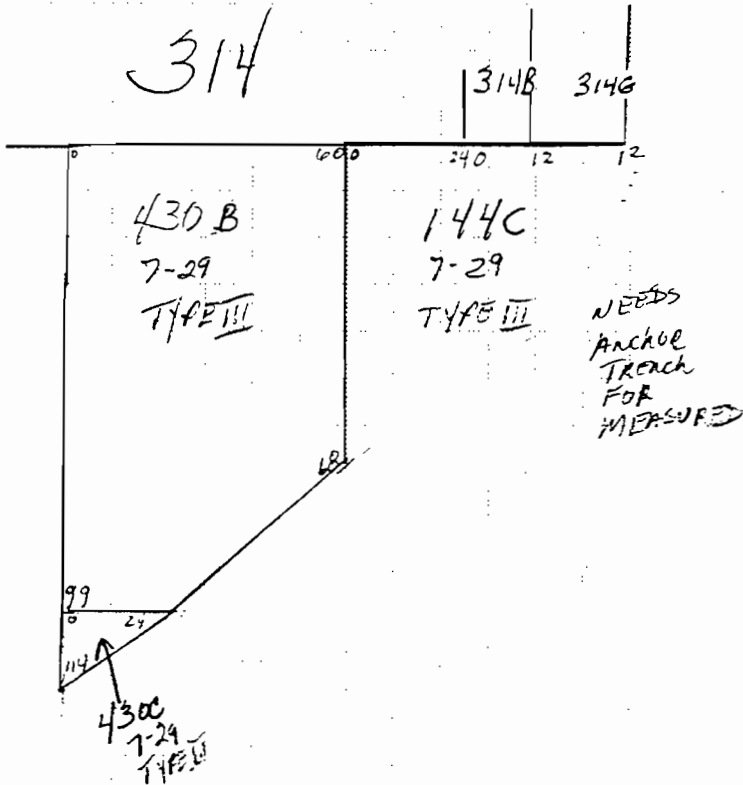
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____



PAGE: 2

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION BLANKETS MEASURED LFP5 AREA 55 TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

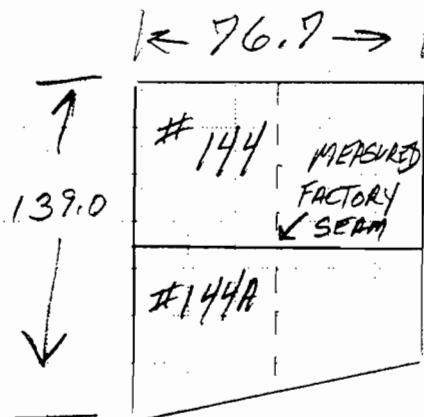
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	
DEPT _____	DATE _____

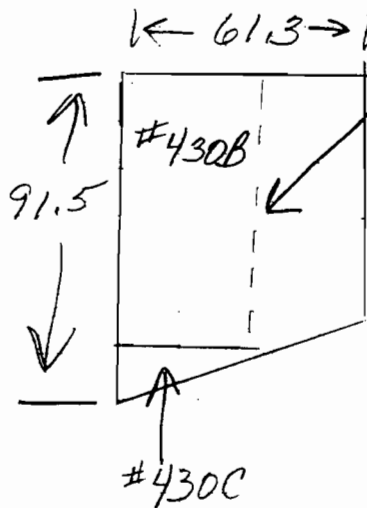
BLANKETS # 144 - # 144A

TYPE III



$$76.7 \times 139.0 = 10661.3 (SF) = 1184.6 YD^2$$

BLANKETS # 430B - # 430C



$$61.3 \times 91.5 = 5608.95 (SF) = 623.2 YD^2$$

ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-29-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

TEMP. DEG F
WIND

Clear AM / PM	P. Cloudy AM / PM	Overcast <u>AM / PM</u>	Rain AM / PM
AM 70°		PM 92°	
Still AM / PM	L. Breeze <u>AM / PM</u>	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate <u>AM / PM</u>	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-29-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM <u>OVR</u>	PM <u>OVR</u>
TEMP DEG F	HI <u>92°</u>	LO <u>70°</u>
WIND	AM <u>210</u>	PM <u>210</u>
PRECIPITATION	AM <u>—</u>	PM <u>—</u>

[illegible]

COMMENTS:

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 7-29-98

G.A. SIKH

☐ Trial Seam Sample Log

☒ Destructive Seam Log

[illegible]

Inspector's signature
Inspector's name

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION BLANKET #144C LFP-5 AREA 34 TASK NO. _____

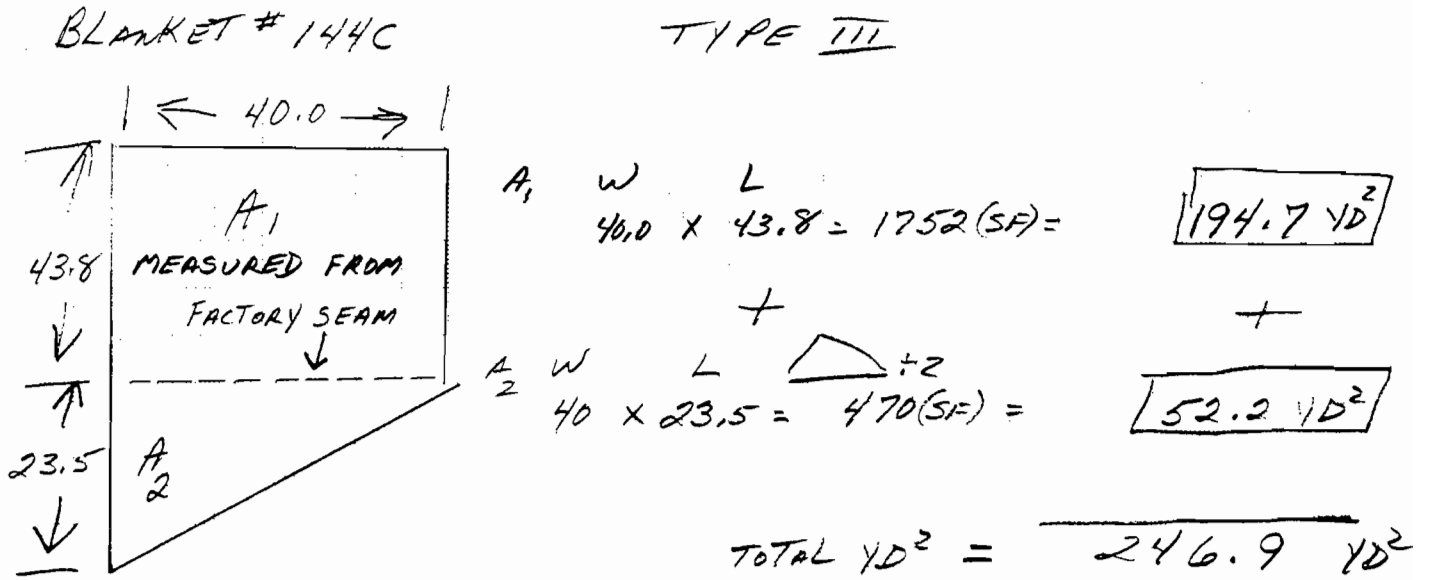
PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY	

DEPT _____	DATE _____



ROY F. WESTON OF NEW YORK, INC.
AIR LANCE TEST FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-30-98
INSPECTOR: SOE SchoFIELD
LINER TECHNICIAN: GRANT MORGAN

WEATHER
TEMP. DEG F
WIND
HUMIDITY

Clear AM / PM	P. Cloudy AM / PM	Overcast AM / PM	Rain AM / PM
AM 68°		PM 94°	
Still AM / PM	L. Breeze AM / PM	Moderate AM / PM	High (> 20 MPH) AM / PM
Dry AM / PM	Moderate AM / PM	Humid AM / PM	

[illegible]

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-30-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM	<u>CLDY</u>	PM	<u>CLDY</u>
TEMP DEG F	HI	<u>94°</u>	LO	<u>68°</u>
WIND	AM	<u>210</u>	PM	<u>210</u>
PRECIPITATION	AM	<u>—</u>	PM	<u>—</u>

[illegible]

COMMENTS:

ROY F. WESTON OF NEW YORK, INC.
GEOTEXTILE PANEL PLACEMENT FORM

CLARKSTOWN LANDFILL
WESTON W.O. # 03228-018-001-0003-00

CLIENT: Town of Clarkstown
GENERAL CONTRACTOR: Ogden
LINER INSTALLER: Environmental Liners

DATE: 7-31-98
INSPECTOR: JOE SCHOFIELD
LINER TECHNICIAN: LYLE LUTHER

WEATHER	AM	<u>RAIN</u>	PM	
TEMP DEG F	HI		LO	<u>66</u>
WIND	AM	<u>210</u>	PM	<u>210</u>
PRECIPITATION	AM	<u>YES</u>	PM	

[illegible]

COMMENTS:

JOHN OF CLARKSTOWN, WEST NYACK, NEW YORK

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINERS, INC. JOB NO:1818

Date: 7-31-98

Q.A. 516N

-destructive Seam Log

[illegible]



SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION LOWER FLAP TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY

DEPT _____ DATE _____

LOWER FLAP WEST OF CHANNEL #1TYPE II ★

$$(A_1) \begin{matrix} W & L \\ 15.7 & \times 75.1 = 1179.07 (SF) = \end{matrix} \quad 131.0 \text{ yd}^2$$

$$(A_2) \begin{matrix} W & L \\ 15.8 & \times 76.7 = 1211.86 (SF) = \end{matrix} \quad 135.0 \text{ yd}^2$$

$$(A_3) \begin{matrix} W & L \\ 16 & \times 75.6 = 1209.6 (SF) = \end{matrix} \quad 134.4 \text{ yd}^2$$

$$(A_4) \begin{matrix} W & L \\ 15.2 & \times 76.0 = 1155.2 (SF) = \end{matrix} \quad 128.3 \text{ yd}^2$$

$$(A_5) \begin{matrix} W & L \\ 15 & \times 75.1 = 1126.5 (SF) = \end{matrix} \quad 125.1 \text{ yd}^2$$

$$(A_6) \begin{matrix} W & L \\ 17.7 & \times 26.6 = 470.82 (SF) = \end{matrix} \quad 52.3 \text{ yd}^2$$

$$\text{TOTAL FLAP yd}^2 = \boxed{706.1}$$

COMPOSITE OVER LINER FLAP

$$\begin{matrix} W & L \\ 14.0 & \times 405.1 = 5671.4 (SF) = \end{matrix}$$

$$\boxed{630.1 \text{ yd}^2}$$

Inspector's signature
JOE SCHOFIELD
Inspector's name

ORSC PROJECT NO. 34-1996

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINENS, INC. JOB NO:1818

ENVIRONMENTAL LINERS, INC.

Trial Scan Sample Log

Date: 8-4-98

☒ Destructive Seam Log (RETEST) DS 164 SEAMS 165-[#] 320[#]


 Dr. A. S. K. N.

[illegible]

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL TIMBERS, INC.

SUBCONTRACT NO. 7-52-52-111970
CENTRAL LINENS, INC. JOB NO:1818

Trial Scan Sample Log

Date: 8-4-98

☒ ☒ Destructive Scan Log

(RETEST) DS#169 SEAMS #326A - #325

Q.A. SIGN

Sample #	Date Sampled	Account ID	Machine #	Feet		Shot		Lab #/1	Sample Results/Comments
16951		LL	8	46	45	78 -	--		
16952		LL	8	40	42	74 75	77		
169N1		LL	8	44	42	75	79		
169N2		LL	8	49	48	74	75		
16953				47	45	68	71/73		

← FAILED

PAGE: 3

ORSC PROJECT NO. 34-1996

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LINKS, INC. JOB NO: 4818

ENVIRONMENTAL LENSES, INC.

Dile: 8-4-98

Q.A. 516N

[illegible]

S M T W TH F S

Date: 8/5/98

IDR #: 694

Weather	High	Low
CLR / CLDY AM PM	93°	62°

Description of work performed and inspected

[illegible]

Remarks: PLACEMENT OF A CAP STRIP OVER ALL ACCEPTABLE (4) DESTRUCTIVE
SAMPLES ON JS#164 (2) AT 10' FT. INCREMENTS FROM FAILED ORIGINAL
DESTRUCT IN EACH DIRECTION THEN CAP STRIP WAS AIR LANCED AND WAS
ACCEPTABLE THEN ANOTHER 5' FT DESTRUCT WAS CUT AND SENT TO THE
LAB. 5' FT DESTRUCT WAS PATCHED THEN AIR LANCED. ON FAILED JS#169
THE (2) NORTH SIDE WAS ACCEPTABLE 8-4-98 DESTRUCT CUT THEN TAKEN TO LAB
THEN CHASE SOUTH SIDE TO S4 AND S5 IN 10' FT. INCREMENTS FIELD TESTS
SHOWED ACCEPTABLE THEN SOUTH JS WAS TAKEN THEN CAP STRIP, AIR LANCED
AND CAP STRIP WAS TAKEN TO LAB. THEN AIR LANCED. ON FAILED JS#166
NORTH 3, N4, N5, AND N6 FAILED NEED TO REEXCAVATE ANOTHER 20' FT.
AT 10' FT INCREMENTS FOR (2) PASSING FIELD TESTS. ON FAILED DESTRUCT
#184 SOUTH 1 AND S2 HAS FAILED NEED TO REEXCAVATE 20' FT.
FOR (2) PASSING FIELD TESTS. PLACEMENT OF ADJUSTABLE STAINLESS
STEEL BRIDS AROUND ALL (4) PVC BOOTS AT THE GAS EXTRACTION
VENTS OVER THE RAIA MATERIAL AREA H5-H4-I5 AND I4

Start/finish time: 7:00/5:30

ge 1 of 6 pages
s:\clarktwn\fldforms\ldr.xls

Inspector's signature
Inspector's name

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
 DOMINENTAL LINENS, INC. JOB NO:1818

Trial Scan Sample Log

Dalce:

☐ Trial Scan Sample Log

☒ Destructive Scan Log (RETEST) DS#169 SEMM: 3264
325

8-5-98

Q.A. SIGN

[illegible]

TOWN OF CLARKSTOWN, WEST NACIC, NEW YORK

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
 DOMINENTAL LINENS, INC. JOB NO 18

מ
ד
ו
ה
ב
א

Date: 8-5-98

3
Q.A. 516N

Page: 2

ORSC PROJECT NO. 34-1996

ENVIRONMENTAL LINERS, INC.

SUBCONTRACT NO. 7-52-52-111970
ENVIRONMENTAL LININGS, INC. JOB NO: 1818

Trial Scan Sample Log

☒ Destructive Seam Log (RETEST) 329A

Date: 8-5-98

Q.A. 51672

[illegible]

[illegible]

TOWN OF CLARKSTOWN, WEST NYACK, NEW YORK

SUBCONTRACT NO. 7-52-52-111970

ENVIRONMENTAL LINENS, INC. JOB NO: 1818

Date: 8-5-78

Q.A. 5147

[illegible]

Inspector's signature
Joe Schorfer
Inspector's name

NO: 1818

[Signature]

A. 516N

PAGE: 2

TOWN OF CLARKSTOWN, WEST NYACK, NEW YORK

SUBCONTRACT NO. 7-52-52-111970

ENVIRONMENTAL LININGS, INC. JOB NO:1818

144A

Q.A. SIGN

[illegible]

[illegible]

TOWN OF CLARKSTOWN, WEST NACON, NEW YORK

ENVIRONMENTAL LINERS, INC.

ENVIRONMENTAL LINERS, INC. JOB NO: 1813

ENVIRONMENTAL LINERS, INC.

Date: 8-6-98

☒ Destructive Seam Log (RETEST) 18152 + 51 + 54 + 53

d.A. 5167N

[illegible]

ORSC PROJECT NO. 34-1996

SUBCONTRACT NO. 7-52-52-111970
MINERAL LINERS, INC. JOB NO: 4818

Date: 8-6-98

Q.A. 516

[illegible]

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 8/17/98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 697

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLR / CLR	87°	63°

Description of work performed and inspected

[illegible]

Remarks: ON FAILED DS #181 OGDEN EXCAVATED 20' FT SOUTH FOR (2) PASSING FIELD TESTS AT 10' FT. INCREMENTS, TEST RESULTS FROM S5-S6 WAS ACCEPTABLE. ON DS #181 NORTH THEY EXCAVATED 10' FT. FROM THE LAST ACCEPTABLE FIELD TEST AND #181 N5 SHOWED ACCEPTABLE. AFTER FIELD DS SHOWED ACCEPTABLE BOTH NORTH AND SOUTH FROM THE ORIGINAL FAILED DS A 2' FT. COUPOND WAS SENT TO THE LAB, CAP STRIP WAS PLACED OVER THE ENTIRE AREA, AIR LANCED AND 5' FT DS SENT TO THE LAB, PATCH AND AIR LANCED. ON FAILED DS #166 OGDEN EXCAVATED 20' FT. NORTH FOR (2) PASSING FIELD TESTS DS THEY WERE N7 AND N8, FIELD TESTS SHOWED ACCEPTABLE AND THE SAME SEQUENCE OF TESTING, CAPPING AND FINAL COVER AS DS #181. LEACHATE COLLECTION CHAMBER # 3 AND 4 WAS EXCAVATED AND VISUAL OBSERVATION SHOWED PVC BOOT, STAINLESS STEEL BAND AND CAULK TOP OF BOOT, BUT CHAMBER #5 AFTER EXCAVATION SHOWED IT NEEDED ADJUSTABLE STAINLESS STEEL BAND AROUND BOOT AND CAULK.

Start/finish time: 7:00/4:30

Inspector's signature

Page 7 of 7 pages

Inspector's name

[illegible]

[illegible]

TOWN OF CLARKSTOWN, WEST NACK, NEW YORK

ENVIRONMENTAL LINERS, INC.

ENVIRONMENTAL LINERS, INC. JOB NO:1818

ENVIRONMENTAL LINERS, INC.

Q.A. SIGN

Destructive Seam Log (RETEST) 146 N7 + N8

SETH 319 / 329A

fact:

7

S M T W TH F S

Job No: 03228-018-001-0003-00

Date: 8-10-98

Consultant: Roy F. Weston of New York, Inc.

IDR #: 633

Contractor: Ogden Remedial Services Corporation

Weather	High	Low
CLDY/CLDY	86°	71°

Description of work performed and inspected

[illegible]

Remarks: ON REPAIRED DS #166 THE CAP STRIP WAS CUT FOR DESTRUCT THEN SENT TO THE LAB. ON REPAIRED DS #181 NORTH LAB RESULTS ON FRI. 8-7-98 SHOWED DESTRUCTIVE TEST NORTH HAS FAILED, OGDEN THEN REEXCAVATED 20' FT. NORTH AND AT 10' FT. INCREMENTS (2) PASSING FIELD TESTING BOTH N7 AND N8 WAS ACCEPTABLE A 2' FT. DS SAMPLE WAS THEN CUT AND SENT TO THE LAB. CAP STRIP PLACED, AIR LANDED, DS SENT TO THE LAB. THEN A REPAIR PATCH PLACED AND AIR LANDED. ON REPAIRED DS #181 SOUTH REMAINING SEAM WAS NOT ENOUGH TO RETEST SO THEY EXCAVATED THE PREVIOUS SEAM WHICH RAN EAST FOR A BUTT SEAM THE SEAM WAS #147 AND #147A, THEY EXCAVATED 20' FT. FOR (2) FIELD TEST AT 10' FT INCREMENTS, E7 FAILED BUT E8 WAS ACCEPTABLE, AFTER EXCAVATING 10' FT. FOR RETEST E9 WAS ACCEPTABLE, THEN A 2' FT. DS WAS SENT TO LAB. CAP WAS PLACED, AIR LANDED AND DS FROM CAP SENT TO THE LAB. DS #184 RETESTING AREA DRAINAGE NET AND 602. FABRIC OVER THE RILANKET'S REPAIRED. LEACATE COLLECTION CHAMBER #6 AFTER EXCAVATION SHOWED IT NEEDED STAINLESS STEEL LARD

Start/finish time: 7:00 / 5:00

Page 1 of 4 pages
s:\clarktw\fldforms\ldr.xls

Inspector's signature

Inspector's name

JOHN OF CLARKSTOWN, WEST NACK, NEW YORK

SUBCONTRACT NO. 7-52-52-111970

ENVIRONMENTAL LINENS, INC. JOB NO:18138

Date: 8-10-98

Q.A. SIGN

2000

[illegible]

Inspector's signature
JOE SCHULTZ
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

Inspector's signature
JOE SCHOFIELD
Inspector's name

APPENDIX F2:

Executed Subbase Acceptance Forms



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/5/97

TIME: 10:00 AM

DWG. NO. 1

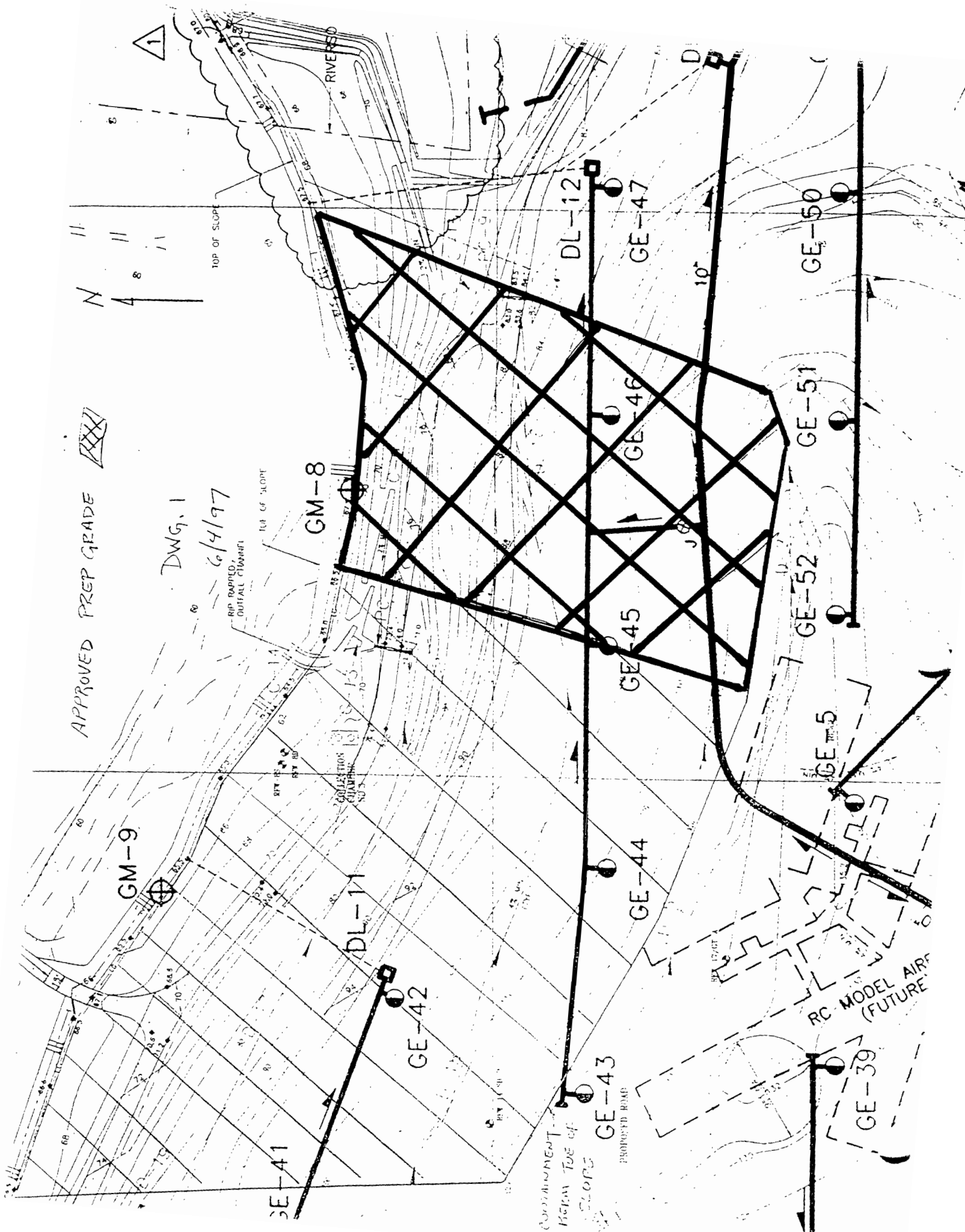
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER





REMEDATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDATION OF CLARKSTOWN¹¹
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/9/97

TIME: 9:40 AM

DWG. NO. 2

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

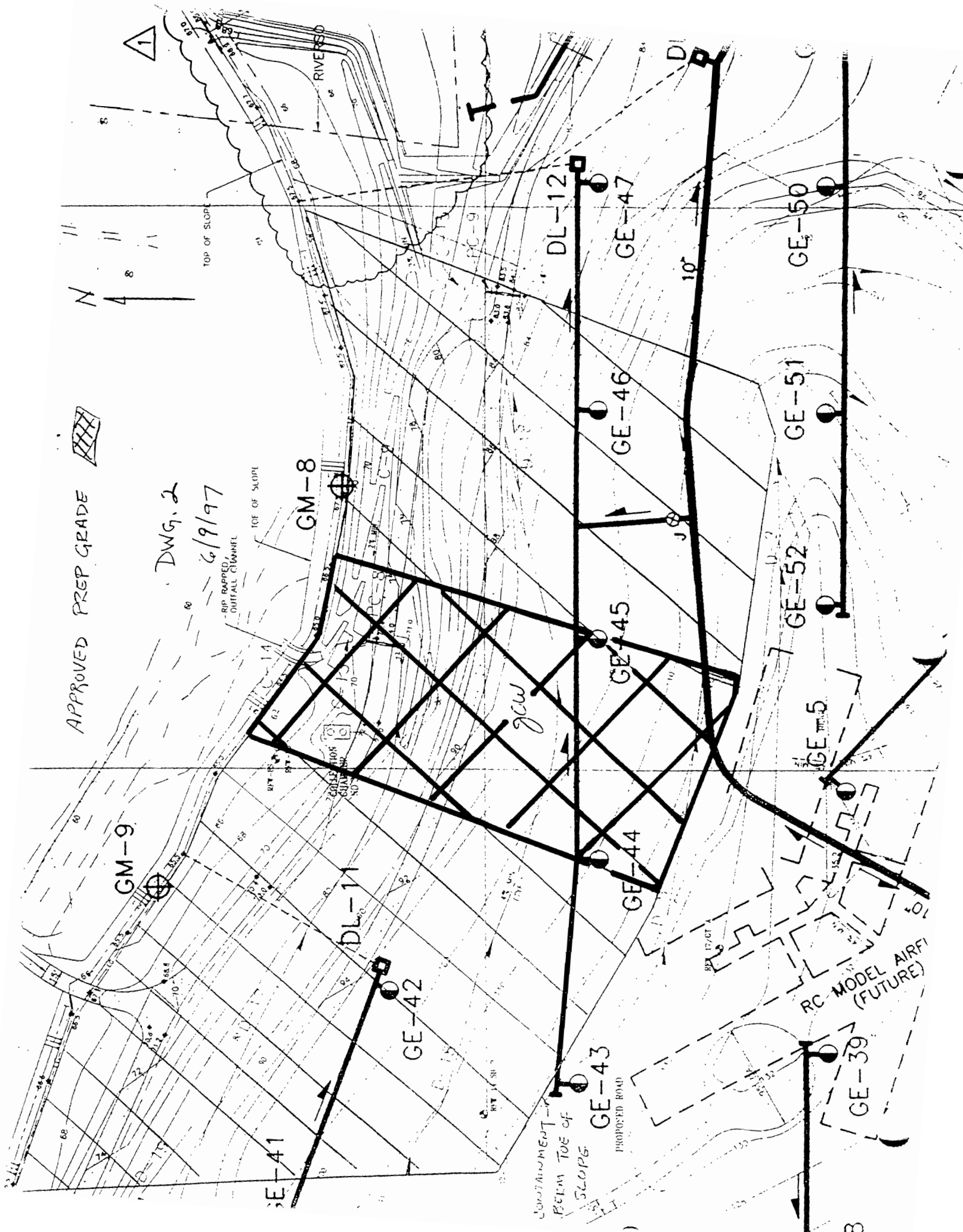
OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER

APPROVED PREP GRADE



DWG. 2
6/9/97



OGDEN

REMEDIALATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

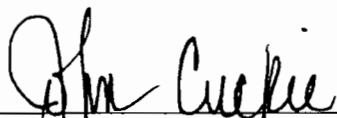
REMEDIALATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/17/97

TIME: 8:20 AM

DWG. NO. 3

ENVIRONMENTAL LINER, INC., OGDEN REMEDIALATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



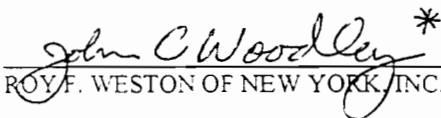
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIALATION SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QC MANAGER

* DL-11 2" DRAIN PIPE NEEDS TO BE FOUND & REPAIRED IF NECESSARY,
AND SOIL REPLACED

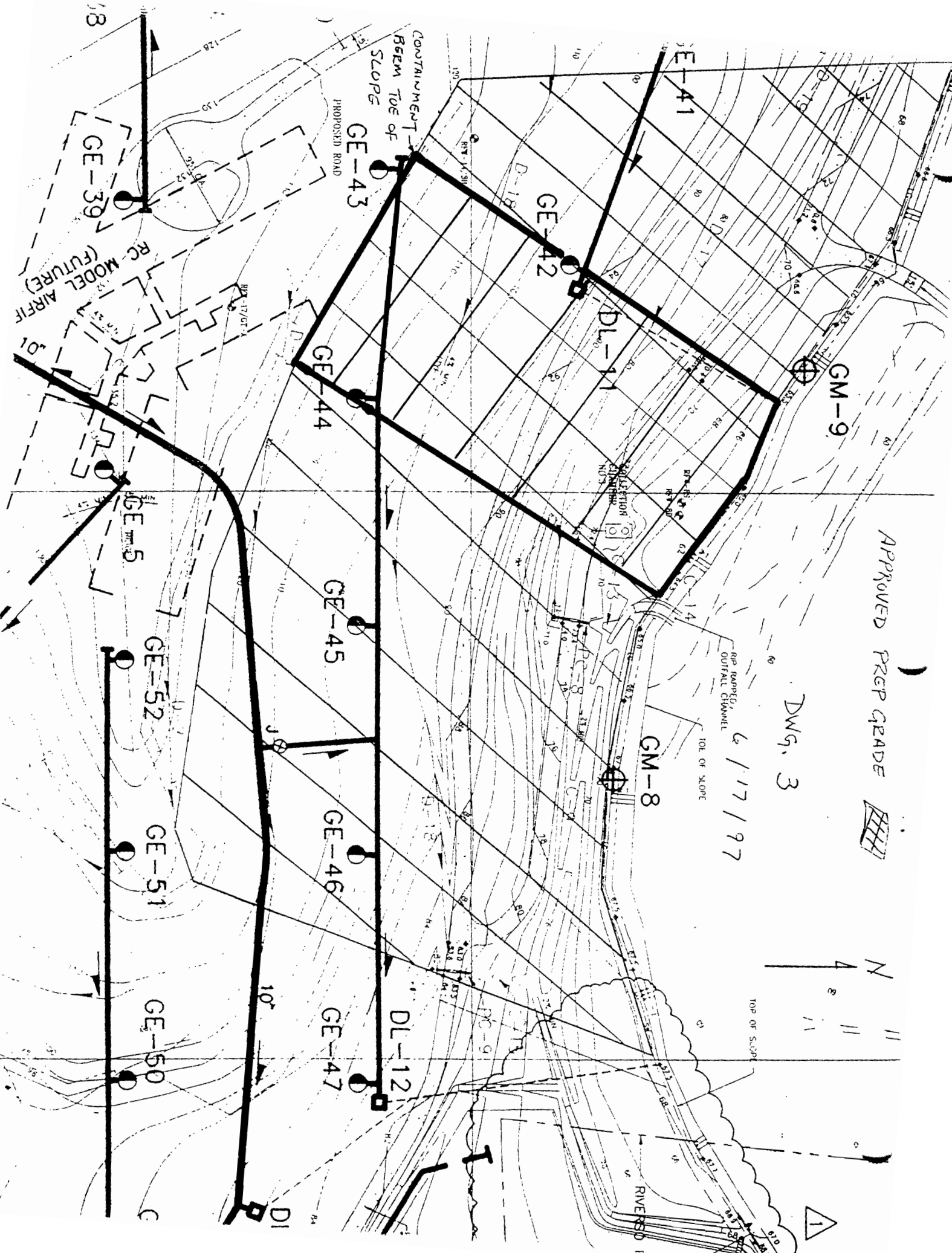


DWG. 3

6/17/97

TOE OF SLOPE

TOP OF SUPP
21



OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

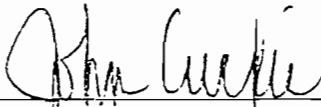
REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/23/97

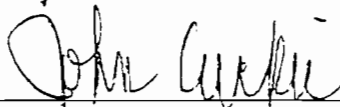
TIME: 4:00 PM

DWG. NO. 3 A

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QC MANAGER

RECEIVED JUN 24 1997

copy us: PHM CAE
JEB C10L
MJD

ACCEPTANCE D 1 3A

DATE = 6/23/97

APPROD AREA

PREP AREA

THE PREPARED CAMP
WITH FORTIFICATION
IS 1145

GM-10

GM-9

GE-41

DI-11

GE-42

GE-43

GE-40

GE-44

GE-45

GE-52

TOP RAPID,
INITIAL CLIMB

10E OF SE

COLLECTOR
CHAMBER
NO. 3

COLLECTOR
CHAMBER NO. 4

WT-43
RT-40/41

WT-17/43

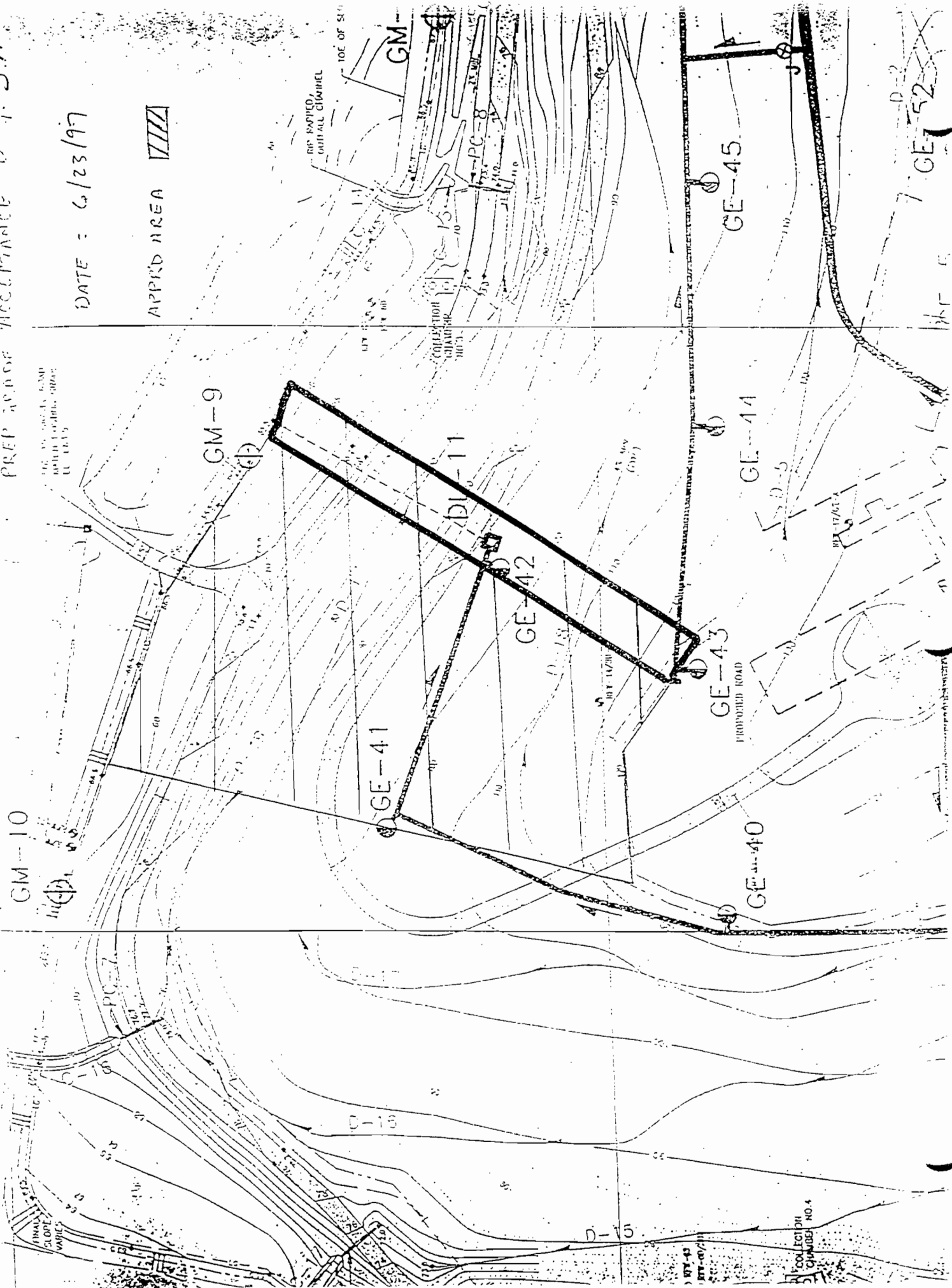
PROPOSED ROAD

D-15

D-18

D-2

pkf



OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/24/97

TIME: 9:20 AM

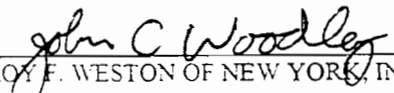
DWG. NO. 4

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN

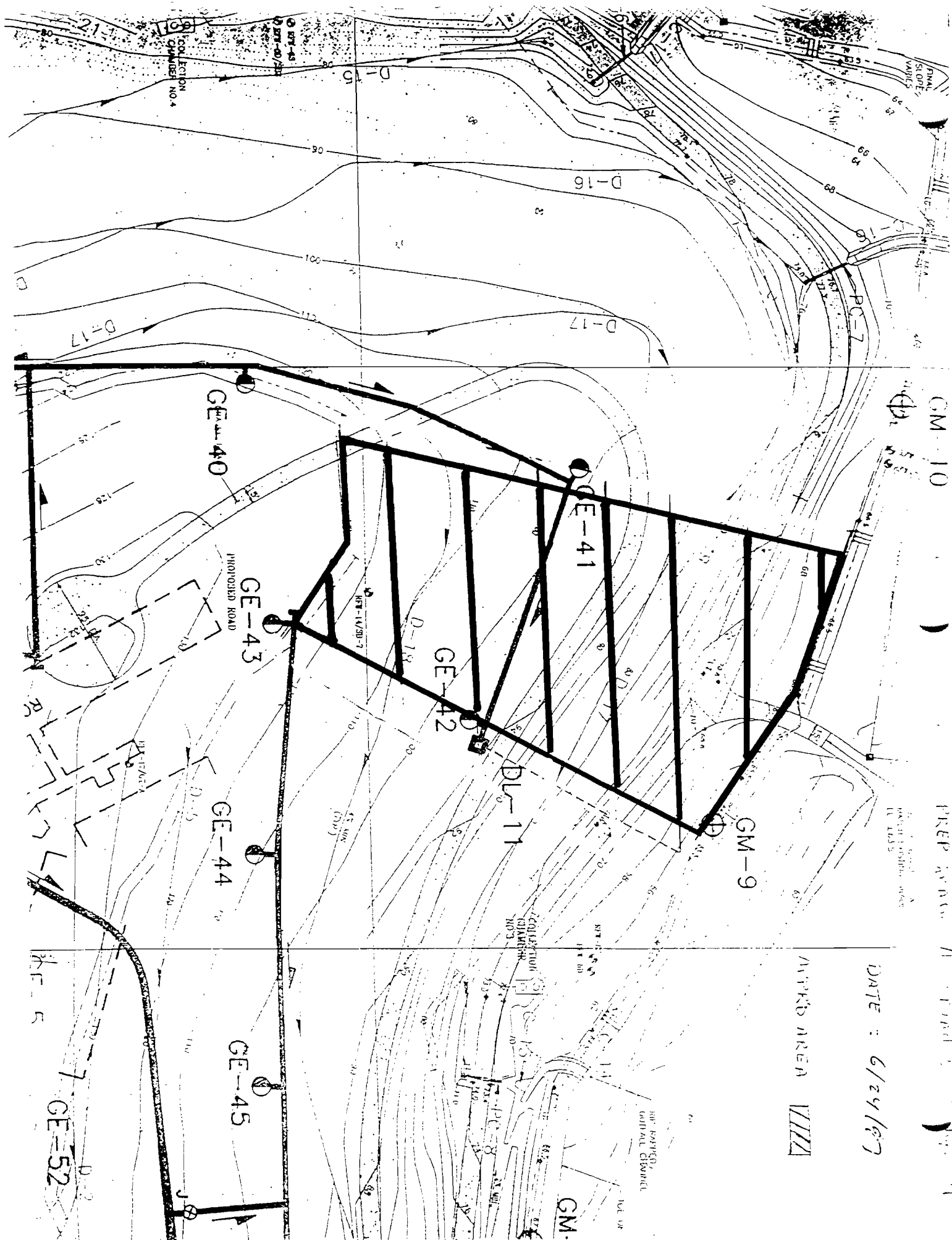

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QC MANAGER

⊕

11. 16.55

DATE : 6/24/67





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

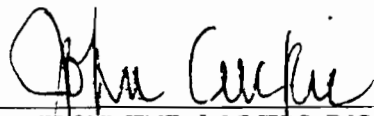
REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/25/97

TIME: 2:00 PM

DWG. NO. 5

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN

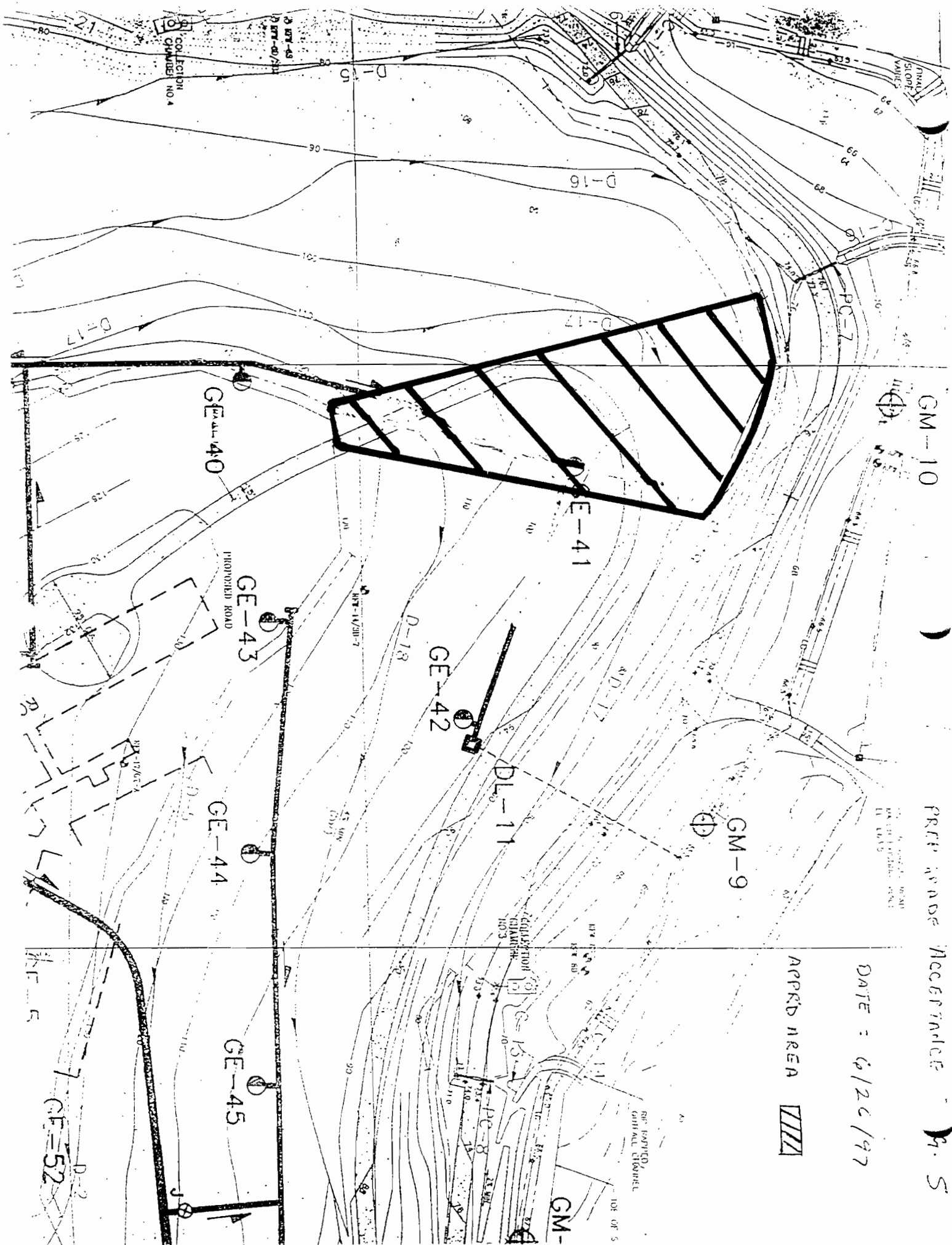

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QC MANAGER

PRR: 40006 Mccerindle M. S

DATE: 6/26/97

APPENDIX A



OGDEN REMEDIATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

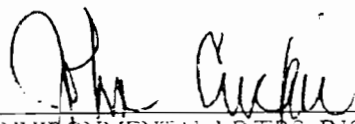
REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/26/97

TIME: 11:00 AM

DWG. NO. 6

ENVIRONMENTAL LINER, INC., OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

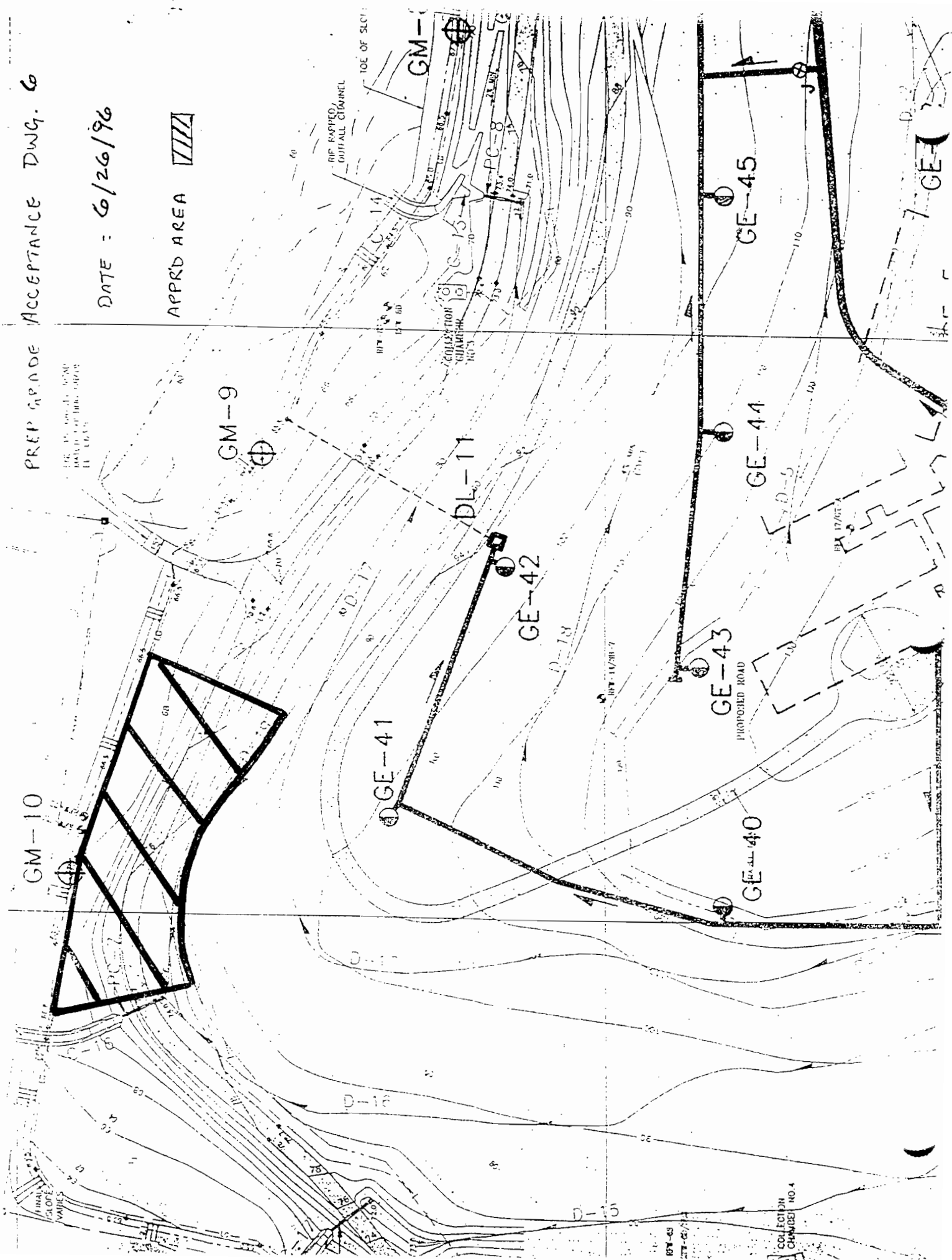


ROY F. WESTON OF NEW YORK, INC. QC MANAGER

PREP GRADE ACCEPTANCE DWG. 6

DATE = 6/26/96

APPR'D AREA 



OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/30/97

TIME: 11:15 AM

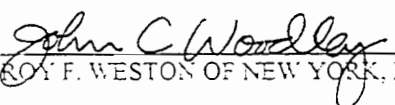
DWG. NO. 6A

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QC MANAGER

PREP - GRADE ACCEPTANCE DWG. 6A

DATE: 6/30/97

APPROVED AREA



60

RIP RAPPED
OUTFALL CHANNEL

GM-10

END 15' GRAVEL ROAD
MATCH EXISTING GRADE
TO 15' GRAVEL

GM-9

GE-41

GE-42

DL-11

COLLECTION
CHAMBER
NO. 3

D-18

RIP RAPPED
OUTFALL CHANNEL

ROAD



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 356 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7-1-97

TIME: 9:00 AM

DWG. NO. 6 B

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER

PREP - GRADE ACCEPTANCE DWG.

DATE:

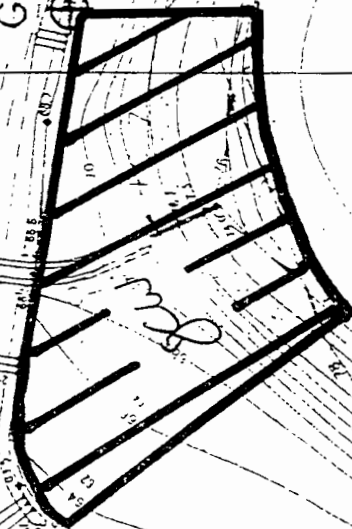
APPROVED AREA



95

100' RAPPED
OUTFALL CHIMNEY

GM-10



100' RAPPED
OUTFALL CHIMNEY

GM-9



GE-41



GE-42



DL-11



COLLECTION
CHIMNEY



D-17

D-16

D-15

100' RAPPED
OUTFALL CHIMNEY

ROAD

100' RAPPED
OUTFALL CHIMNEY

100' RAPPED
OUTFALL CHIMNEY

OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/27/97

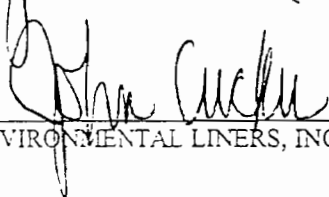
TIME: 2:30 PM

DWG. NO. 7

ENVIRONMENTAL LINERS, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



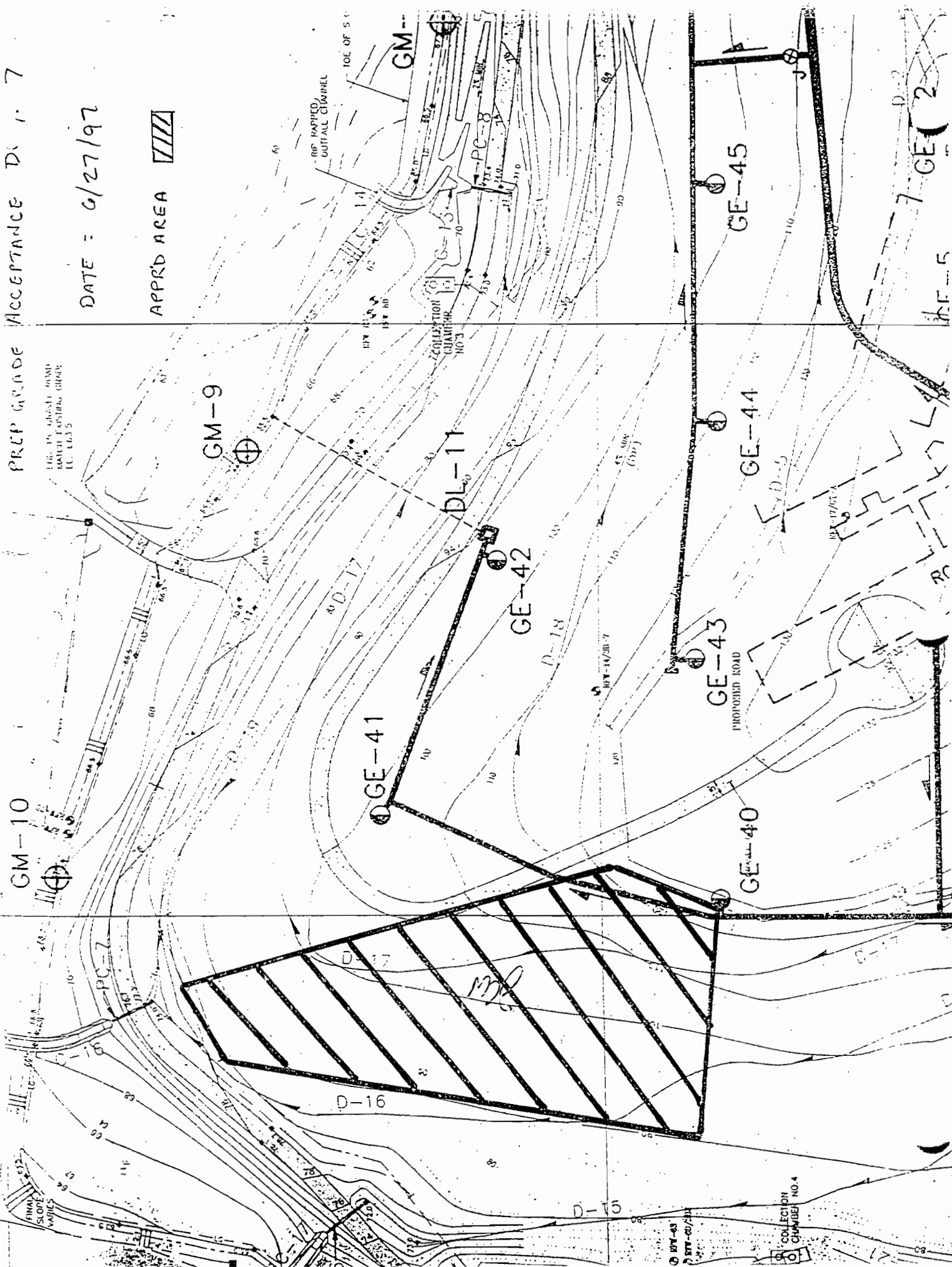
ROY F. WESTON OF NEW YORK, INC. QC MANAGER

PREP GRADE ACCEPTANCE D. 1. 7

DATE = 6/27/97

APPR'D AREA 

THE 10' GRADE-10' ROAD
ADJUSTED ELEVATION
EL. 103.5





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/7/97

TIME: 10:30 AM

DWG. NO. 8

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER

PREP - GRADE ACCEPTANCE DWG.

DATE: 7/7/97

APPROVED AREA



NO. RAISED
INITIAL CHIMNEY

GM-10

END 1st GRANT FUND
NORTH FARMING GRACE
11-11-11

GM-9

DL-11

GE-42

GE-41



RIP RAPPED
OUTFALL CHANNEL

ROAD

1/4 SECTION 36
T4S R4W 101.2



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/8/97

TIME: 3:00 PM

DWG. NO. 8A E'9

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

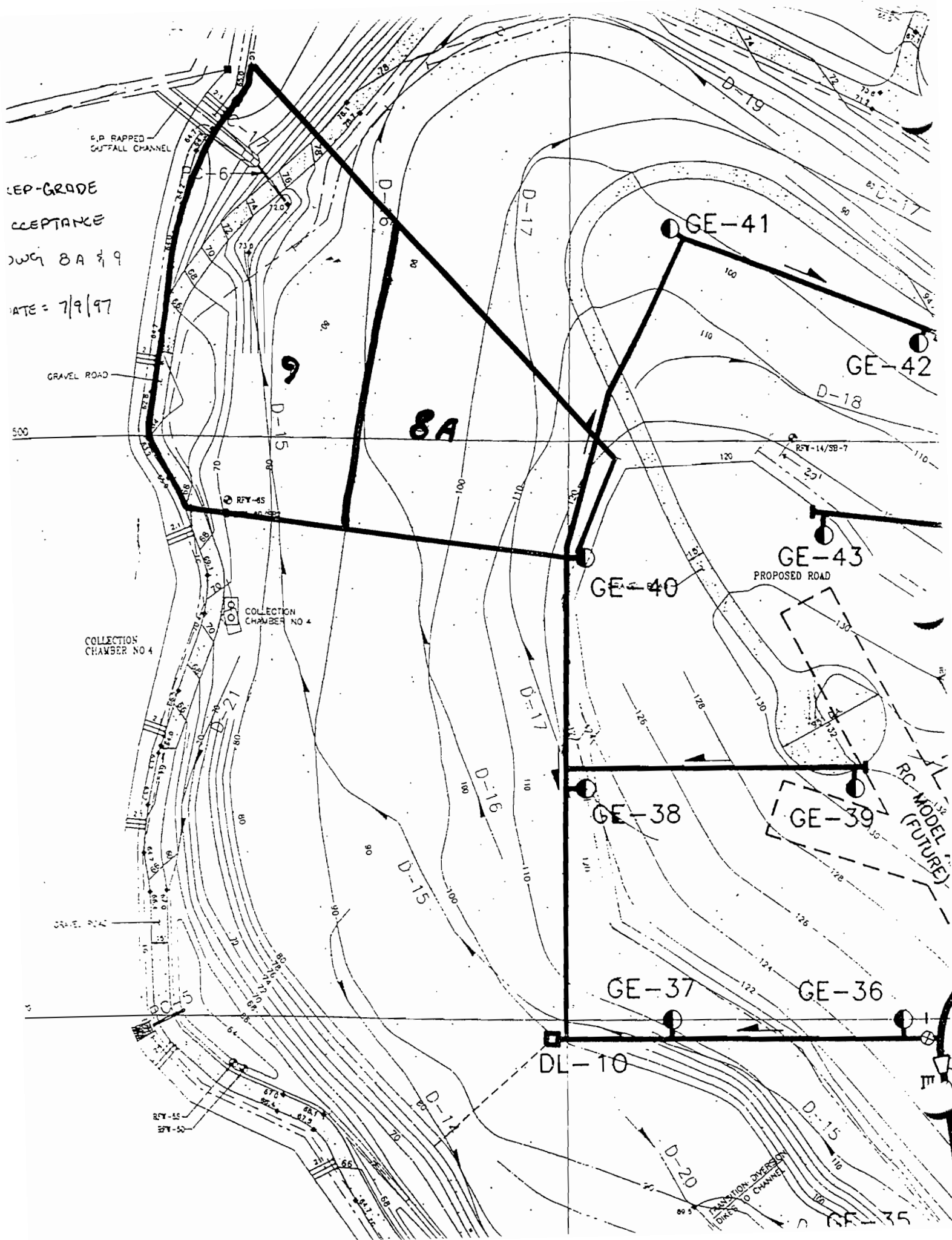
John Cuckie
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

John Cuckie
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Dianna
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

John C. Woodley
ROY F. WESTON OF NEW YORK, INC. QC MANAGER

SEP-GRADE
ACCEPTANCE
DWG 8A & 9
DATE = 7/9/97





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/10/97

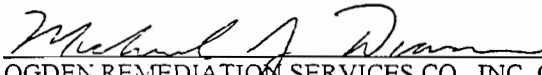
TIME: 4:10 PM

DWG. NO. 8 B 4 9 A

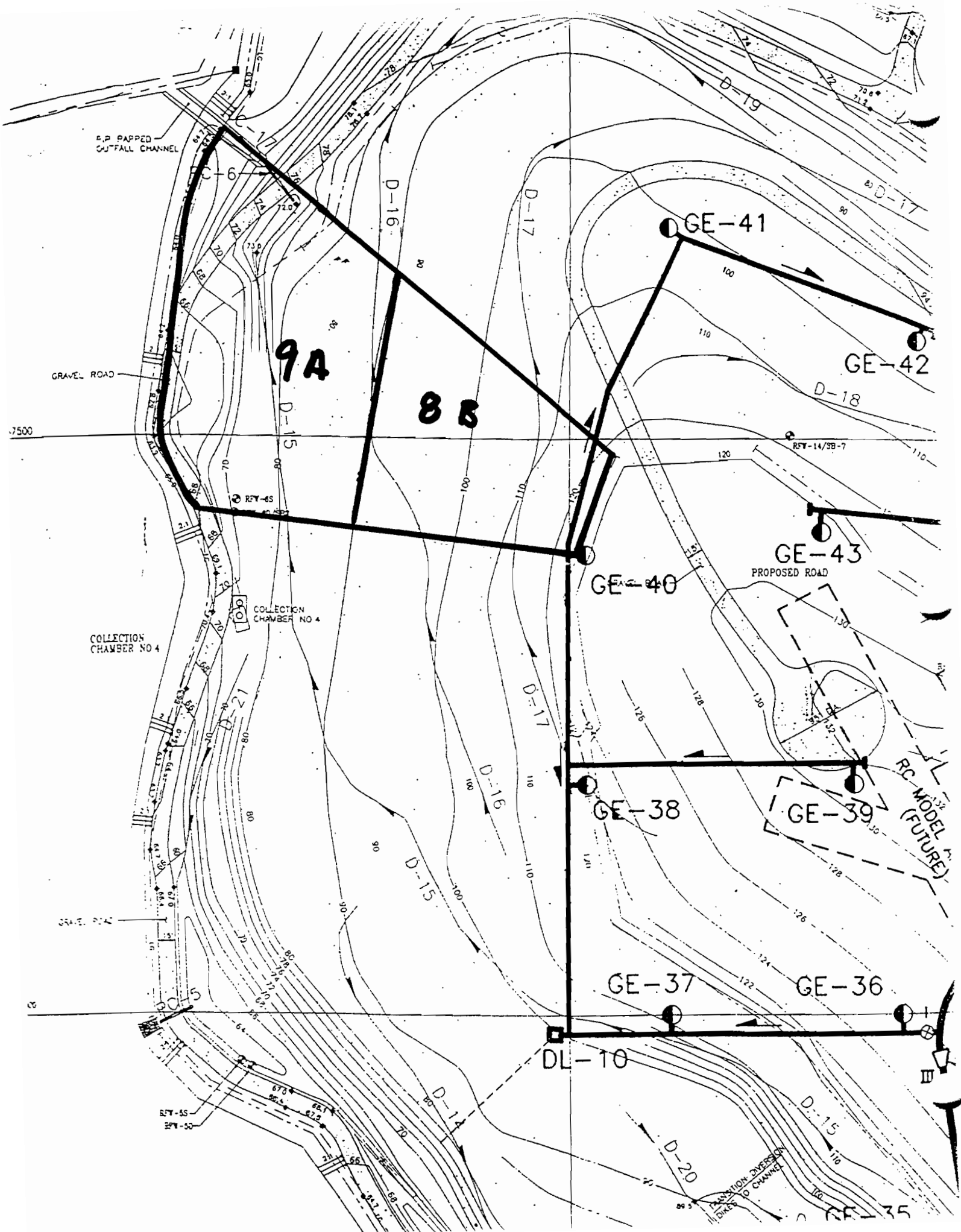
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QC MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/11/97

TIME: 4:15 PM

DWG. NO. 10

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

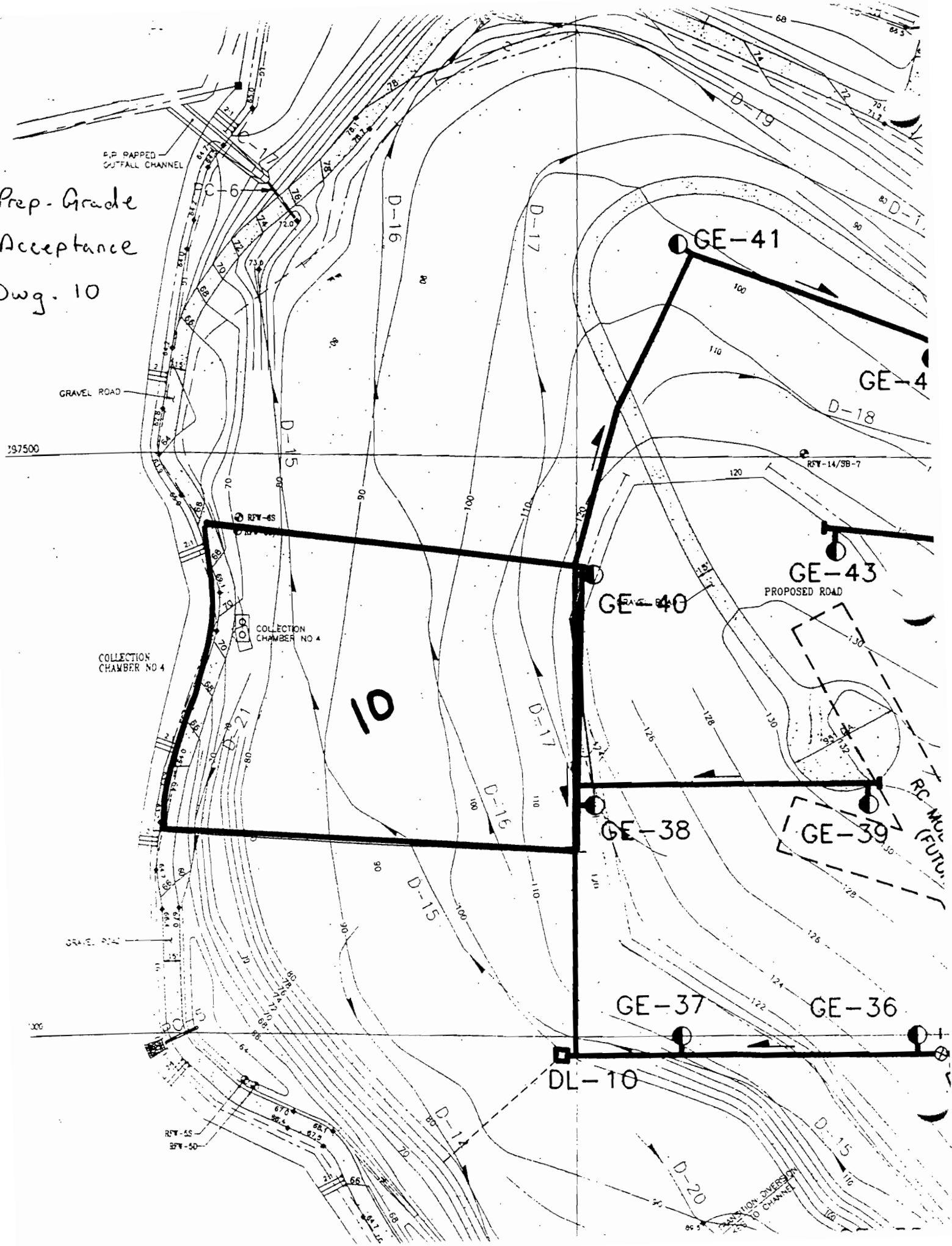
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER

Prep-Grade
Acceptance
Dwg. 10





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/16/97

TIME: 10:10 AM

DWG. NO. 11

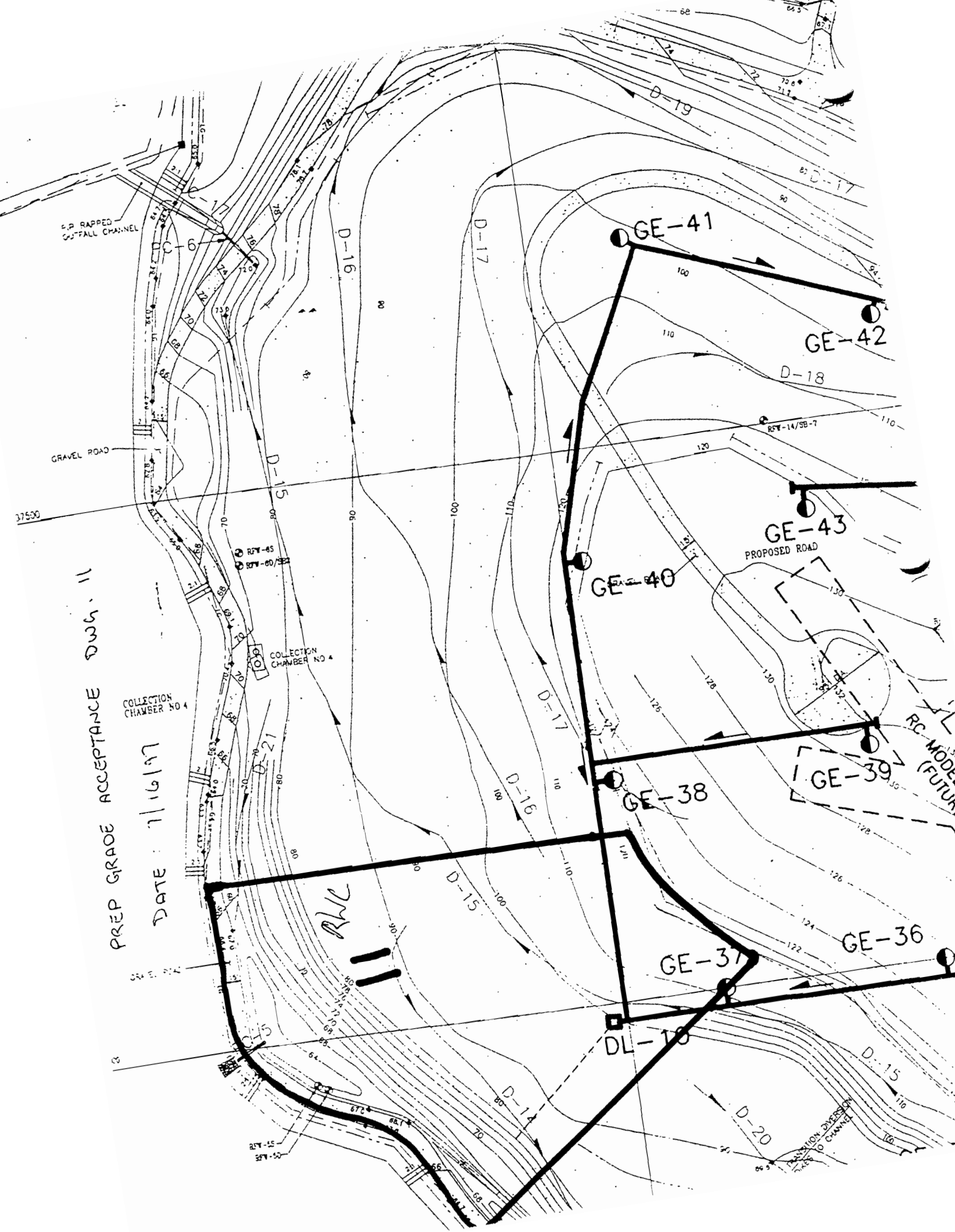
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

John Cuckie
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

John Cuckie
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Dianna
OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

John C Woodley PLC
ROY F. WESTON OF NEW YORK, INC. QC MANAGER



PREP GRADE ACCEPTANCE DWG. 11

DATE: 7/16/77

COLLECTION CHAMBER NO 4

COLLECTION CHAMBER NO 4

GE-43
PROPOSED ROAD

RC-MODEL (FUTURE)

RHC

TRANSITION DITCH
TO CHANNEL



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/18/97

TIME: 8:30 AM

DWG. NO. 11 A

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

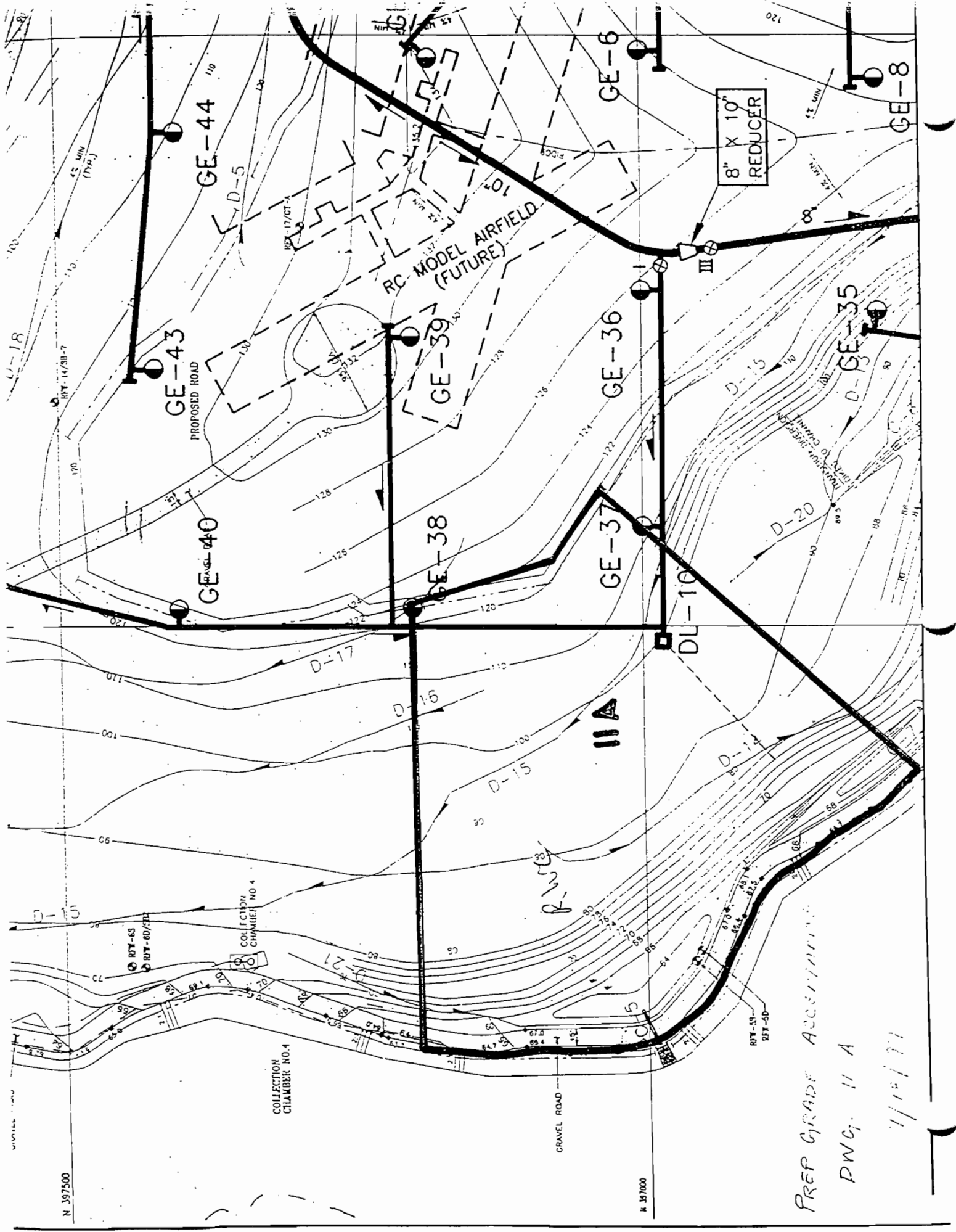
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER

RWC



PREF. GRADE ACCORDING TO
P.W.C. 11 A
11/15/77



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/23/97

TIME: 9:00 AM

DWG. NO. 12

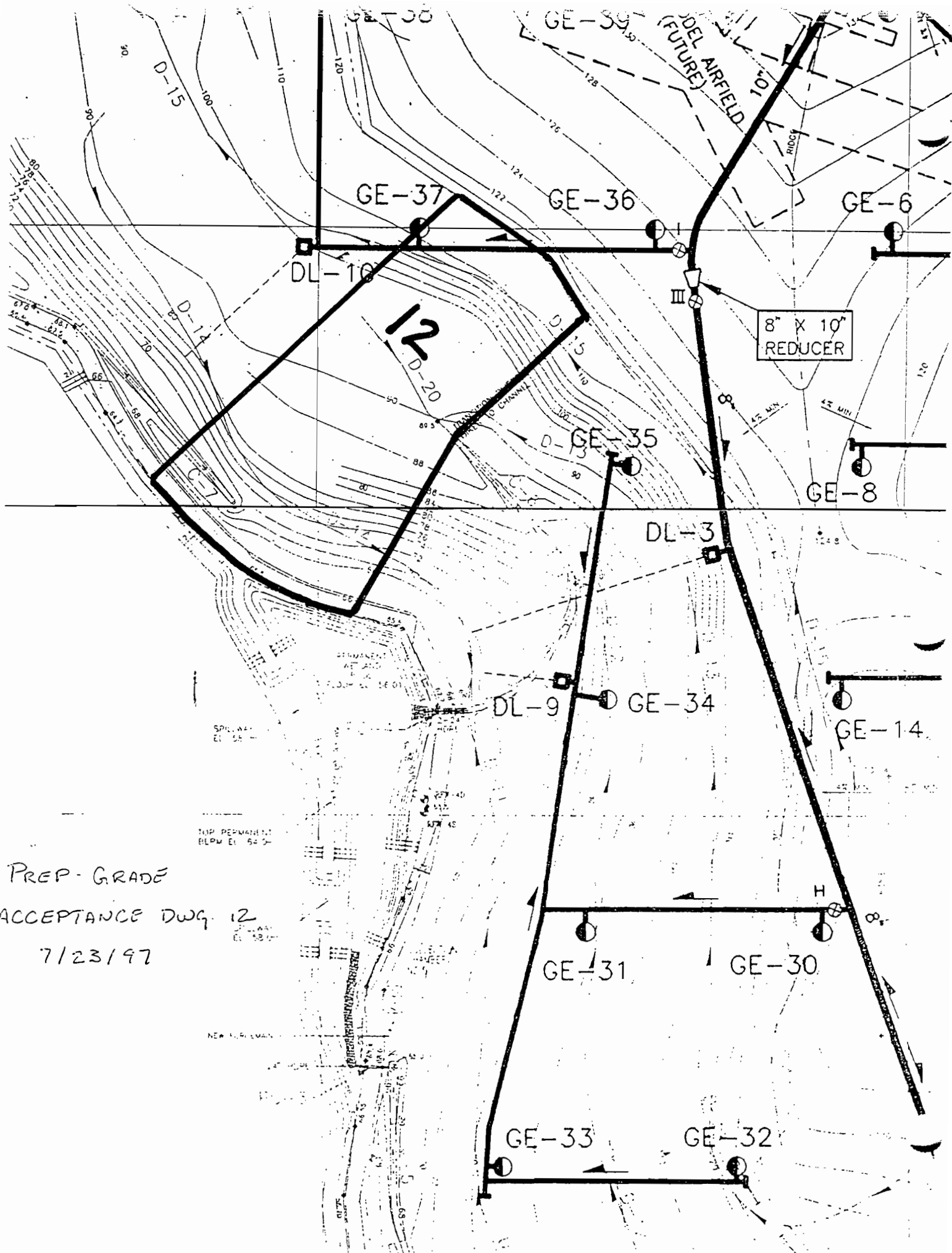
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER



PREP-GRADE
ACCEPTANCE DWG. 12
7/23/97

OGDEN REMEDIATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

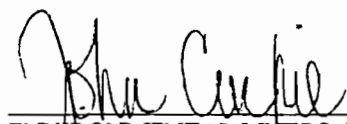
REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/28/97

TIME: 1:40 PM

DWG. NO. 13

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QA MANAGER



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/29/97

TIME: 1:00 PM

DWG. NO. 14

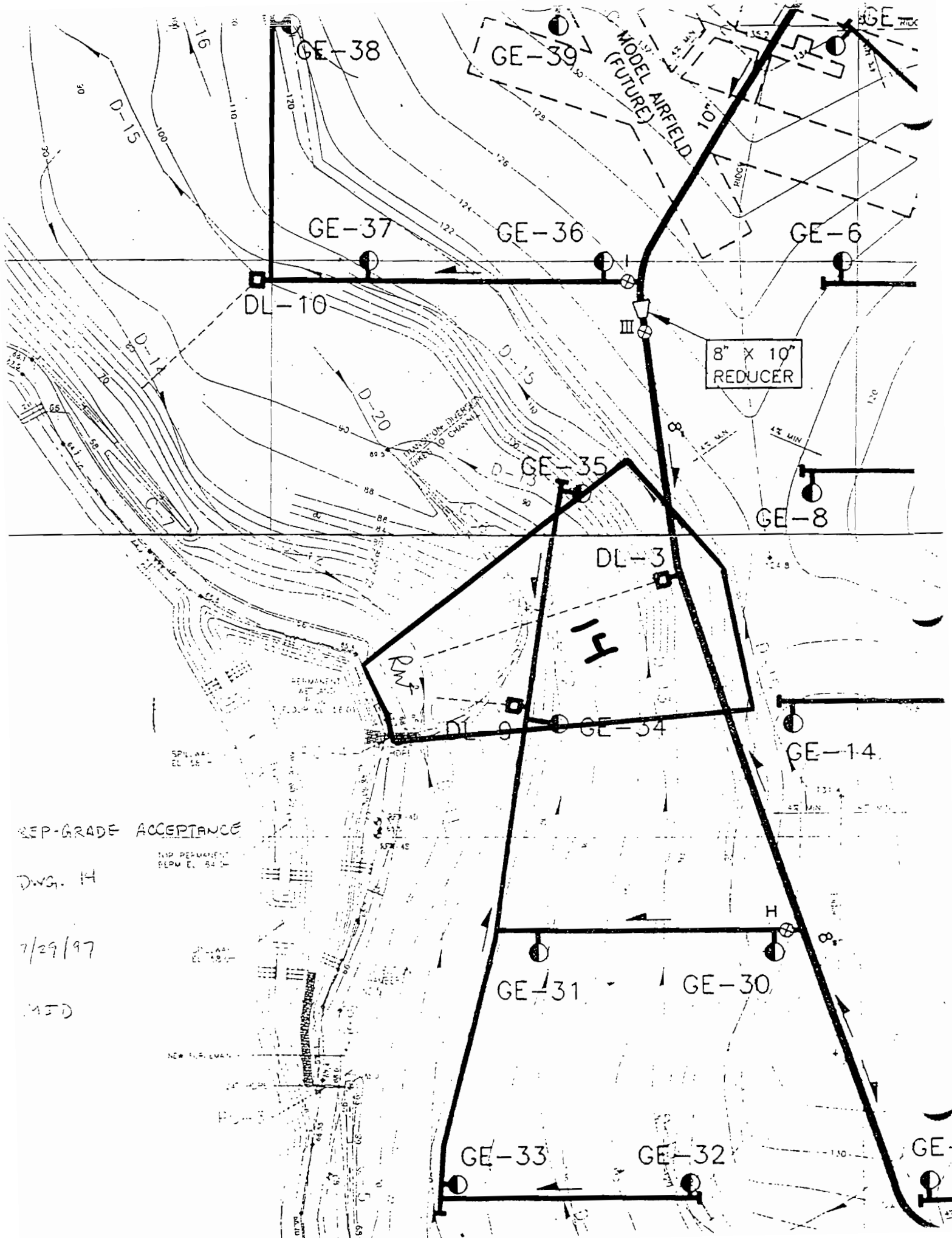
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



REP-GRADE ACCEPTANCE

DWG. 14

7/29/97

MD



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/29/97

TIME: 3:30 PM

DWG. NO. 15

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

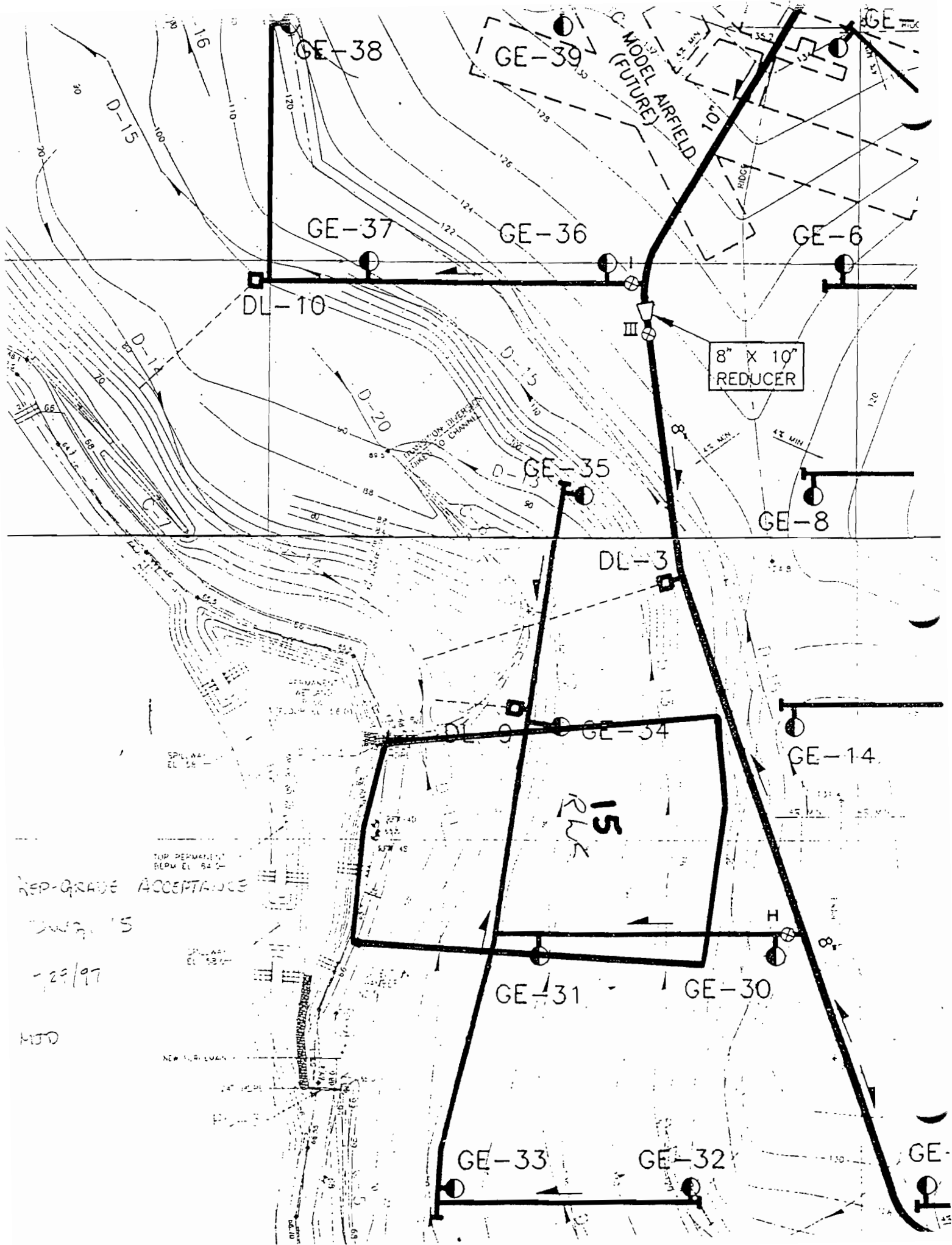
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

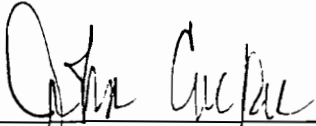
REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

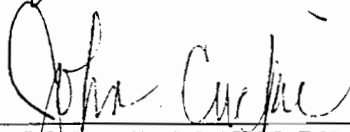
DATE: 7/31/97

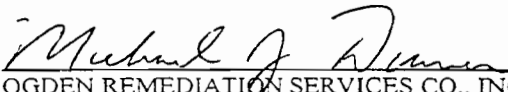
TIME: 11:30 AM

DWG. NO. 16

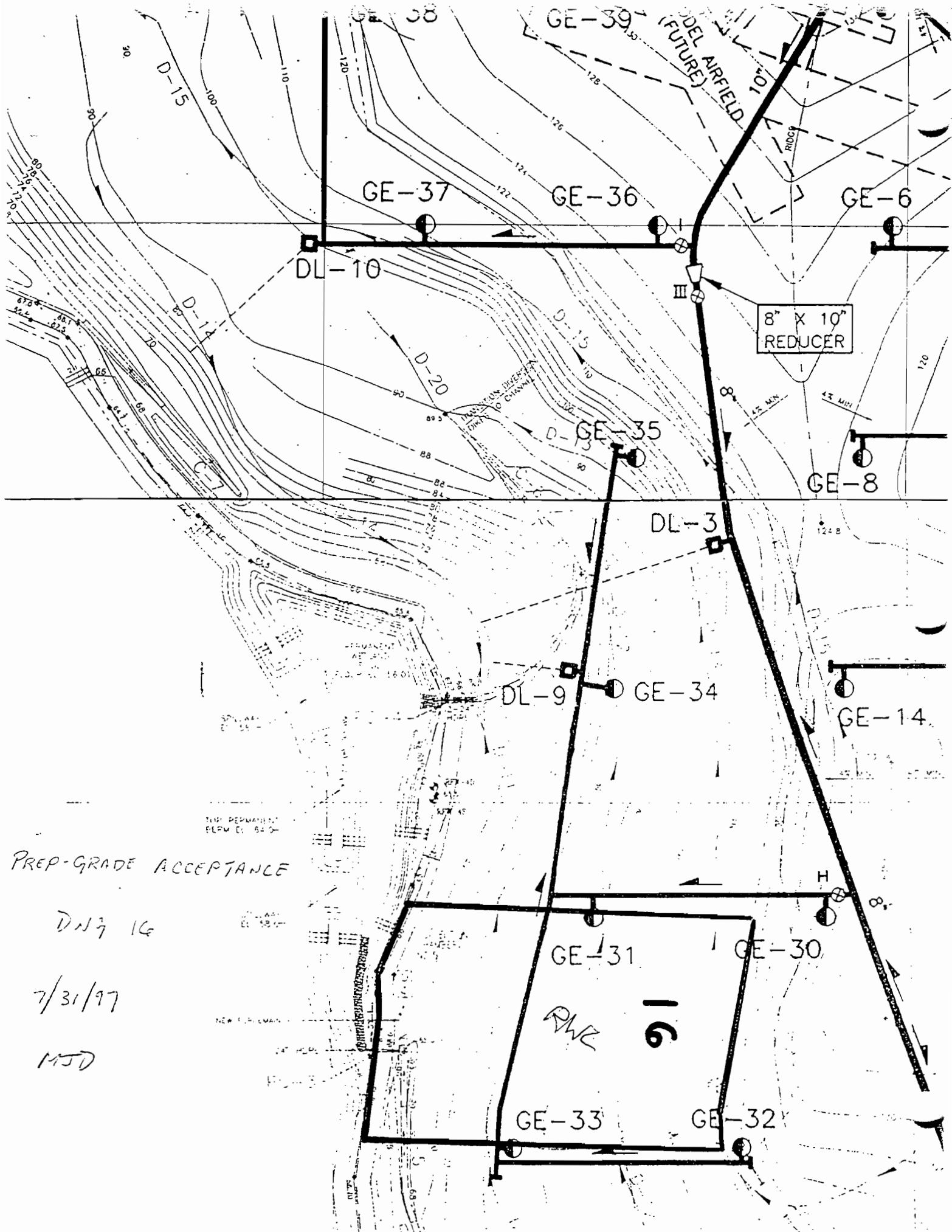
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QA MANAGER



PREP-GRADE ACCEPTANCE

DN 16

7/31/97

MJD



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/4/97

TIME: 2:30 PM

DWG. NO. 17

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

John Cuckie
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

John Cuckie
ENVIRONMENTAL LINERS, INC. FOREMAN

J. Michael J. Deane
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

John C. Woodley
ROY F. WESTON OF NEW YORK, INC. QA MANAGER



2-11-11-11-11-11

PLAN
E1 59.0'

NORTH RIVER

RIDGE

GE-31

GE-30

GE-33

GE-32

GE

GE-28

GE-29

B-2050
B-2056

B-2070
B-2075

GE-27

GE-26

DL-8

RELOCATED MUDDY BROOK STREAM



REMEDIAL SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/4/97

TIME: 9:30 AM

DWG. NO. 18

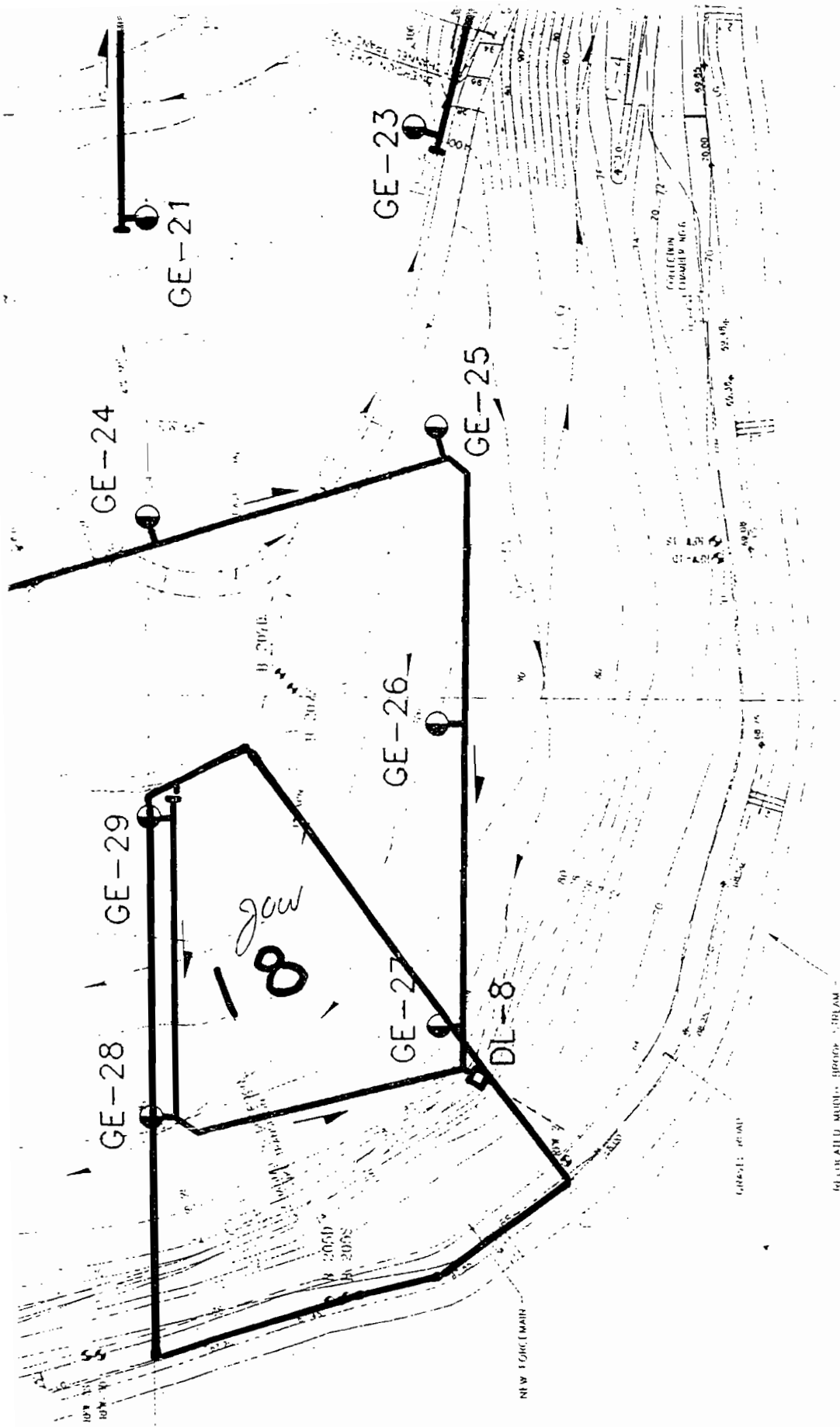
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



NEW YORK (MAIN)

CUTTING



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/6/97

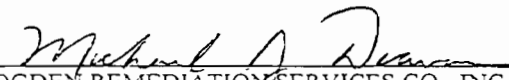
TIME: 4:30 PM

DWG. NO. 19

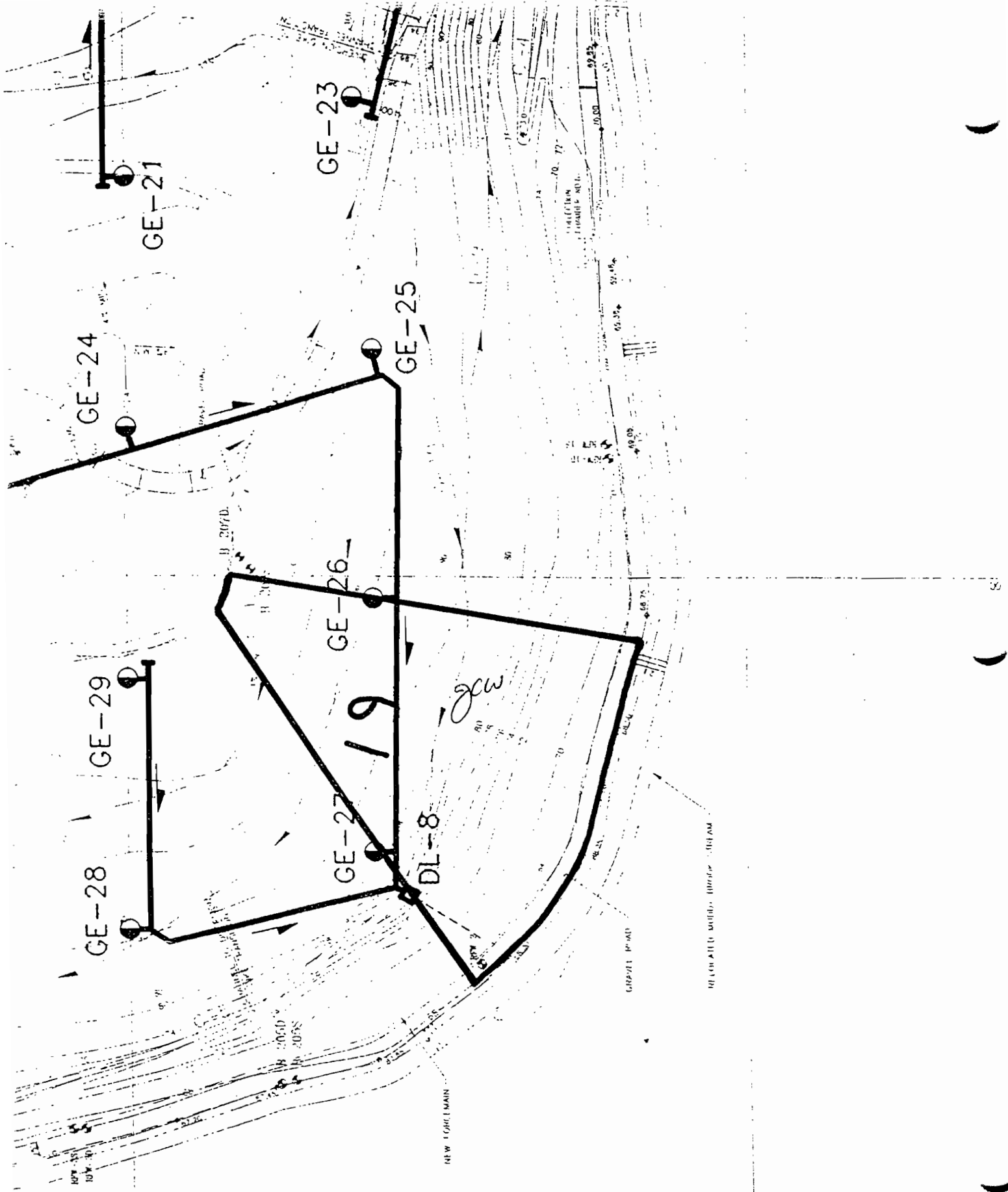
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/11/97

TIME: 8:15

DWG. NO. 20

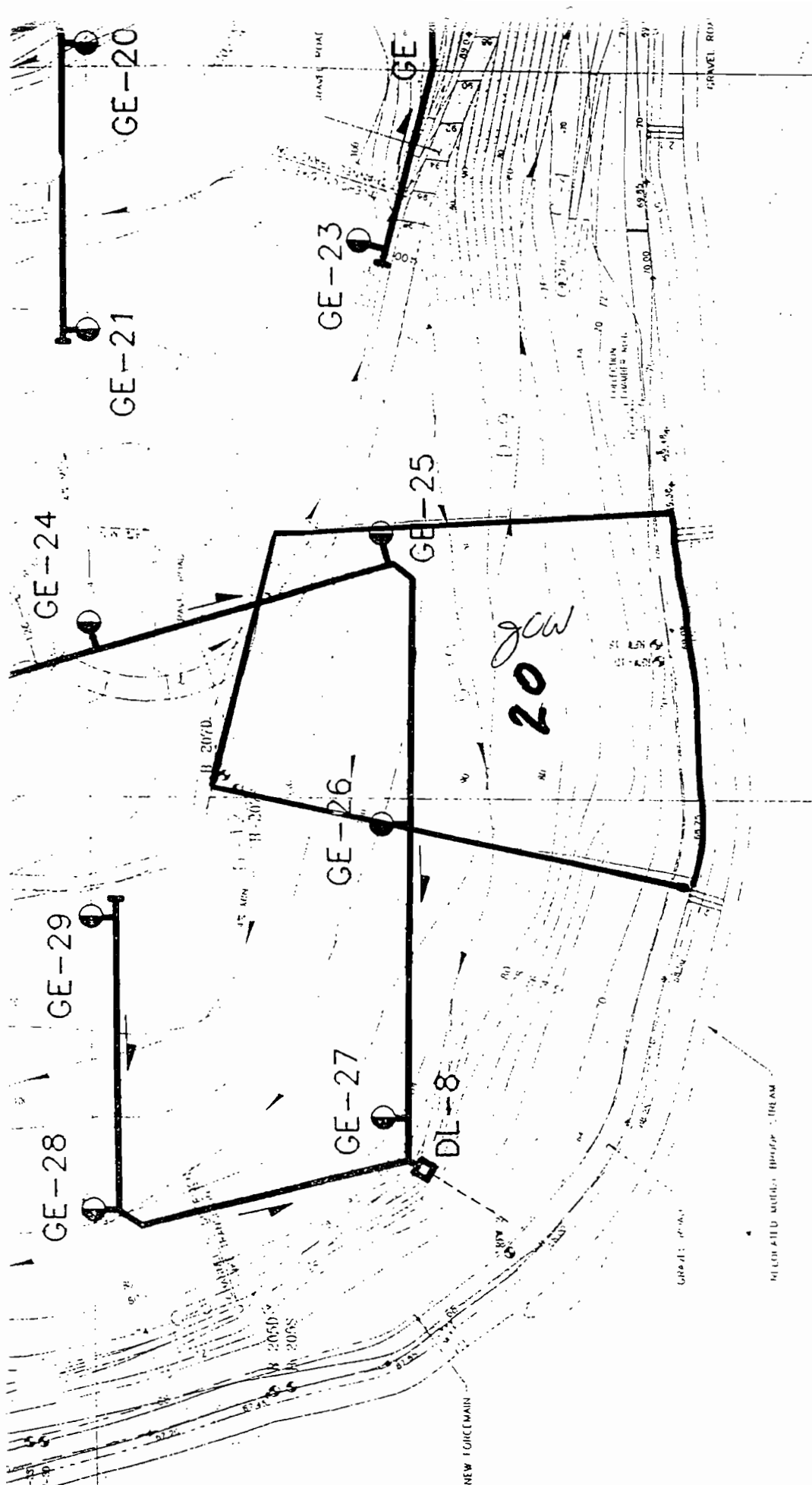
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QC MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
168 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/11/97

TIME: 1:45 PM

DWG. NO. 21

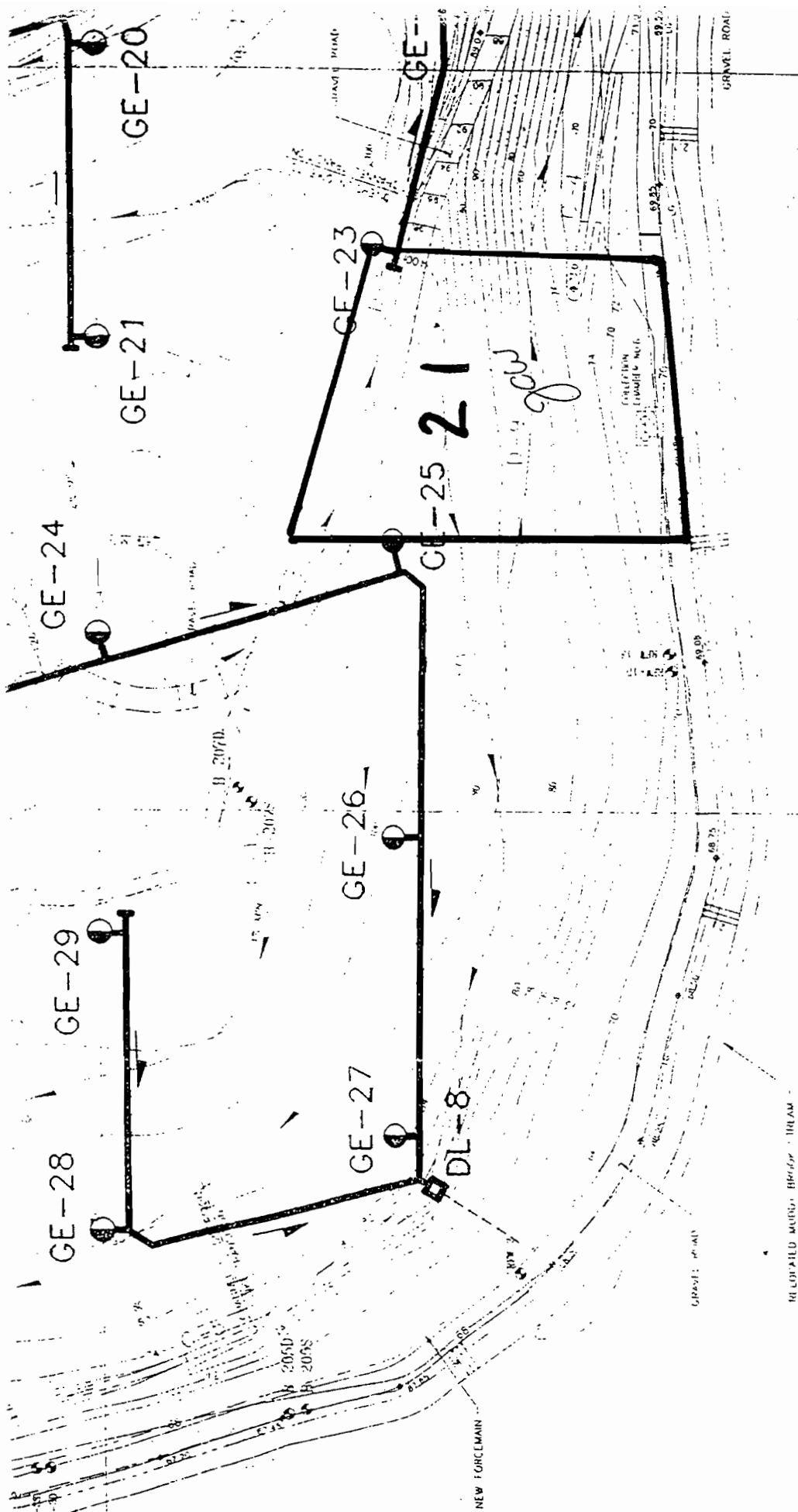
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

[Signature]
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

[Signature]
ENVIRONMENTAL LINERS, INC. FOREMAN

[Signature]
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

[Signature]
ROY F. WESTON OF NEW YORK, INC. QAMANAGER



OGDEN REMEDIATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
Tel: 914 358 2720
Fax: 914 358 2790

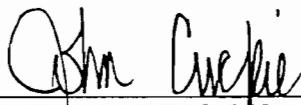
REMEDIATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/14/97

TIME: 11:45 AM

DWG. NO. 22

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



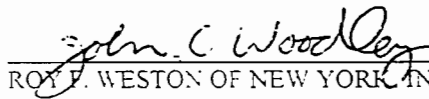
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER



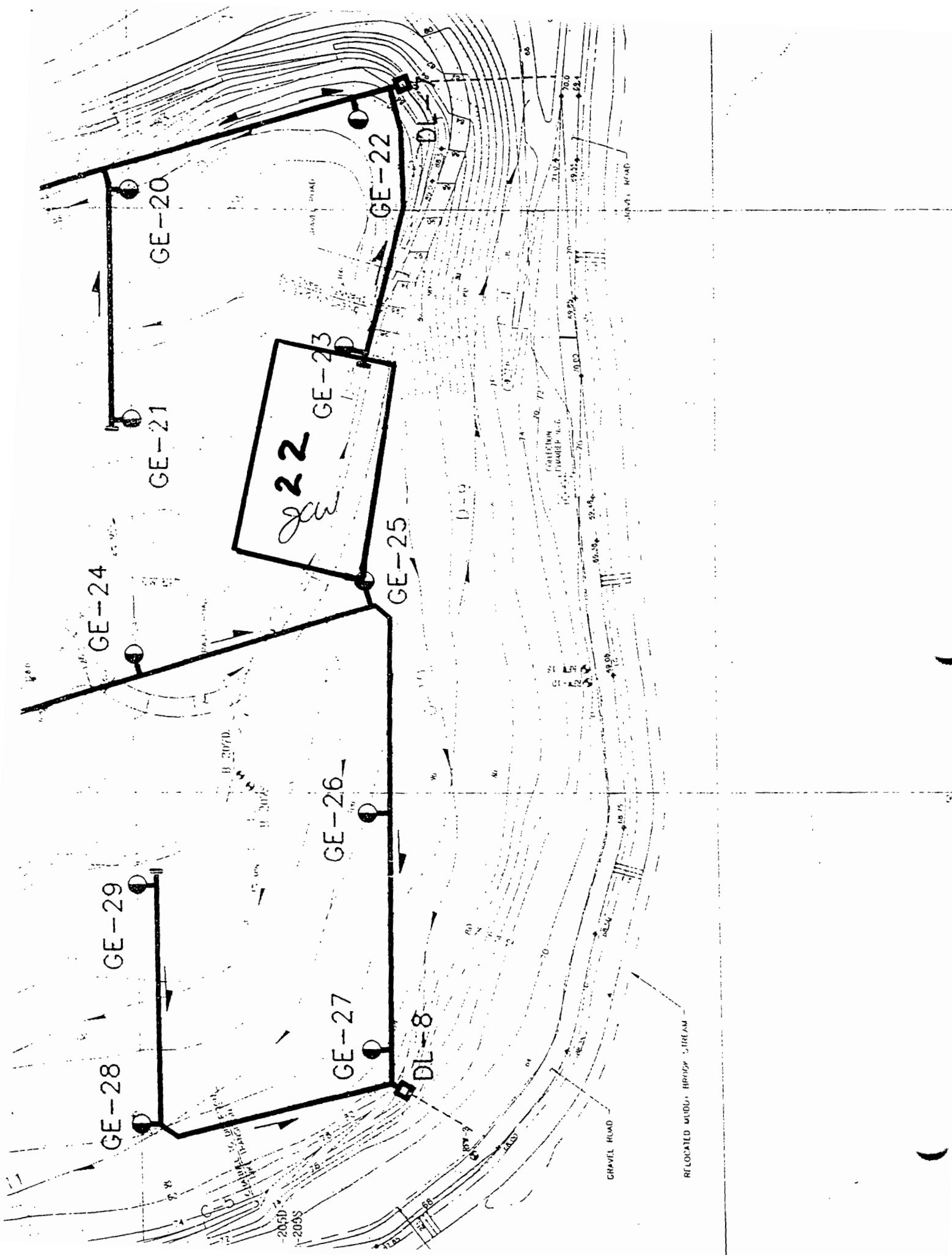
ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QA MANAGER



OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/15/97

TIME: 10:00 AM

DWG. NO. 23

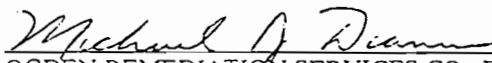
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



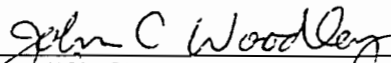
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN

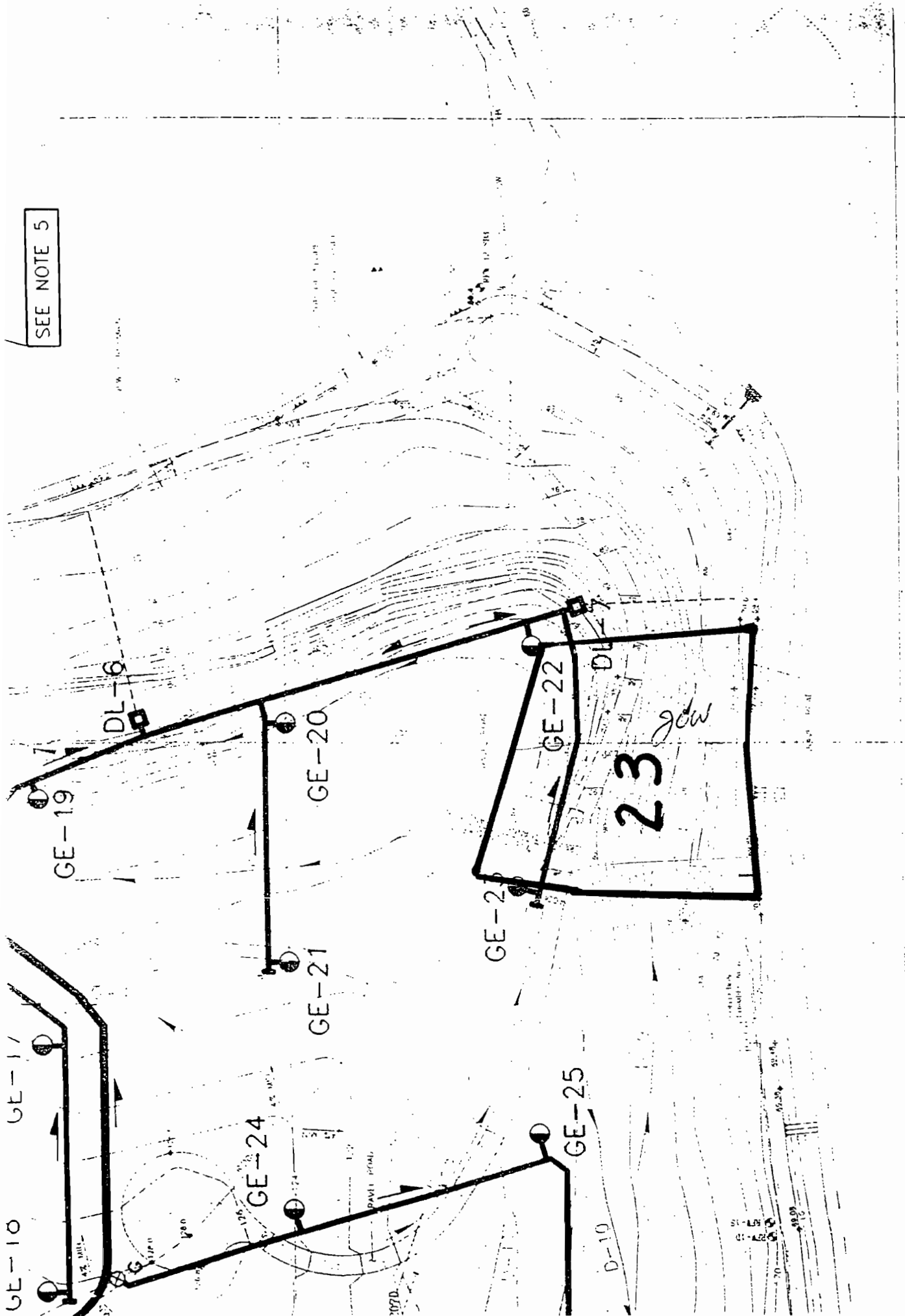


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QA MANAGER

SEE NOTE 5





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/25/97

TIME: 9:00 AM

DWG. NO. 24

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

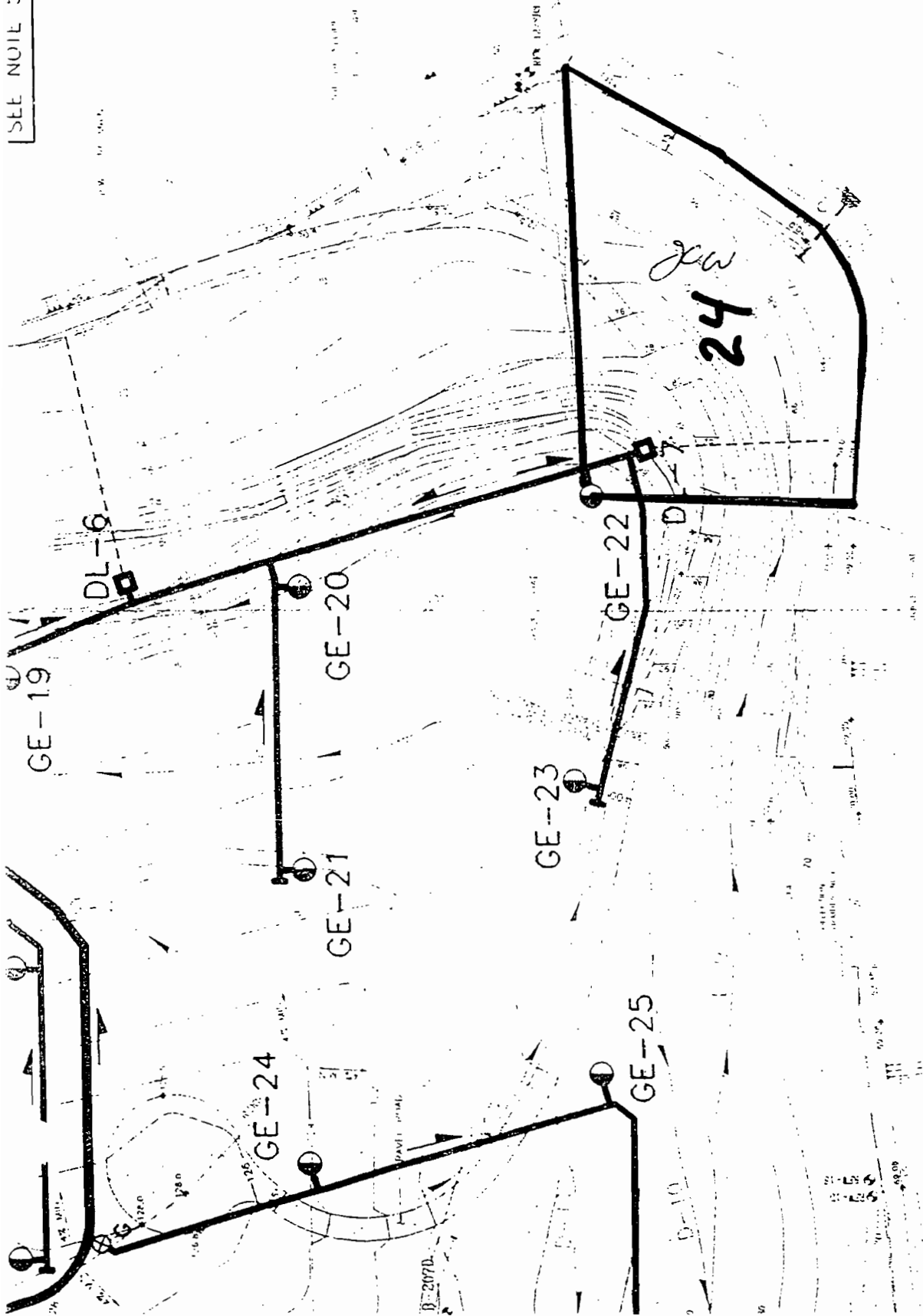
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

SEE NOTE 5





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 8/26/97

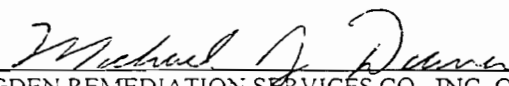
TIME: 8:30 AM

DWG. NO. 25

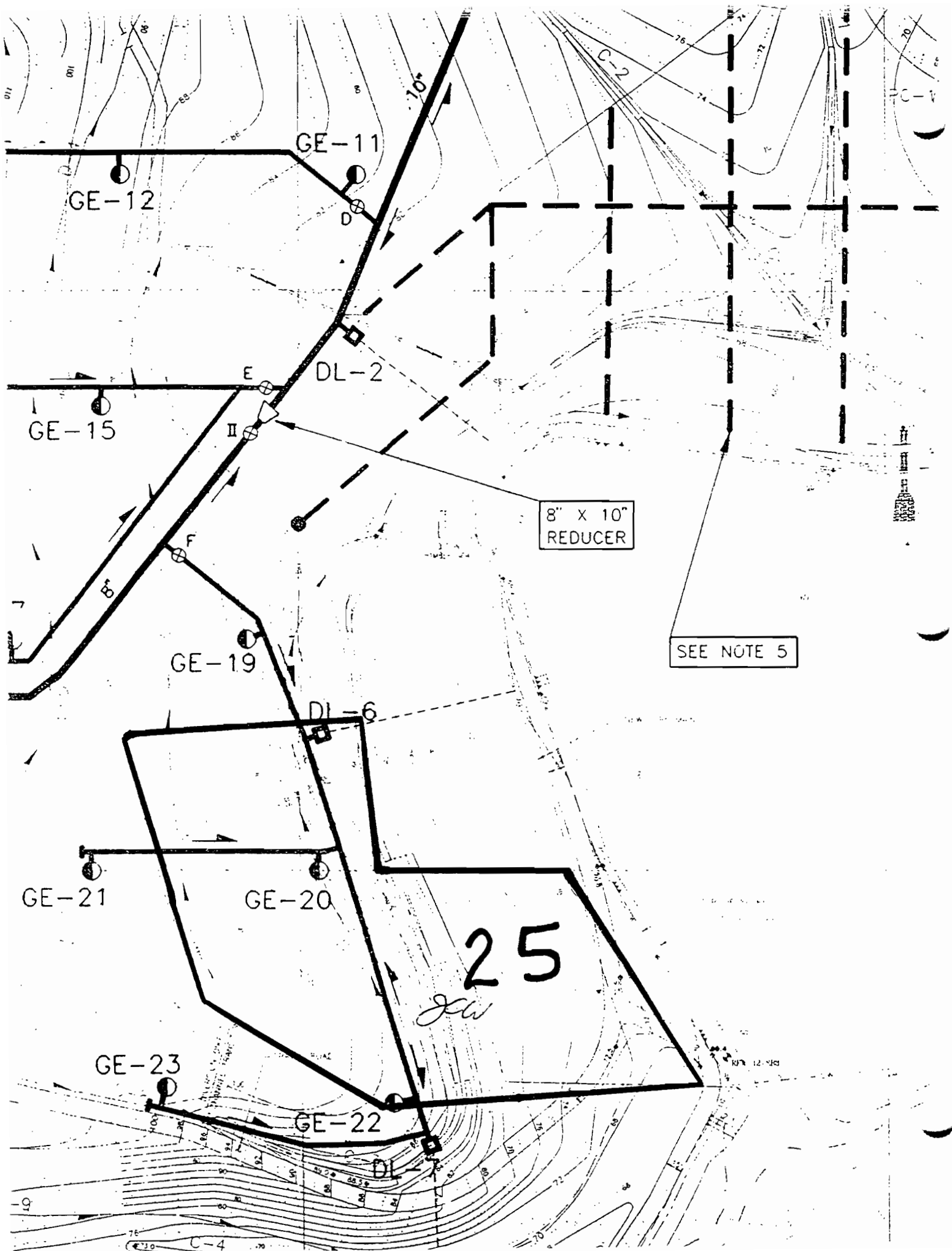
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 9/3/97

TIME: 1:20 PM

DWG. NO. 26

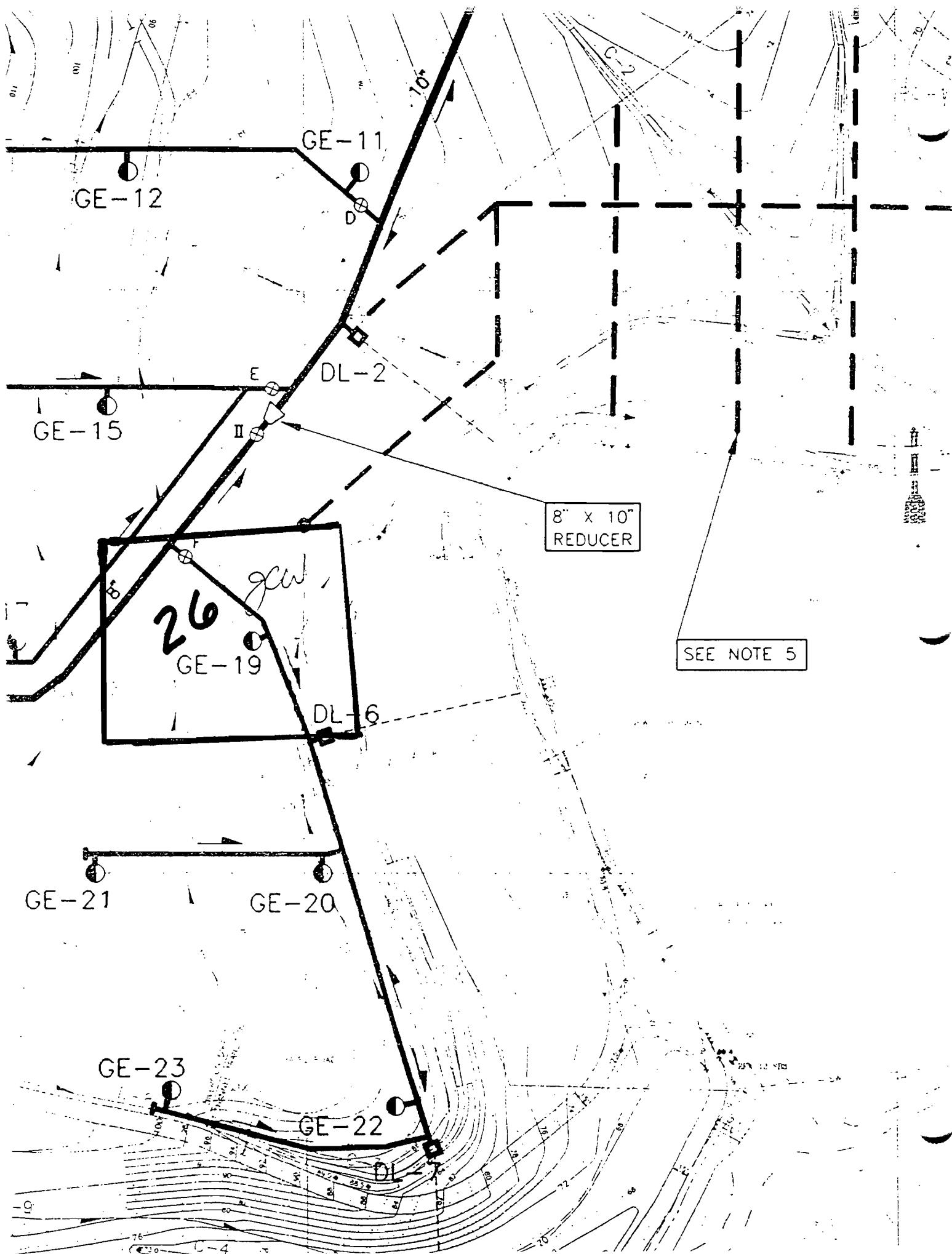
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 9/4/97

TIME: 10:30 AM

DWG. NO. 27

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

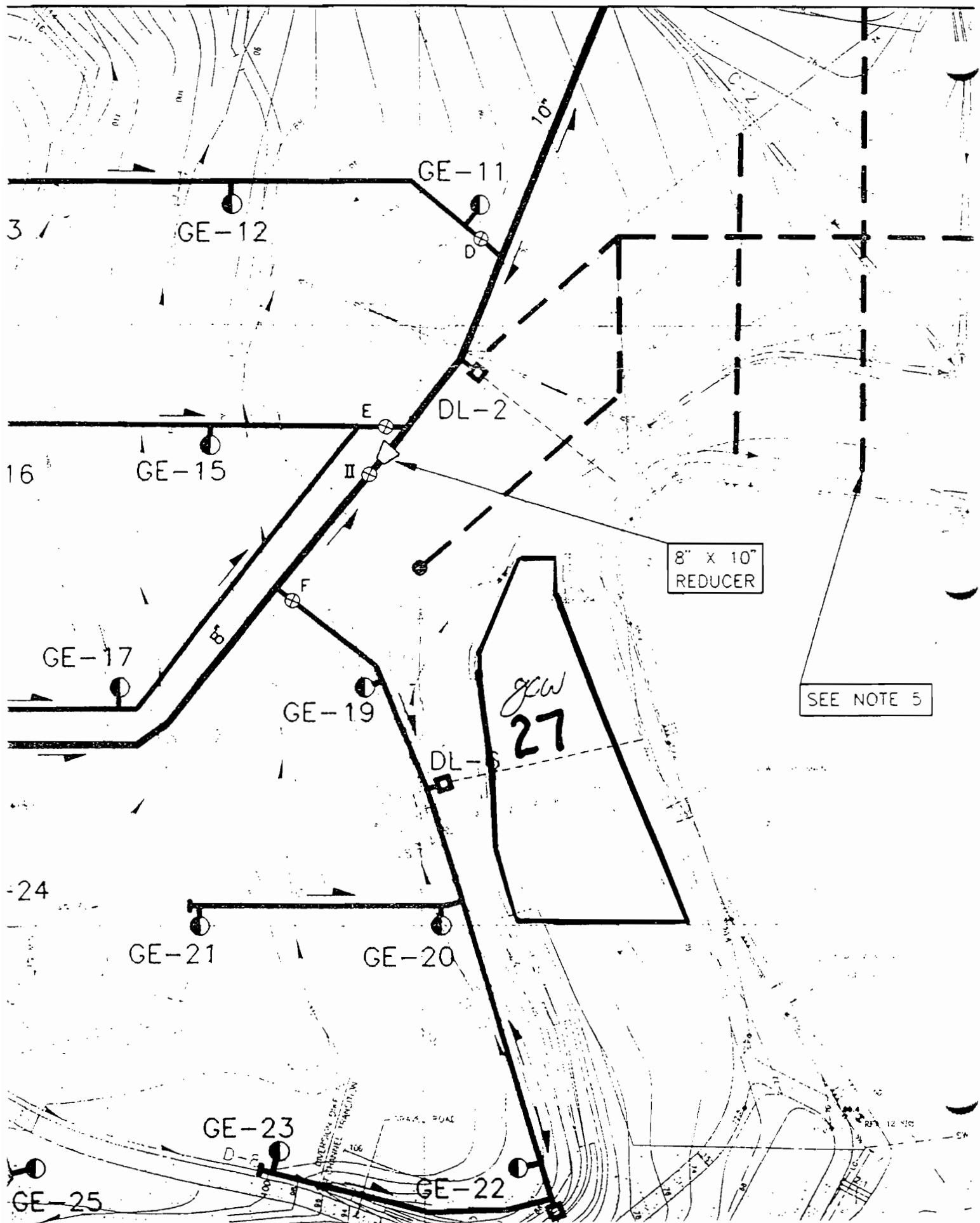
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

MATCHLINE TO DRAWING 4101





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 5/20/98

TIME: 9:10 Am

DWG. NO. 27 A

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

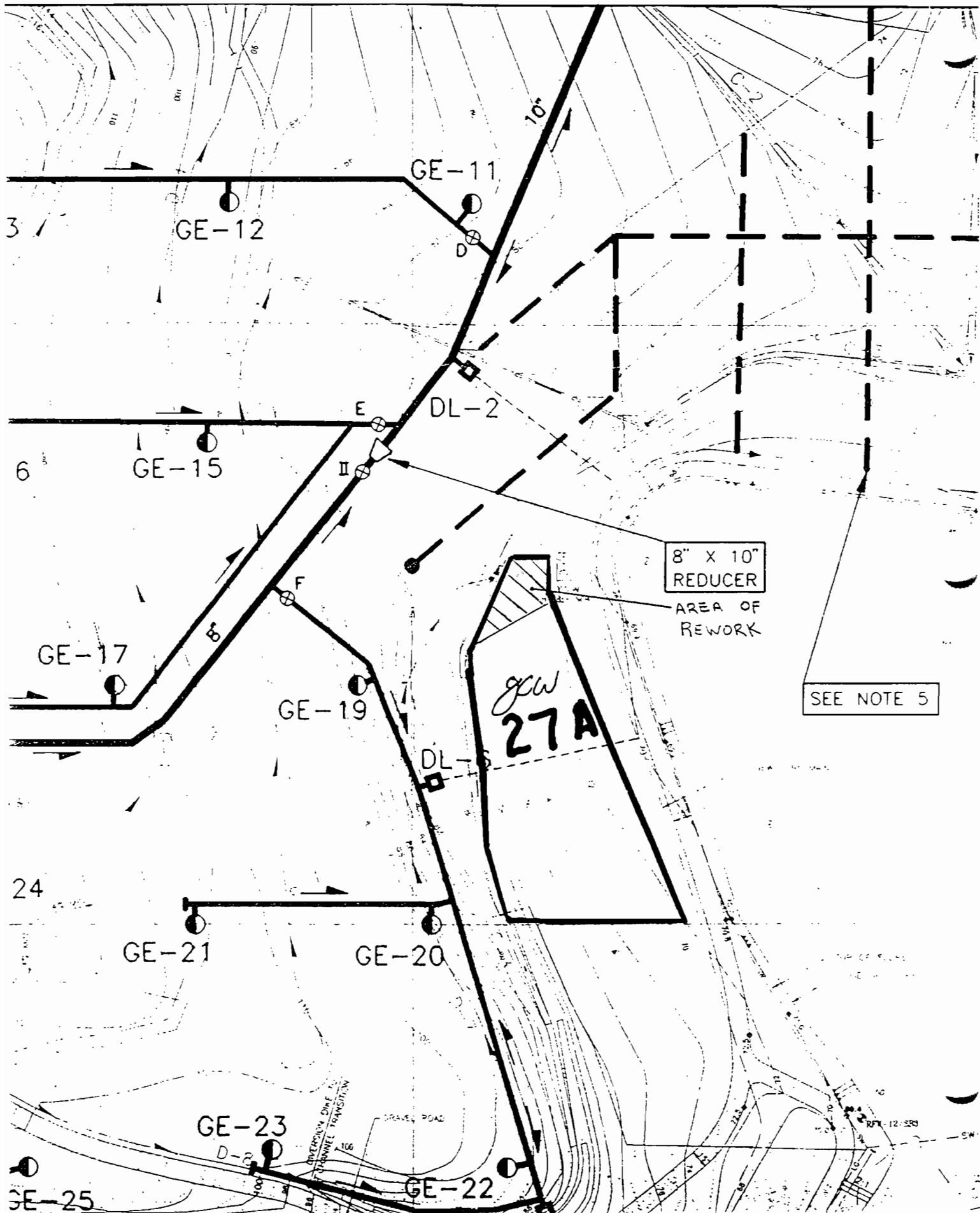
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

MATCHLINE TO DRAWING 4101





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/8/97

TIME: 9:30 AM

DWG. NO. 28

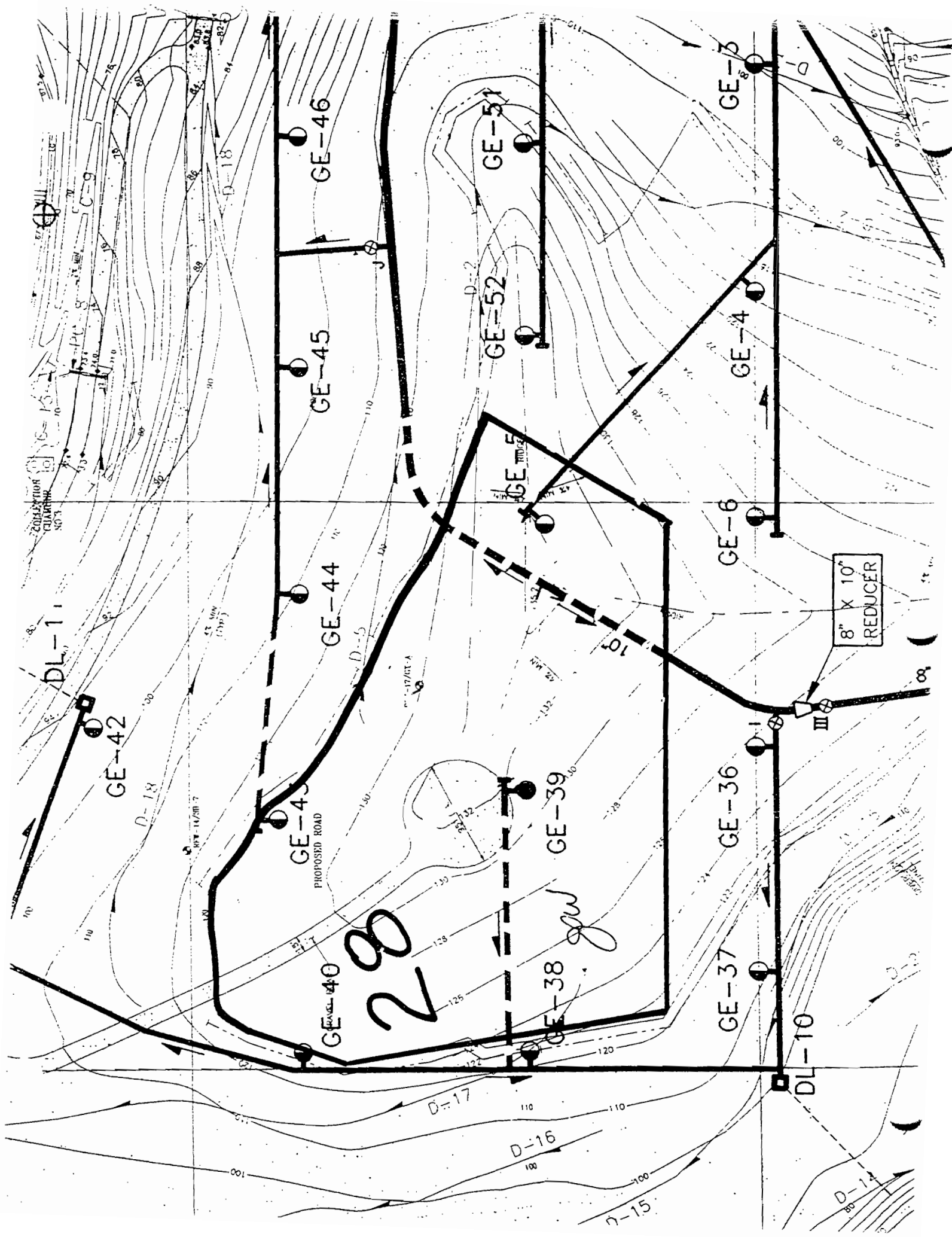
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 9/10/97

TIME: 11:30 AM

DWG. NO. 29

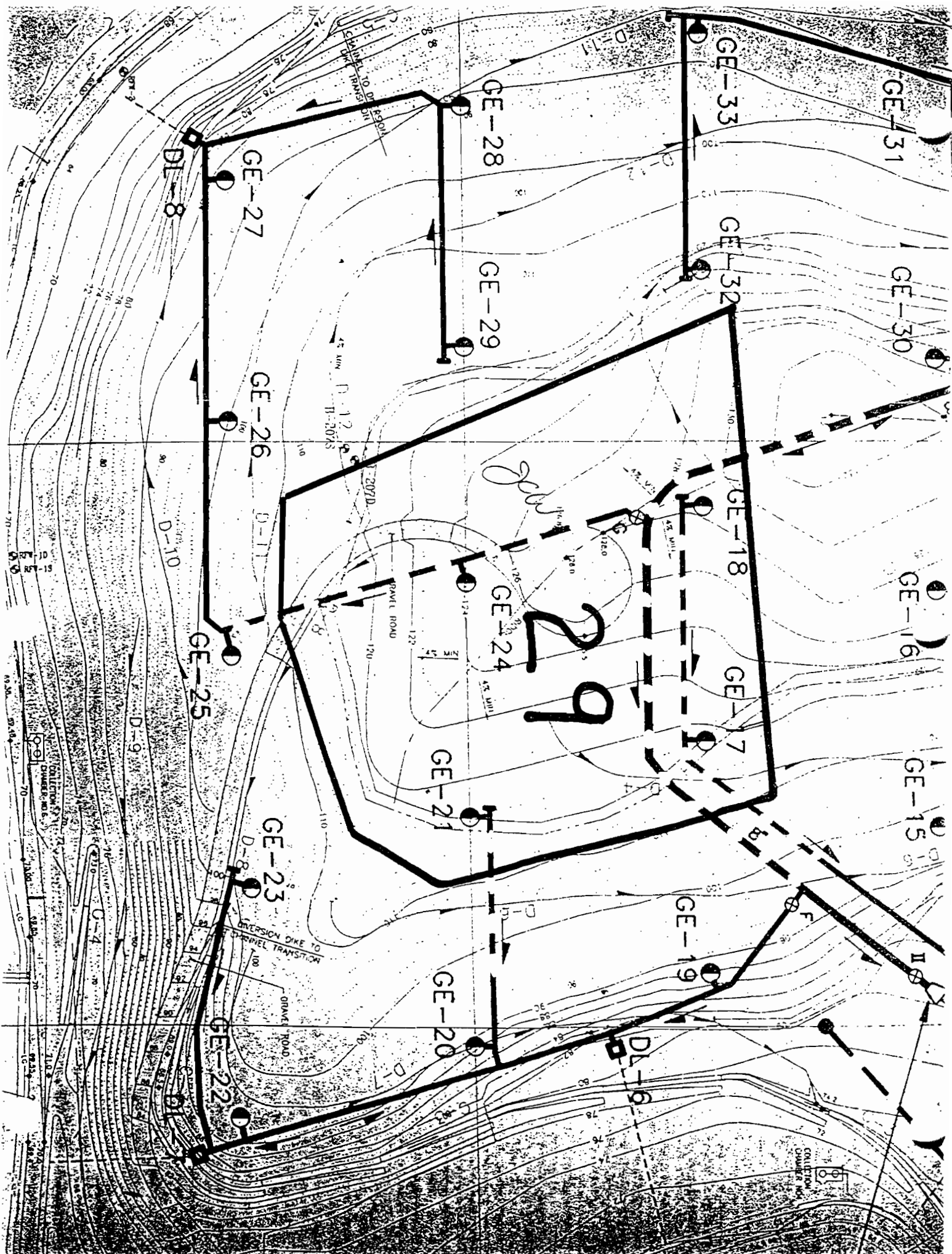
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 9/18/97

TIME: 5:30 PM

DWG. NO. 30

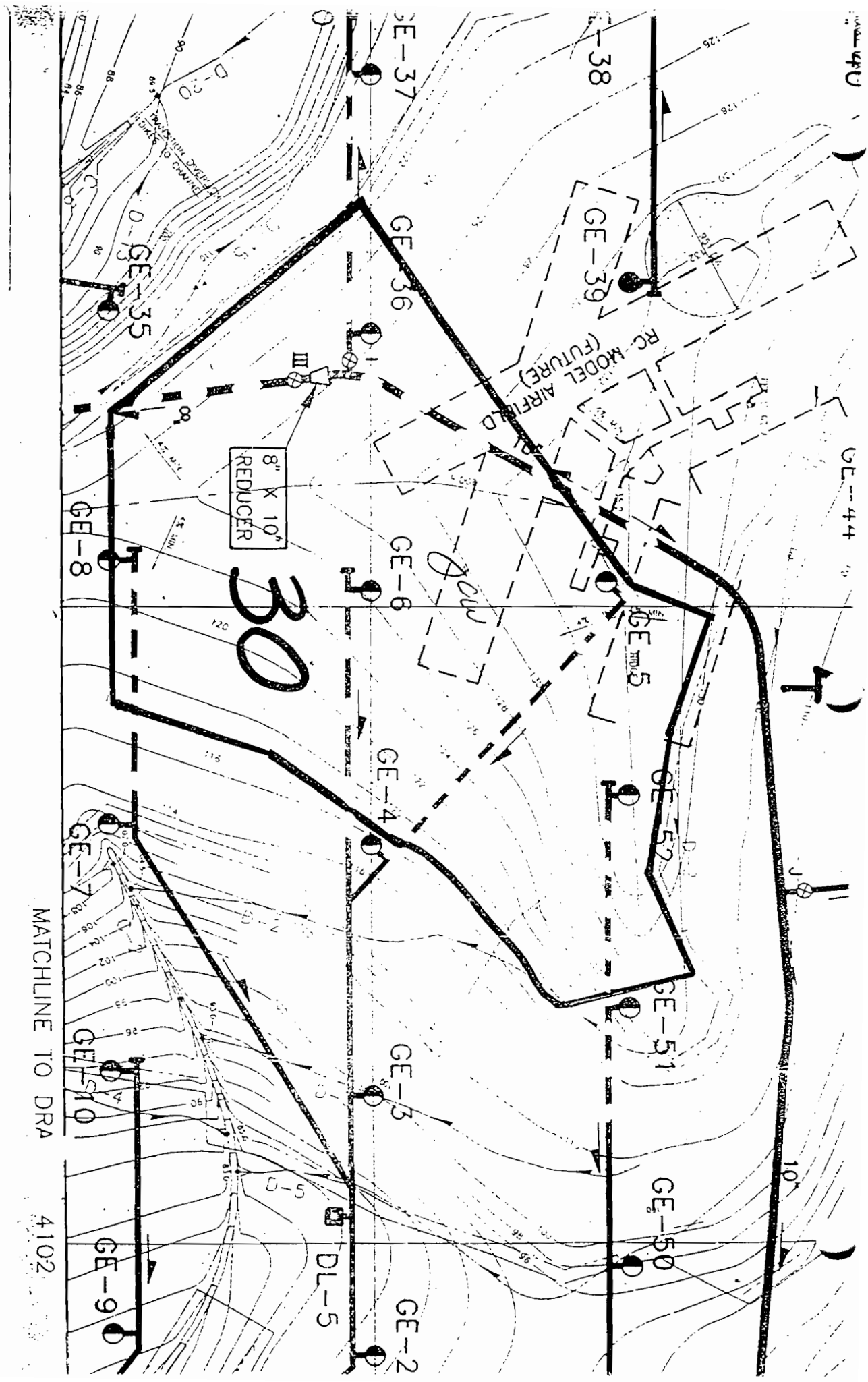
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



MATCHLINE TO DRA

4102



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2730

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND **
LANDFILL CAPPING

DATE: 10 / 1 / 97

TIME: 1:30 PM

DWG. NO. 31

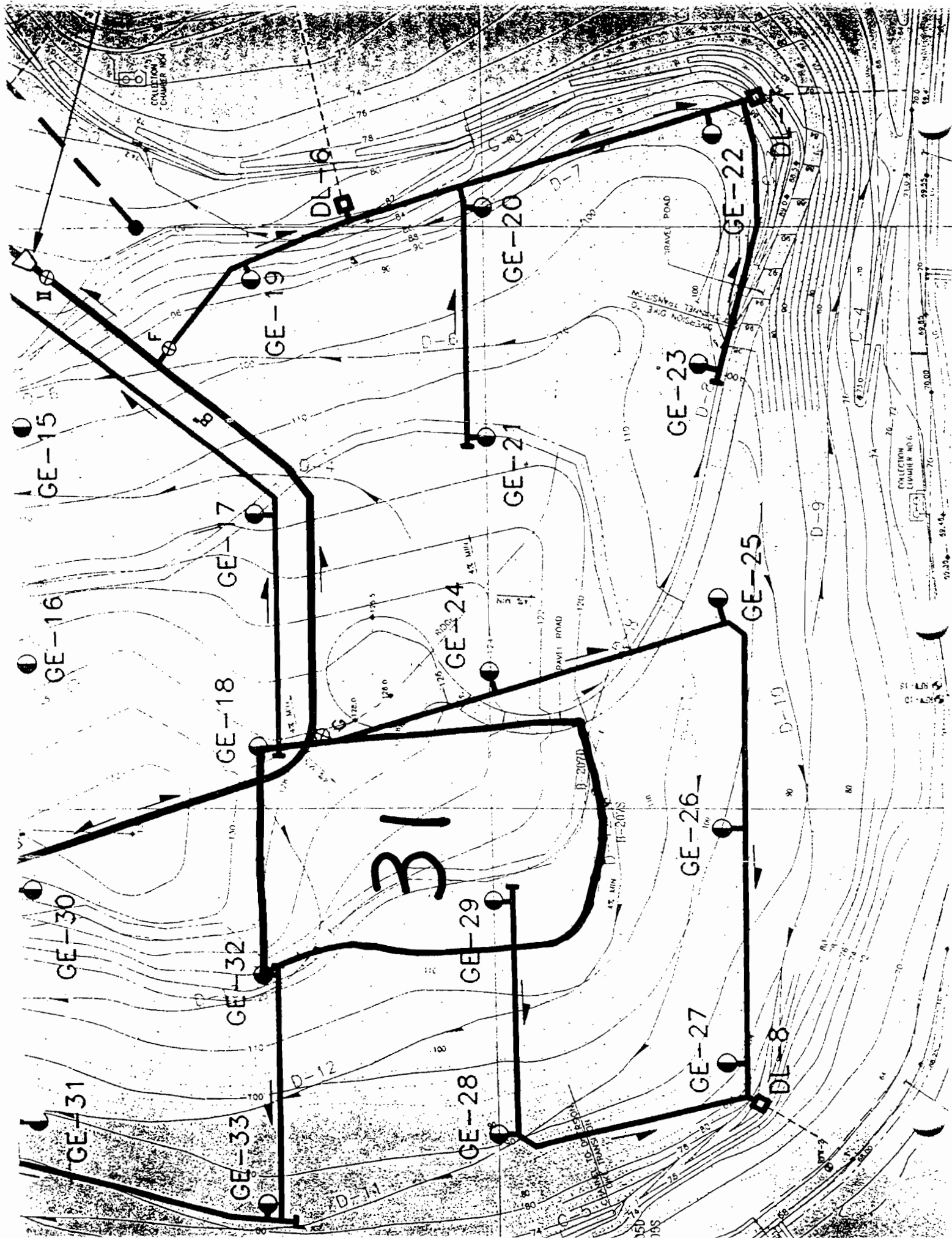
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 10/2/97

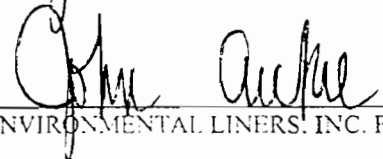
TIME: 10:00 AM

DWG. NO. 32

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



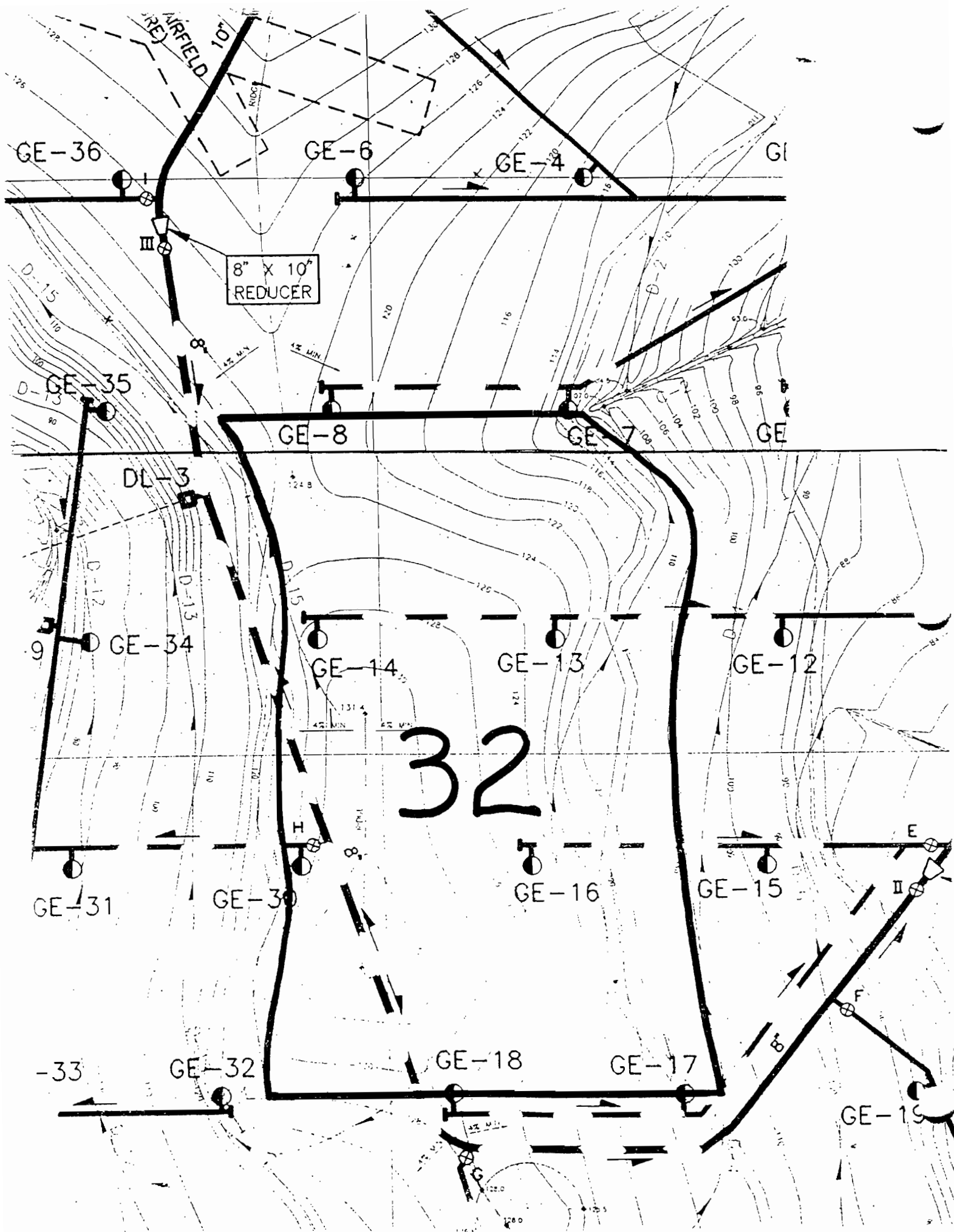
ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 10 / 6 / 97

TIME: 2:30 PM

DWG. NO. 33

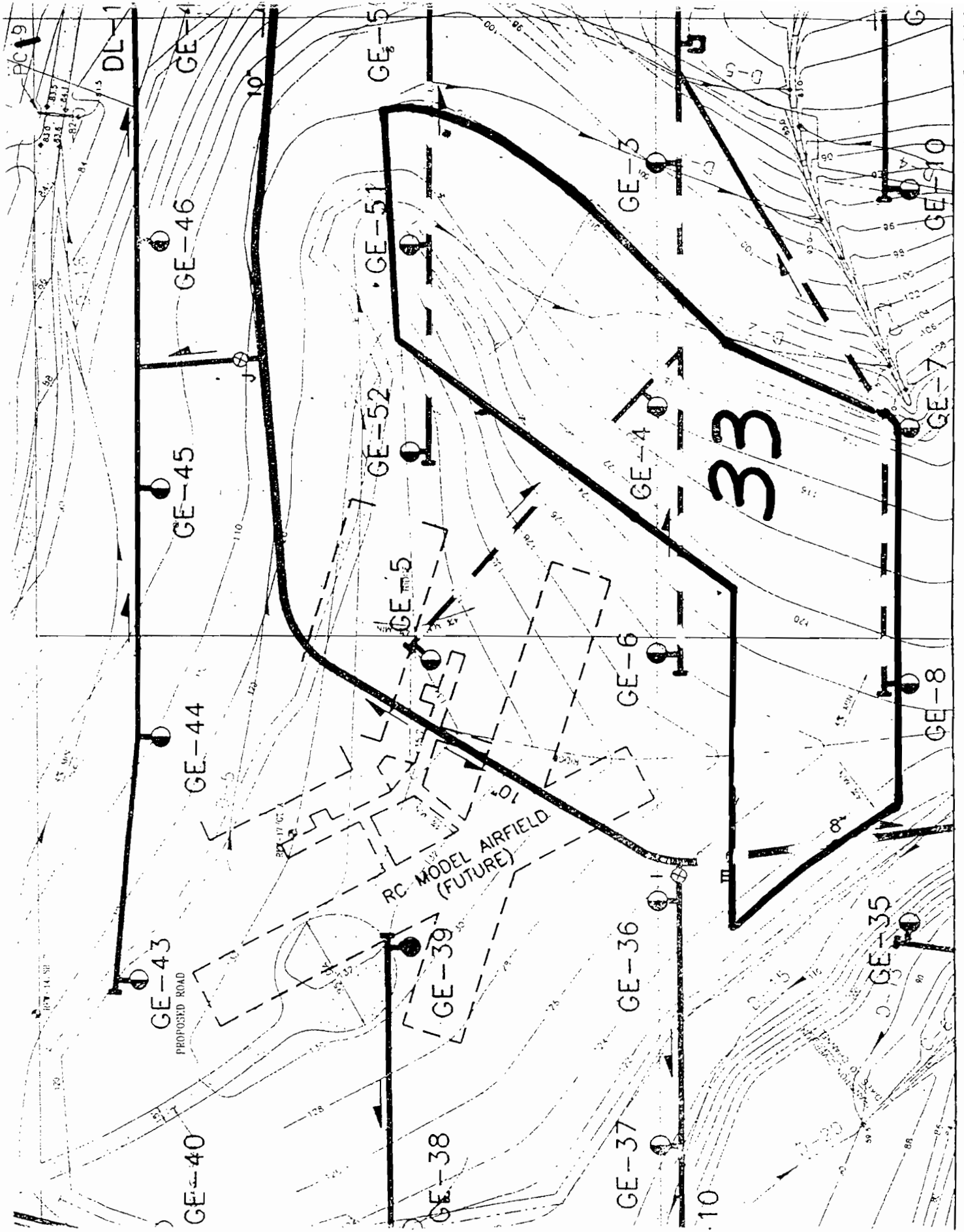
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



MATCHLINE TO DRAWING 410



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND **
LANDFILL CAPPING

DATE: 10/13/97

TIME: 11:30 AM

DWG. NO. 34

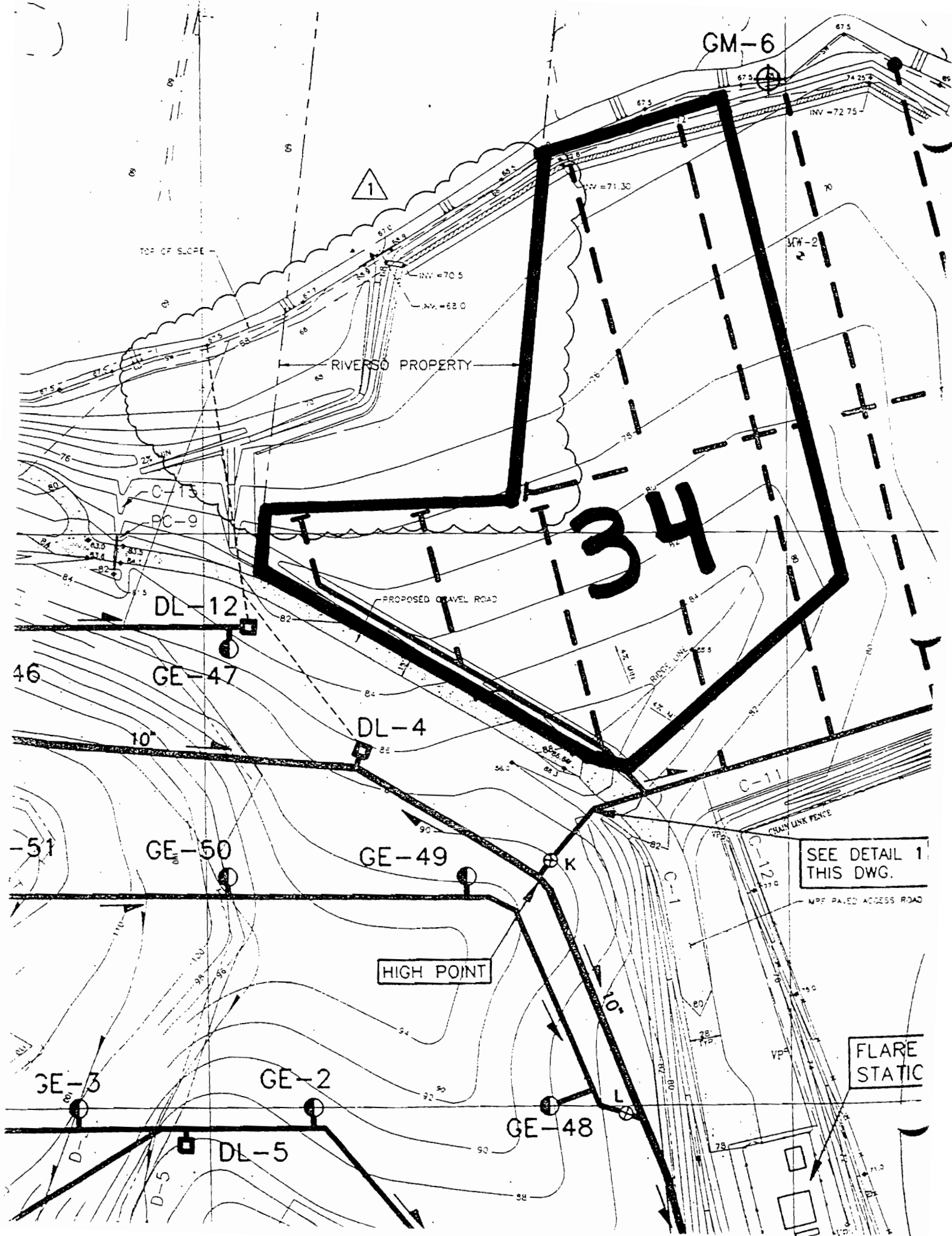
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 10/17/97

TIME: 10:00 AM

DWG. NO. 35

ENVIRONMENTAL LINERS, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

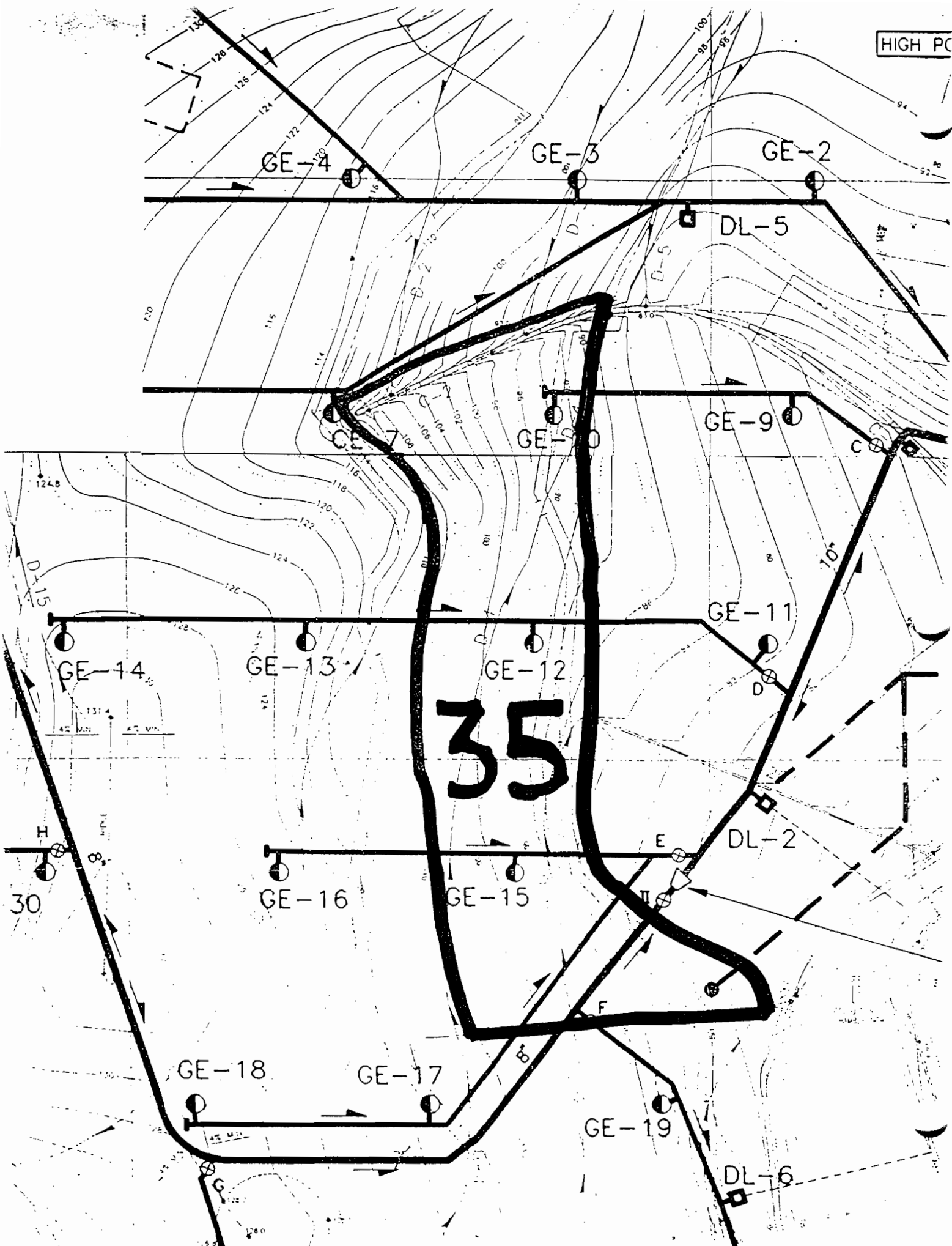
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

HIGH PC





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 10/20/97

TIME: 5:00 PM

DWG. NO. 36

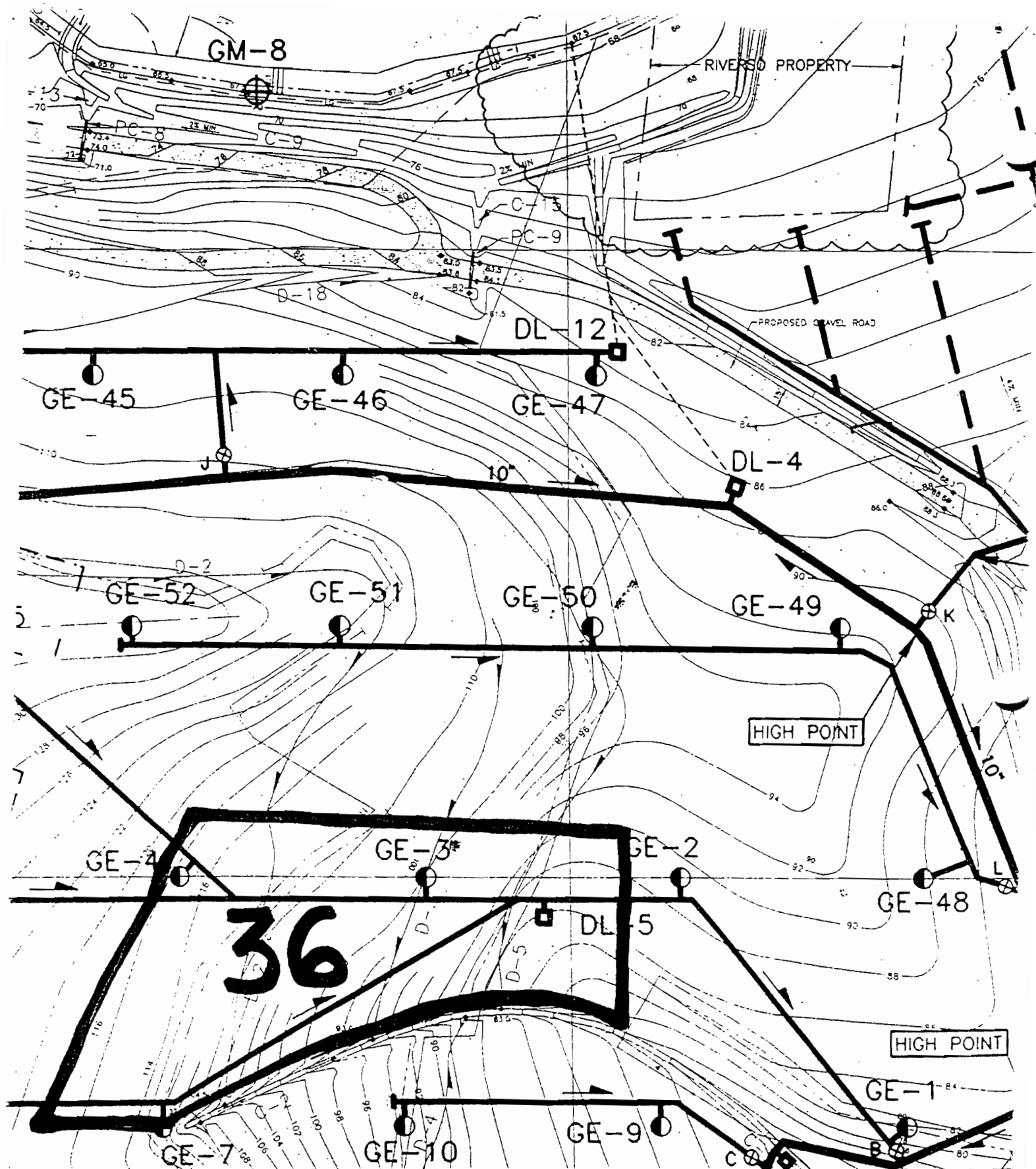
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



MATCHLINE TO DRAWING 4102

SEE NOTE 3

LFG PIPE INV.=72.0±
⊙ CHANNEL C-2 (SEE
DETAIL 2, THIS DWG.)

LFG PI
⊙ CHA
DETAIL

OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 10/24/97

TIME: 1:00 PM

DWG. NO. 37

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



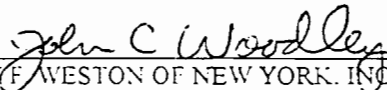
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



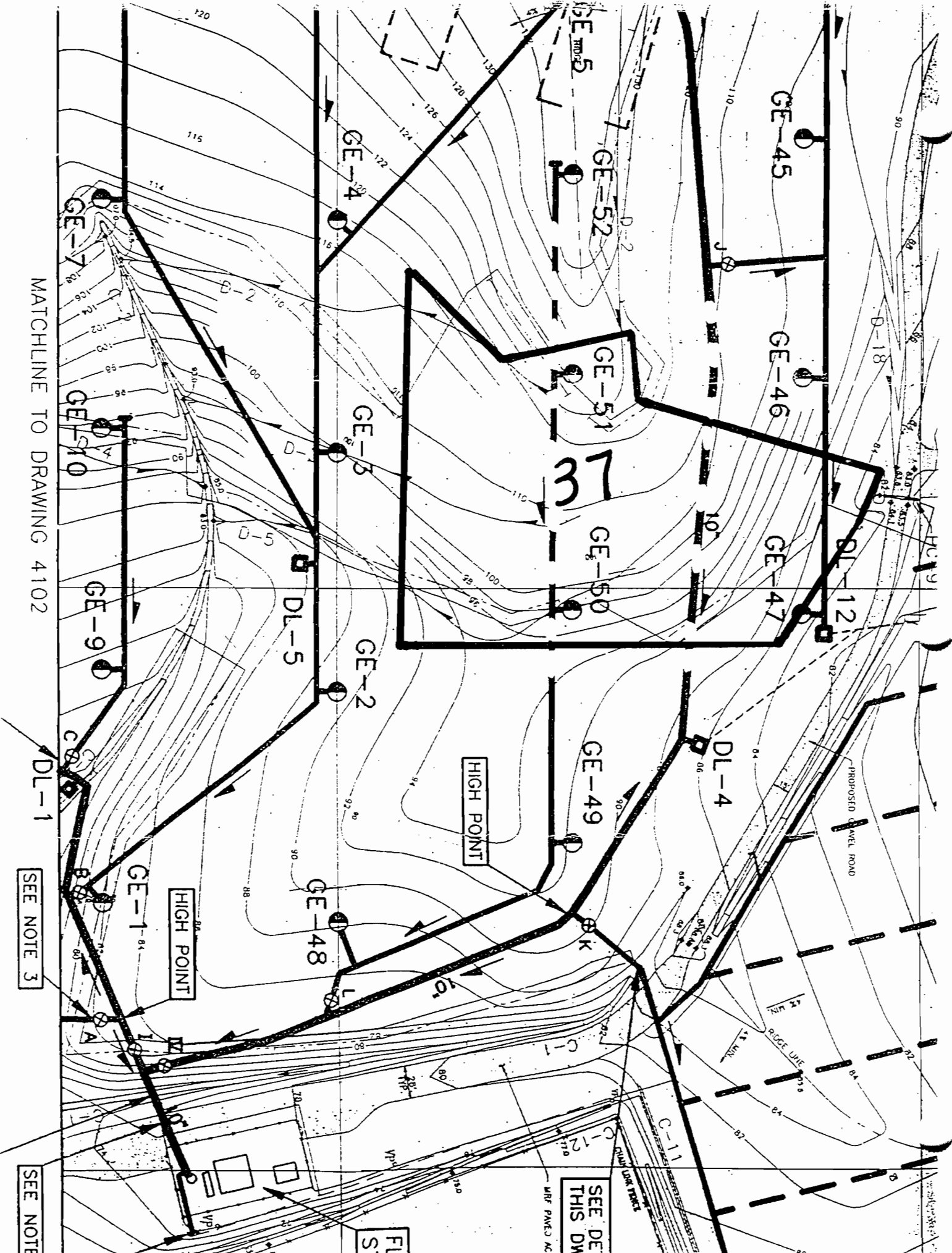
ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QA MANAGER



MATCHLINE TO DRAWING 4102

SEE NOTE 3

SEE NOTE 1

SEE DET
THIS DW

FL
S1

OGDEN

REMEDIALATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
Tel: 914 358 2720
Fax: 914 358 2790

REMEDIALATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

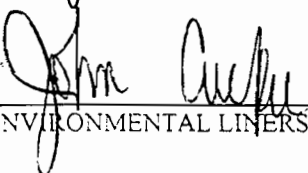
DATE: 12/30/97

TIME: 2:00 PM

DWG. NO. 38

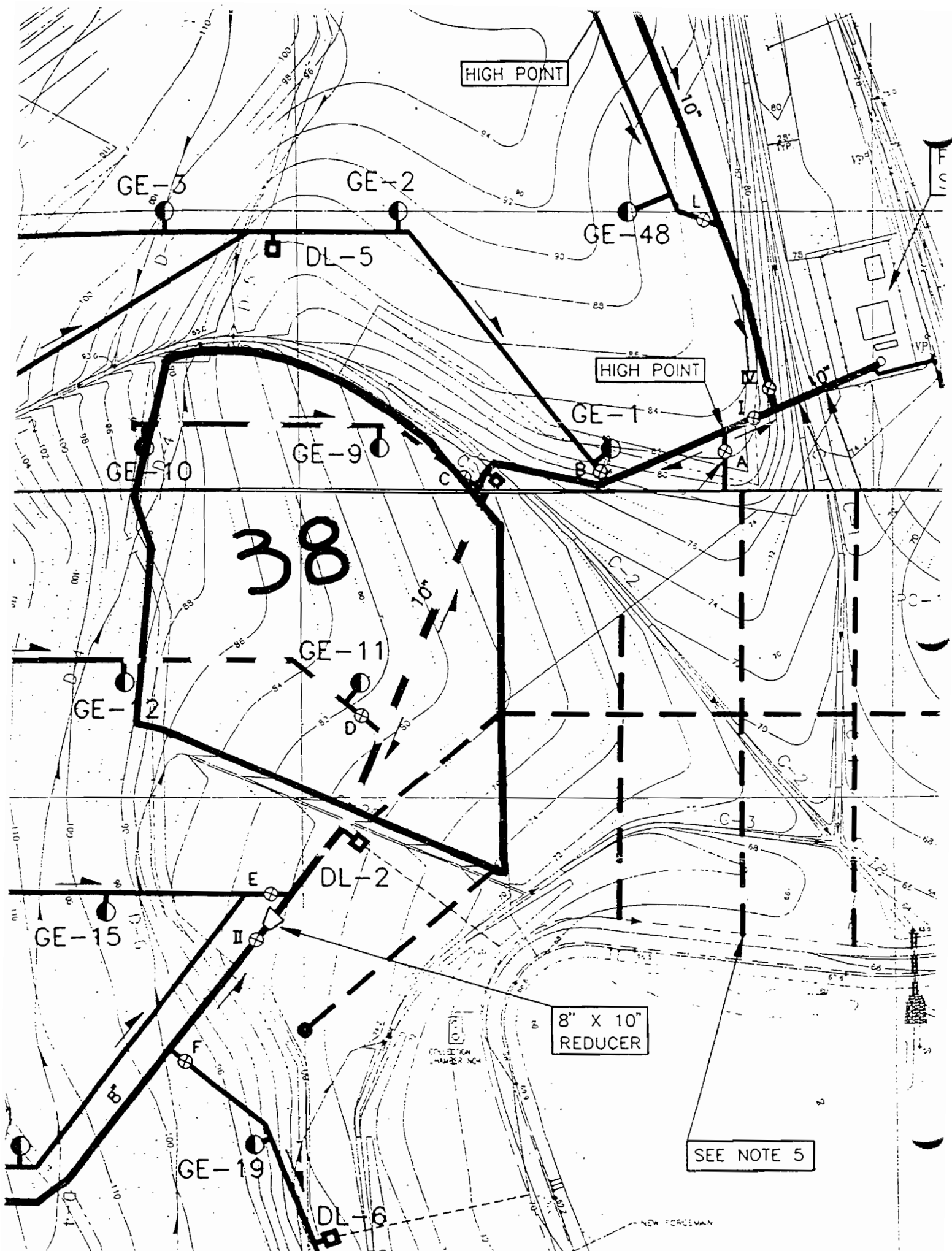
ENVIRONMENTAL LINER, INC., OGDEN REMEDIALATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.


ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIALATION SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 11/7/97

TIME: 3:00 PM

DWG. NO. 39

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

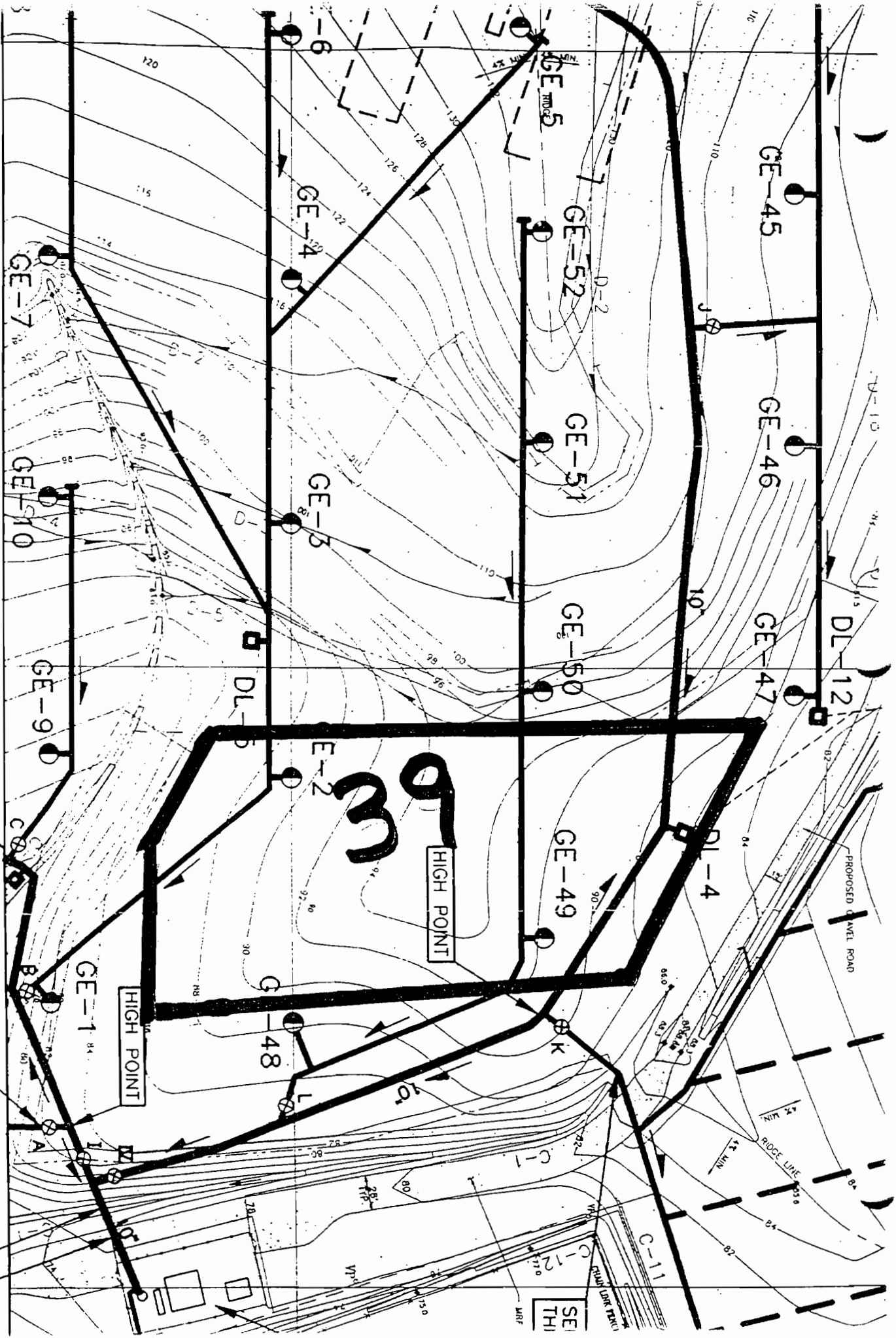
MATCHLINE TO DRAWING 4102

LFG PIPE INV. = 72.04
CHANNEL C-2 (SEE

LFG PIPE INV. 70.54
CHANNEL C-1 (SEE

SEE NOTE 3

SEE 1



OGDEN REMEDIATION SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2780

REMEDATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 11, 13/97

TIME: 3:00 PM

DWG. NO. 40

ENVIRONMENTAL LINER, INC., OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

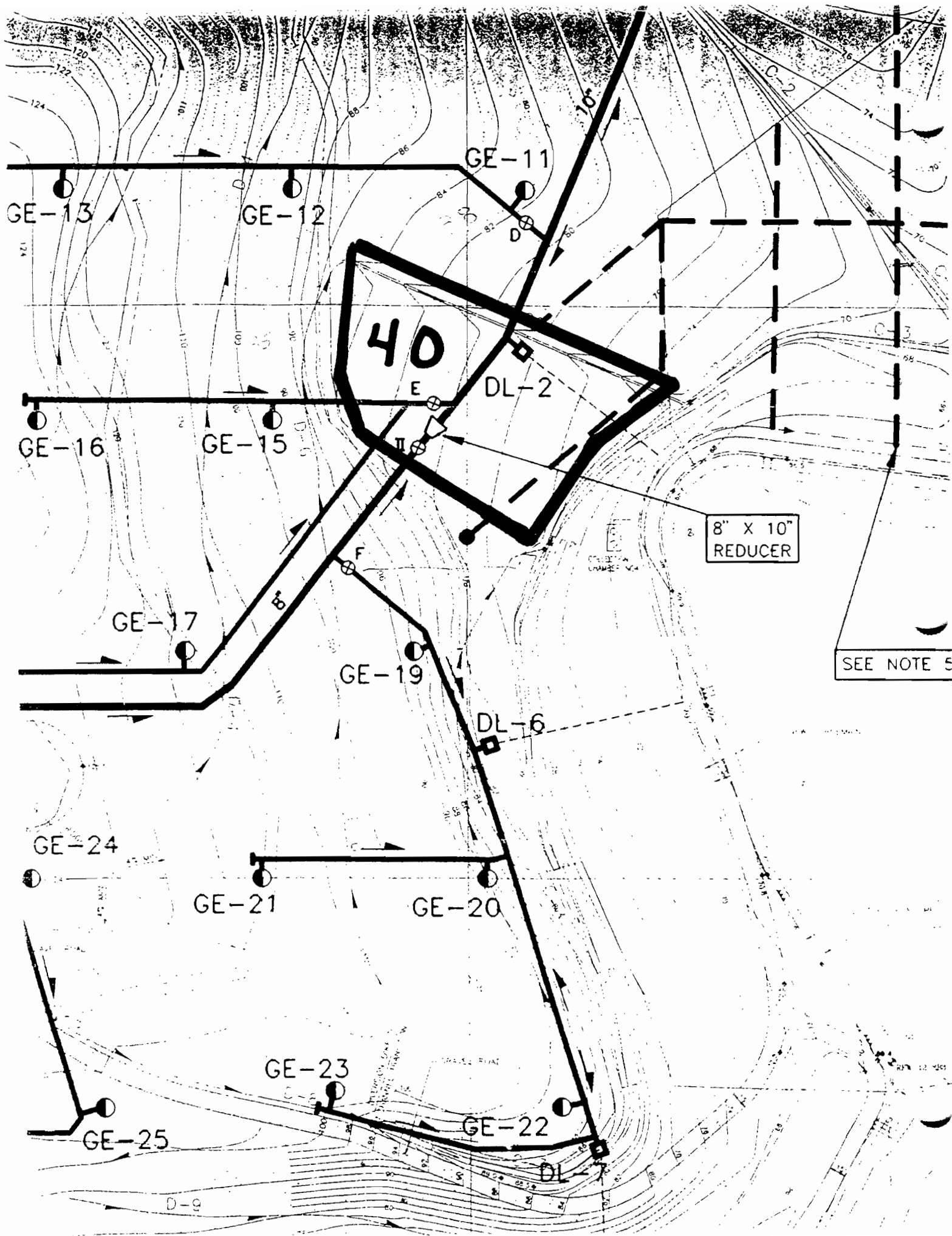
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

1-12-97





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 5/20/98

TIME: 9:10 AM

DWG. NO. 40 A

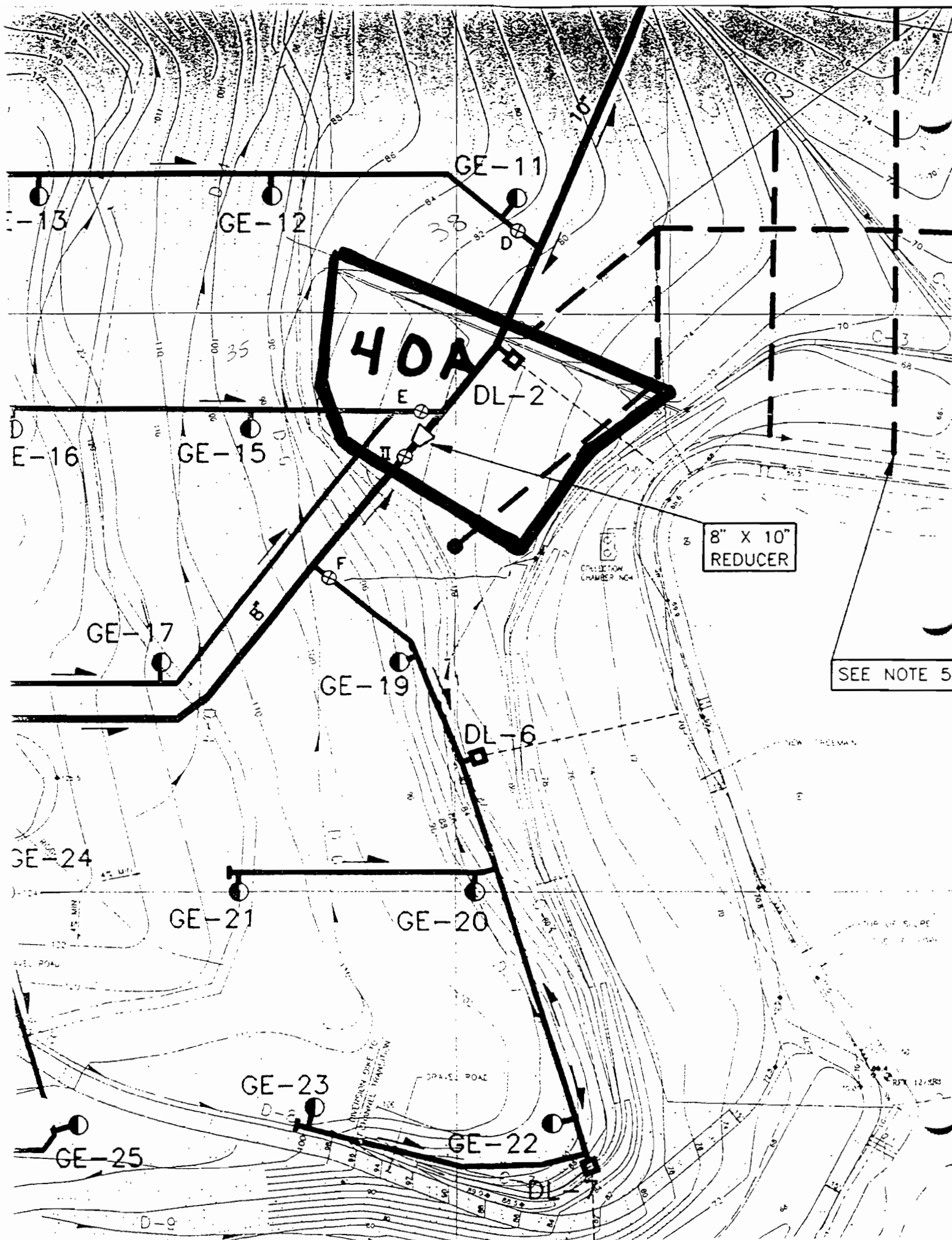
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 11/21/97

TIME: 2:30 PM

DWG. NO. 41

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

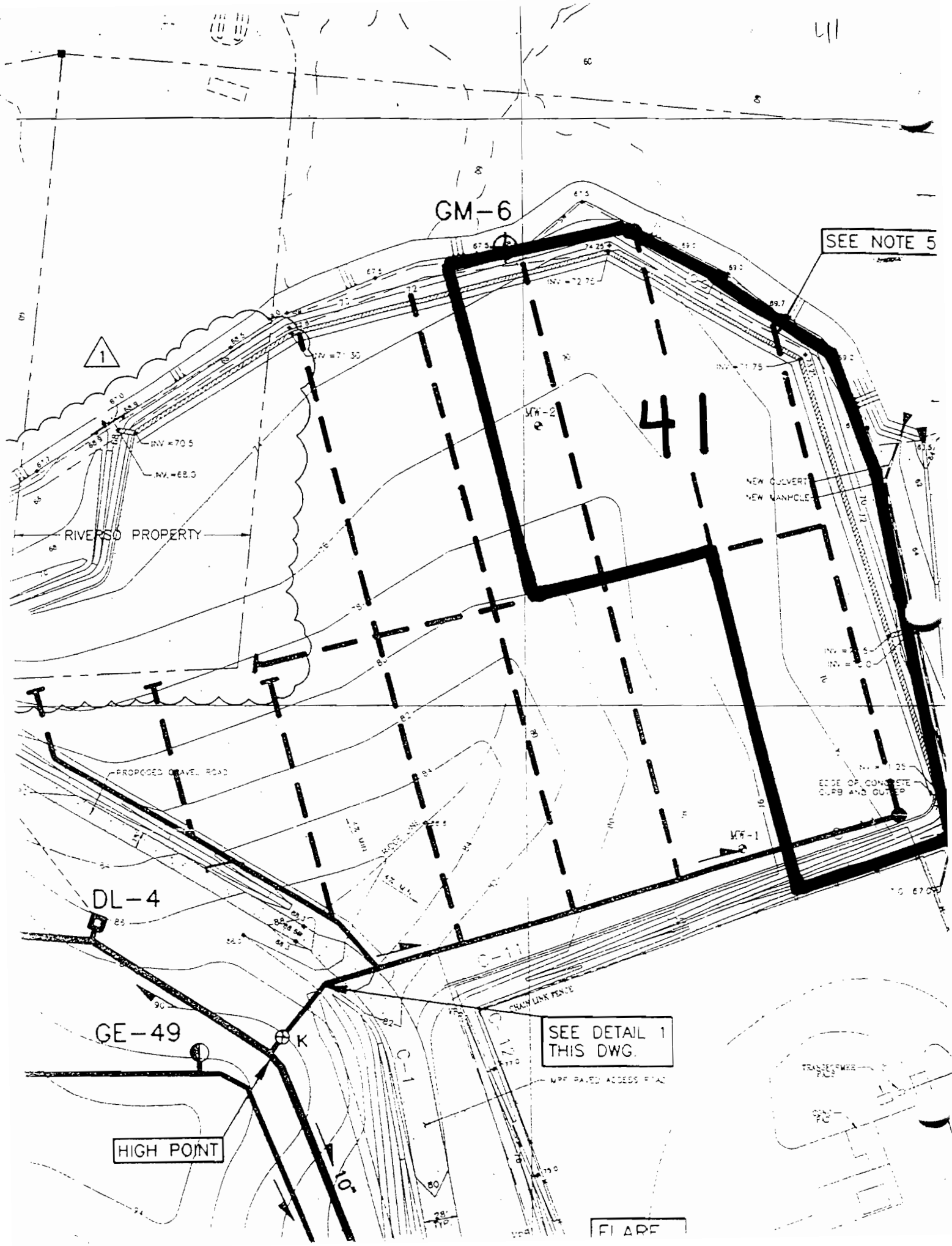
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

1-12-98

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



OGDEN

REMEDIAL SERVICES CO., INC.

□ ■ ■ ■ ■ ■

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 11/26/97

TIME: 4:00 PM

DWG. NO. 42

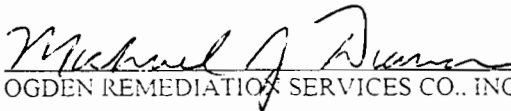
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



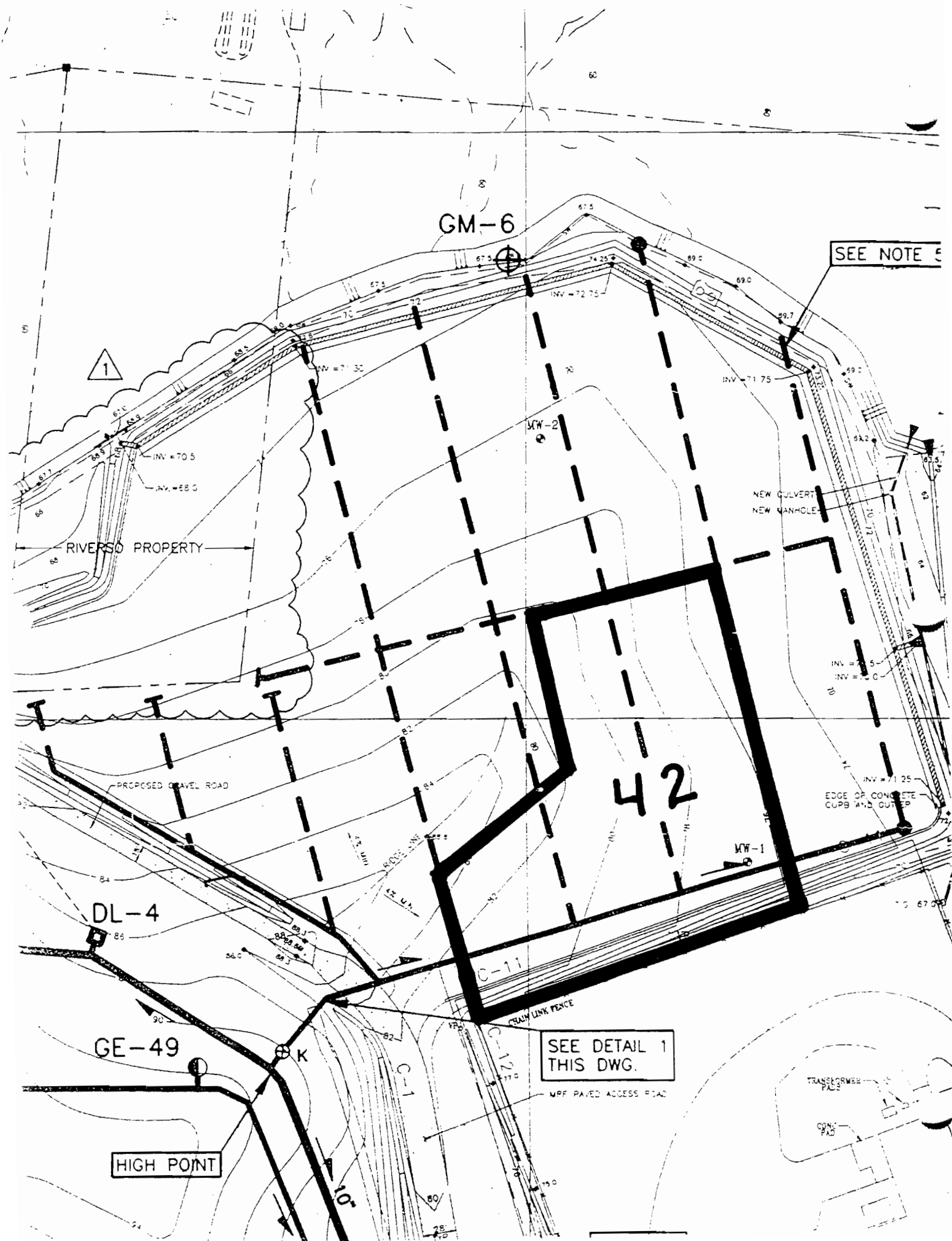
ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

 1-12-98

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 3/31/98

TIME: 12:00 PM

DWG. NO. 43

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

34075. (4)

34

GE-46

47

DL-4

GE-51

5-50

GE-49

GE-13

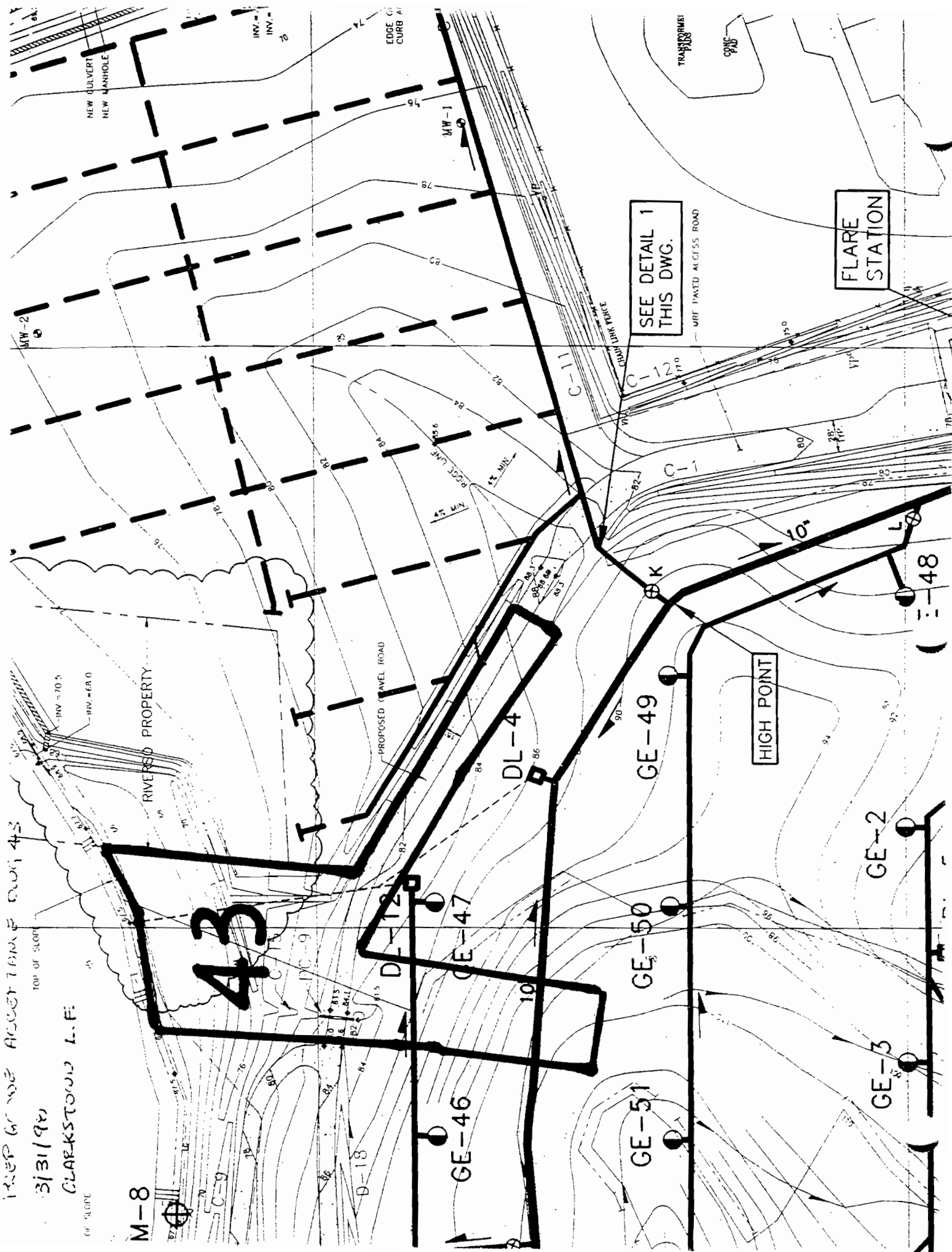
GE-2

48

HIGH POINT

FLARE
STATION

SEE DETAIL 1
THIS DWG.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2723
Fax 914 358 2790

REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 4/23/98

TIME: 11:00 AM

DWG. NO. 44

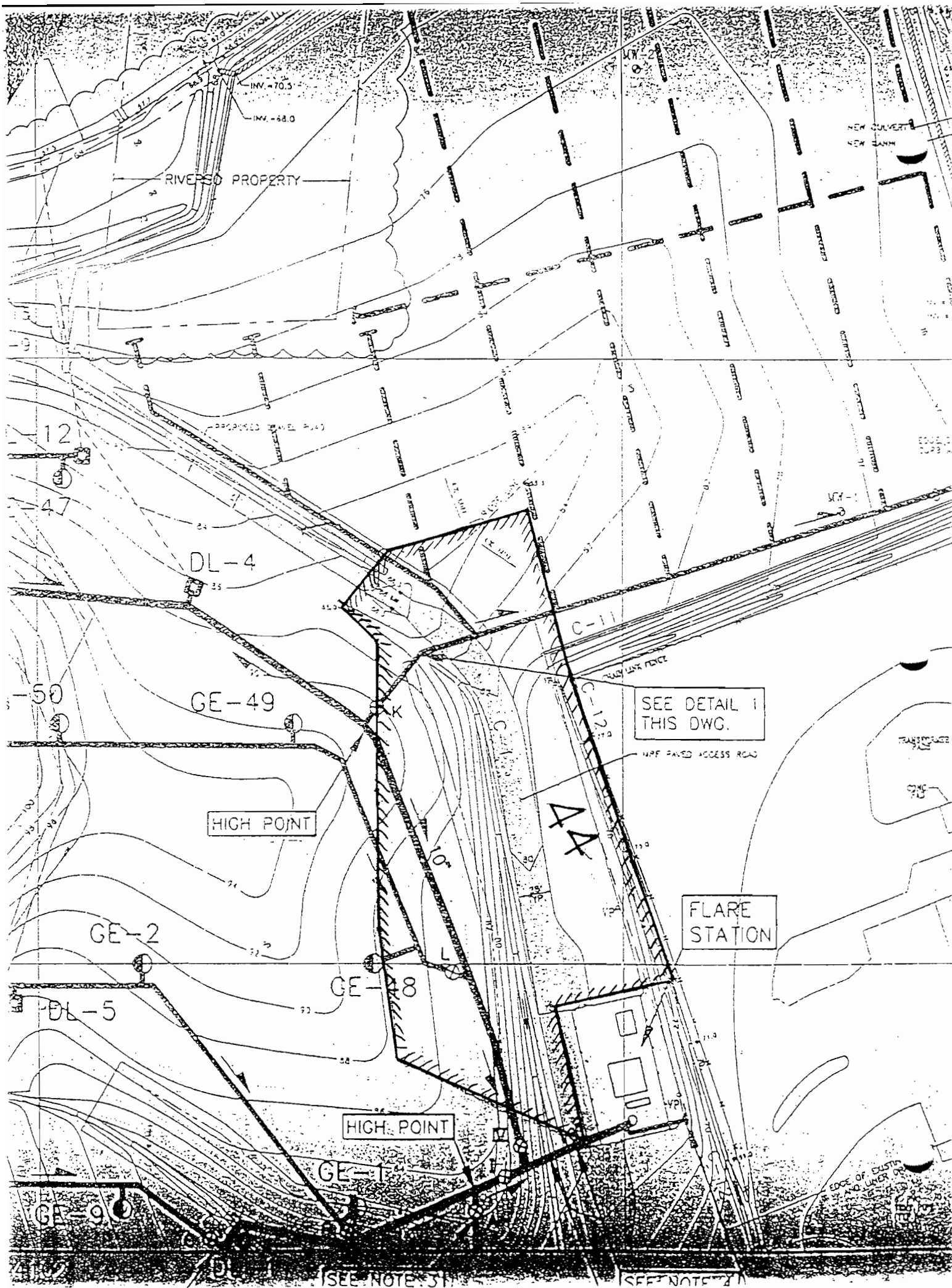
ENVIRONMENTAL LINER, INC., OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

John Cuello
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

John Cuello
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Deane
OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

Roy F. Weston
ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 4/28/98

TIME: 8:30 AM

DWG. NO. 45

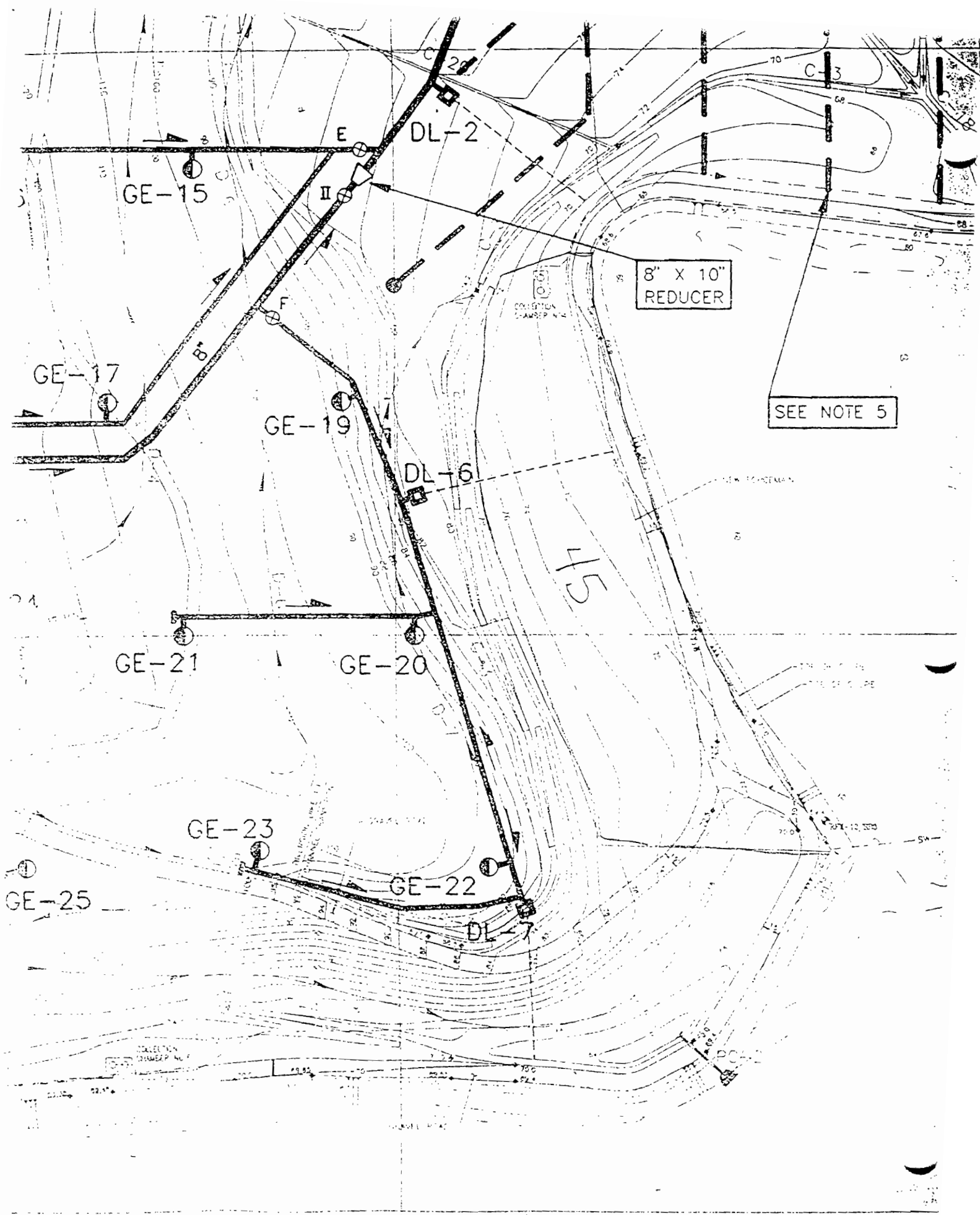
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



OGDEN

REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 5/20/98

TIME: 9:10 AM

DWG. NO. 46

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



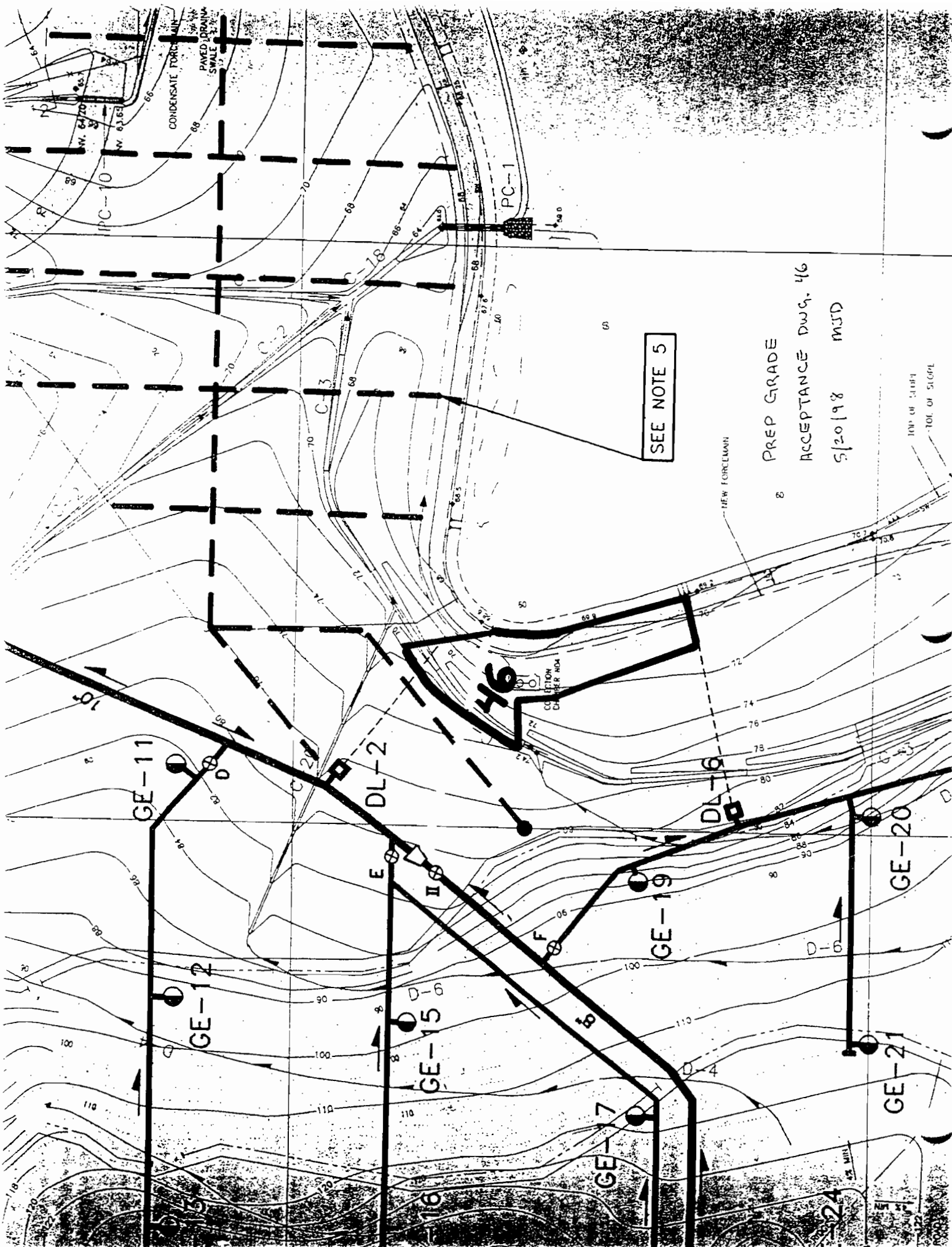
ENVIRONMENTAL LINERS, INC. FOREMAN



OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QA MANAGER



SEE NOTE 5

PREP GRADE
ACCEPTANCE DWG. 46
5/20/98 MJD

TOP OF SLOPE
TOP OF SLOPE



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

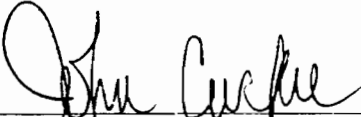
REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

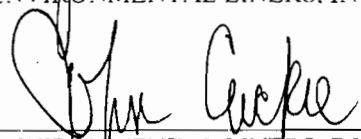
DATE: 5/14/98

TIME: 8:15 AM

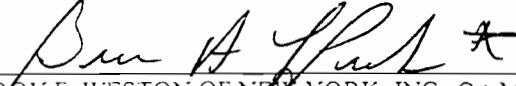
DWG. NO. 47

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

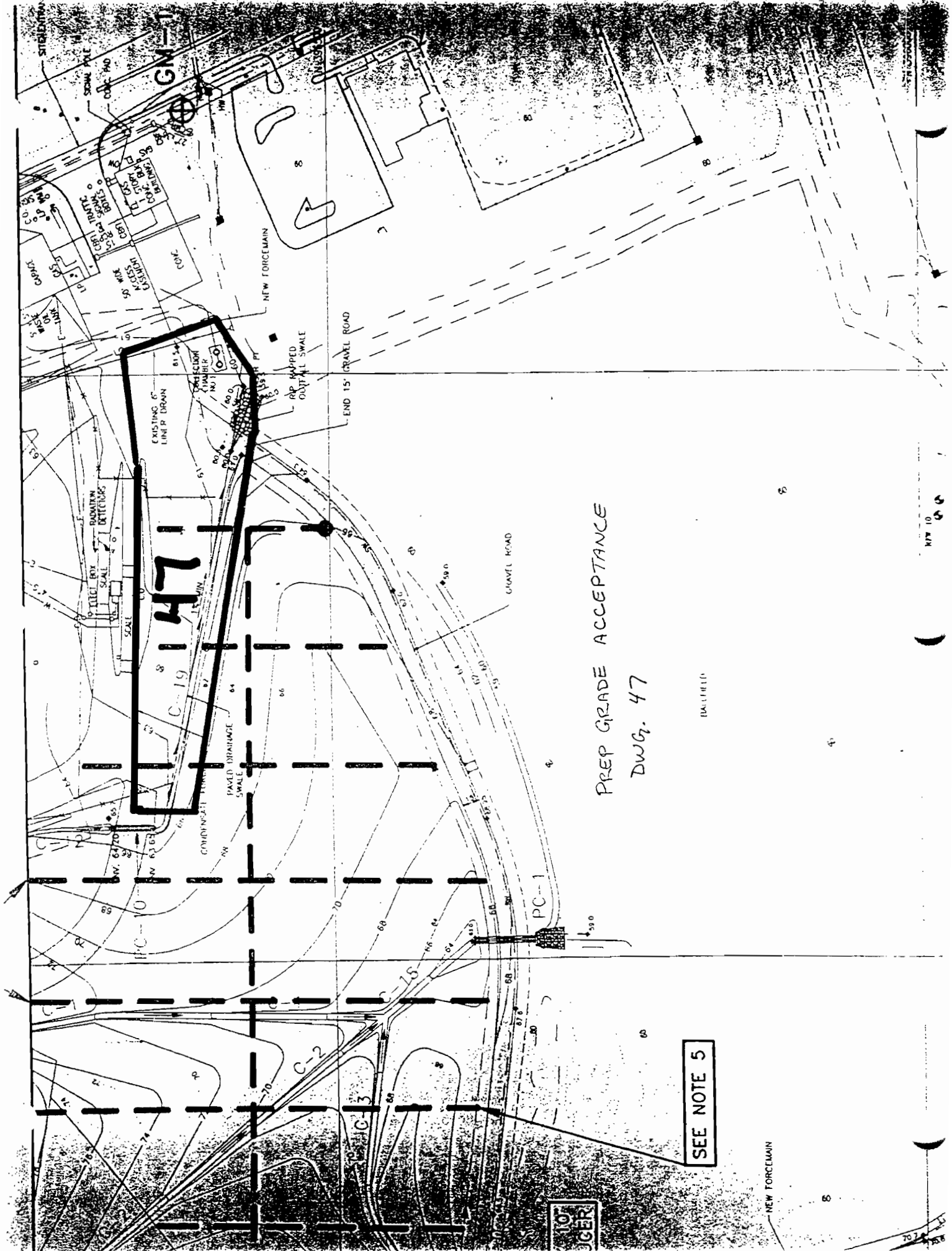

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER


ENVIRONMENTAL LINERS, INC. FOREMAN


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER


ROY F. WESTON OF NEW YORK, INC. QA MANAGER

* Nothing exception taken w.r.t. surface collection system.



PREP GRADE ACCEPTANCE
DWG. 47

SEE NOTE 5

OGDEN

REMEDIAL SERVICES CO., INC.

2 3 4 5 6

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

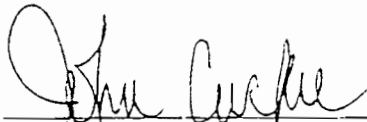
REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 5/14/98

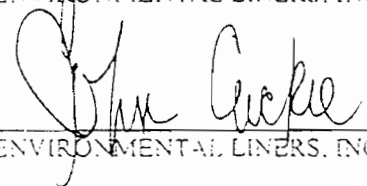
TIME: 8:15 AM

DWG. NO. 47

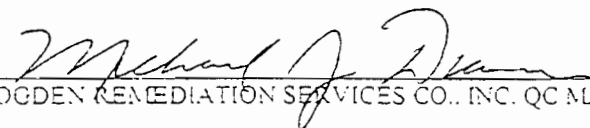
ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.



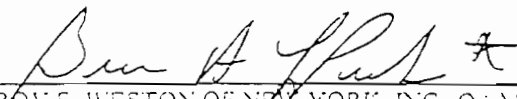
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER



ENVIRONMENTAL LINERS, INC. FOREMAN

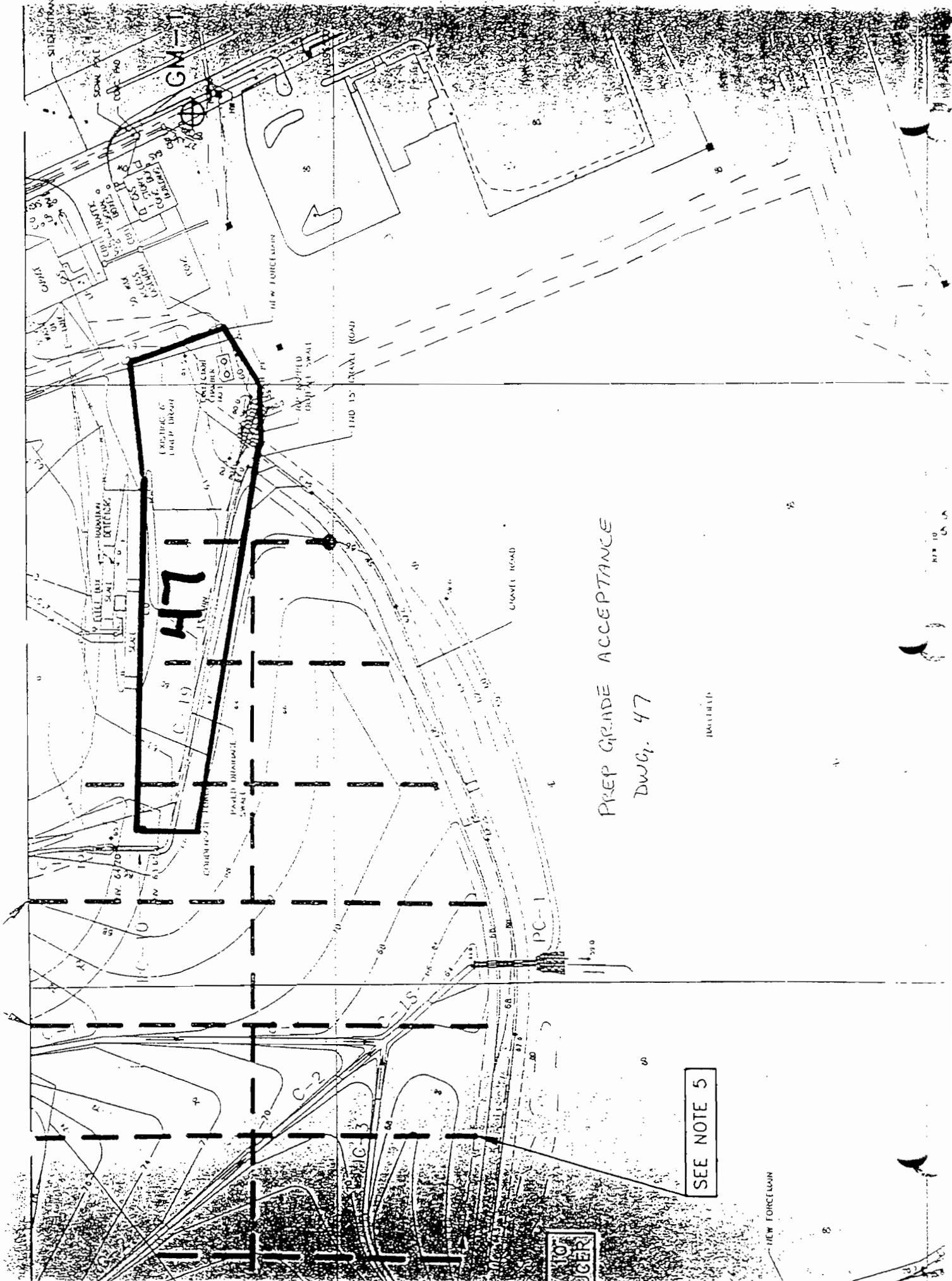


OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER



ROY F. WESTON OF NEW YORK, INC. QC MANAGER

* Nothing exception taken w/ surface collection system.



PREP GRADE ACCEPTANCE
DWG. 47

SEE NOTE 5



REMEDIAL SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 5/29/98

TIME: 9:00 AM

DWG. NO. 48

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

Lyle Luther

ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Deane

OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

Roy F. Weston

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

DATE OF INSTALL
APRIL 14, 1998

RIDGE

86

4% MIN.

84

82

1

2-2

78

77.0

4% MIN. 4% MIN.

48

2042

2
2024

CH

CH

RI

LEW



REMEDATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/5/98

TIME: 9:00 AM

DWG. NO. 49

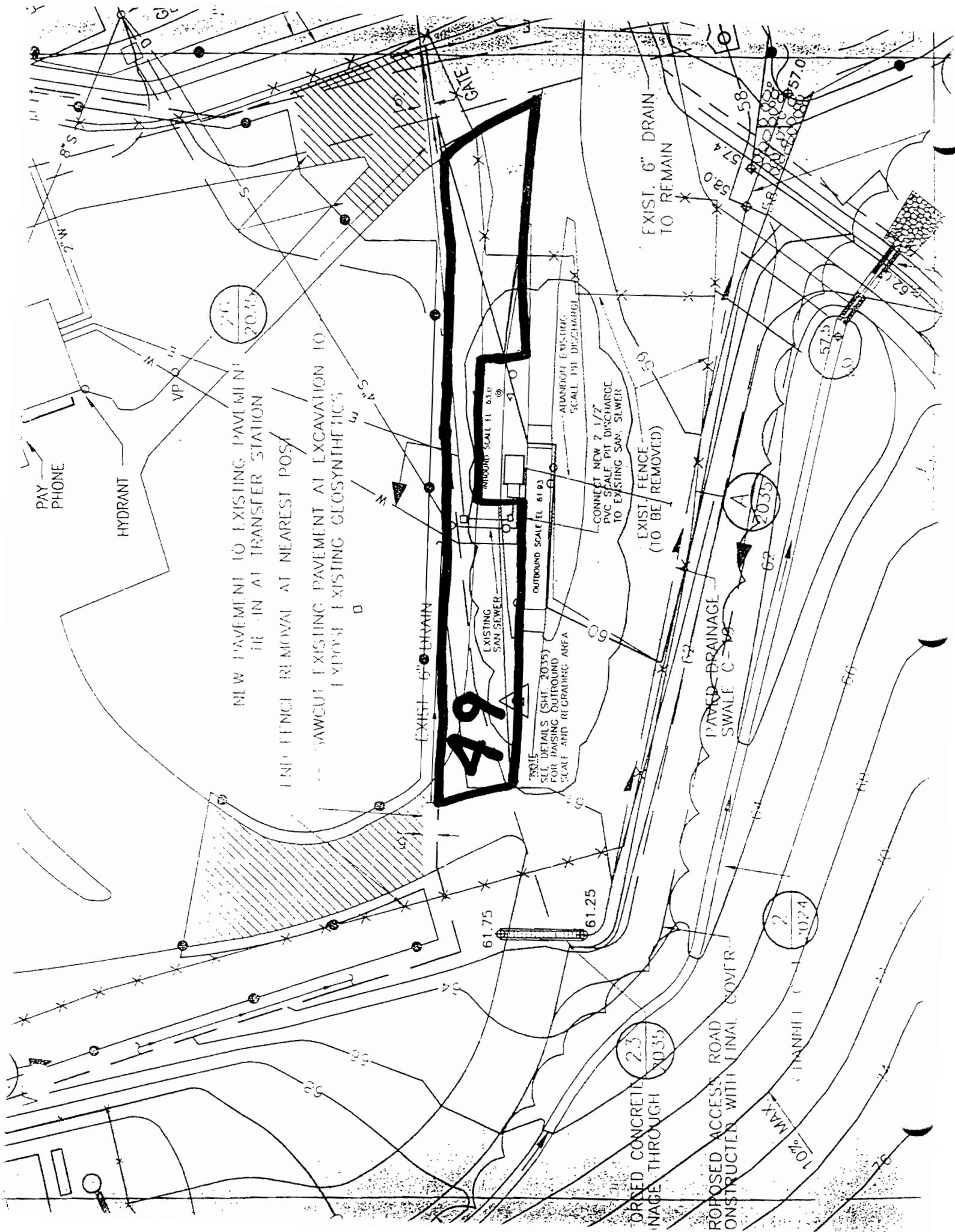
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

ENVIRONMENTAL LINERS, INC. FOREMAN

OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

ROY F. WESTON OF NEW YORK, INC. QA MANAGER



NEW PAVEMENT TO EXISTING PAVEMENT
IN IN AT TRANSFER STATION
END FENCE REMOVAL AT NEAREST POST
SAWCUT EXISTING PAVEMENT AT EXCAVATION TO
EXPOSE EXISTING GEOSYNTHETICS

EXIST 6" DRAIN

49

EXISTING
SAN SEWER

TRIPLE
SEE DETAILS (SAT 2035)
FOR RAISING OUTROUND
SCALE AND REGRADING AREA

OUTBOUND SCALE EL 61.03

INBOUND SCALE EL 61.03

ADDITIONAL EXISTING
SCALE PIT DISCHARGE

CONNECT NEW 2 1/2"
PVC SCALE PIT DISCHARGE
TO EXISTING SAN. SILEW

EXIST FENCE
(TO BE REMOVED)

EXIST. 6" DRAIN
TO REMAIN

PAVED DRAINAGE
SWALE C-19

PROPOSED ACCESS ROAD
ONSTRUCTED WITH FINAL COVER

ORDED CONCRETE
IMAGE THROUGH 23

10% MAX

2
2024

2035

57.5

57.0

58.0

57.4

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

58.0

OGDEN REMEDIATION SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/9/98

TIME: 9:30 AM

DWG. NO. 50

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther

ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

Lyle Luther

ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Deane

OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

Roy F. Weston

ROY F. WESTON OF NEW YORK, INC. QA MANAGER

4% MIN.

K FENCE
ETE ANCHOR

18 27
2034 2035

PRECAST CONCRETE
MEDIAN BARRIER

17
2034

CONCRETE
PLACES)

19 27
2034 2035

COVER SYSTEM ON
FILL SIDE SLOPE
(TYPE II)

29
2036

TYPE I

TYPE II



TYPE I
TYPE III

10' HDPE
HEADER

SEE NOTE #4

84.0



GV

4% MIN.
4% MIN.

RIDGE

PROPOSED ACCESS ROAD
CONSTRUCTED WITH FINAL COVER

10% MAX.

50

30
2036

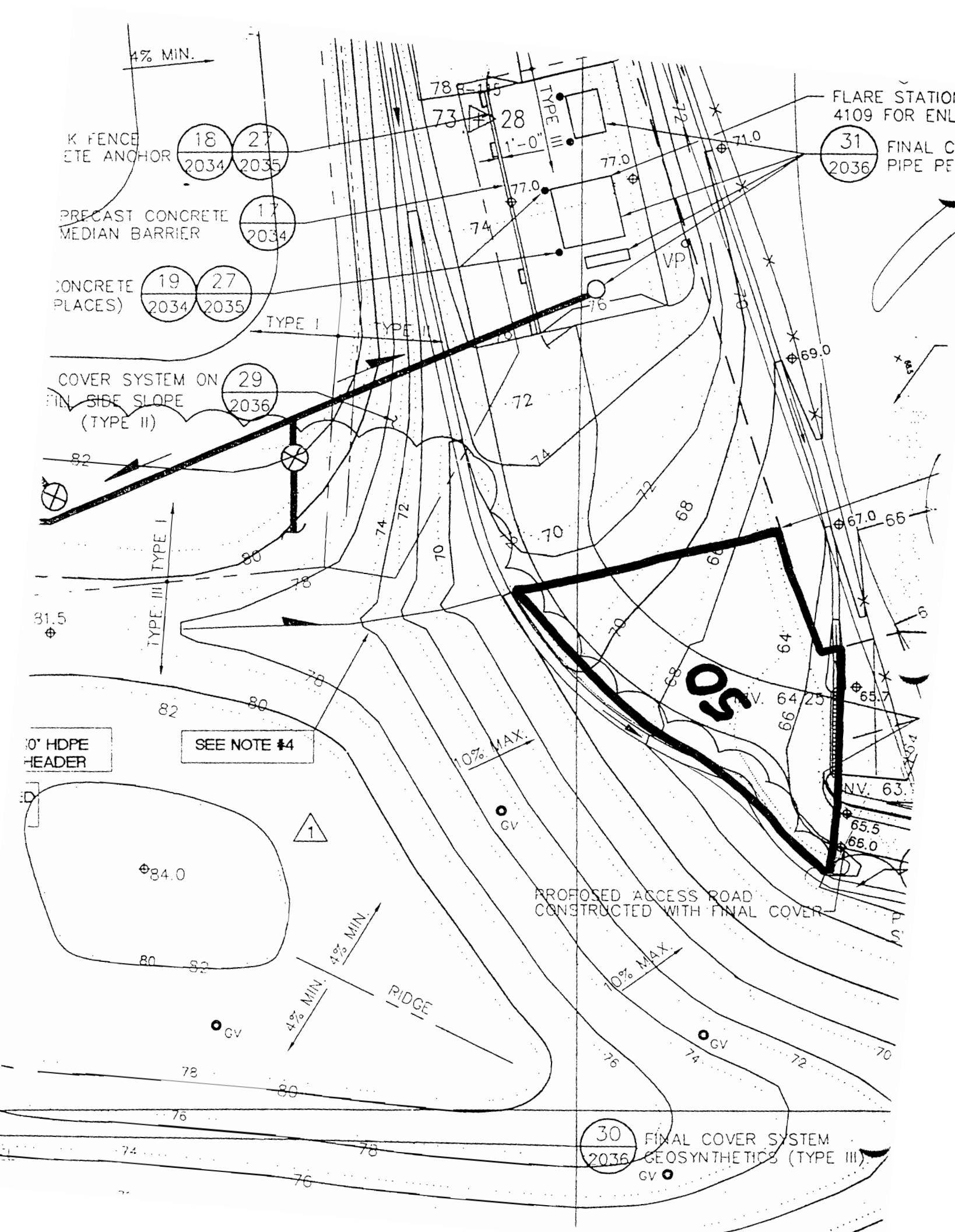
FINAL COVER SYSTEM
GEOSYNTHETICS (TYPE III)

GV

FLARE STATION
4109 FOR ENL

31
2036

FINAL C
PIPE PE





REMEDIAL SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 6/24/98

TIME: 9:00 AM

DWG. NO. 51

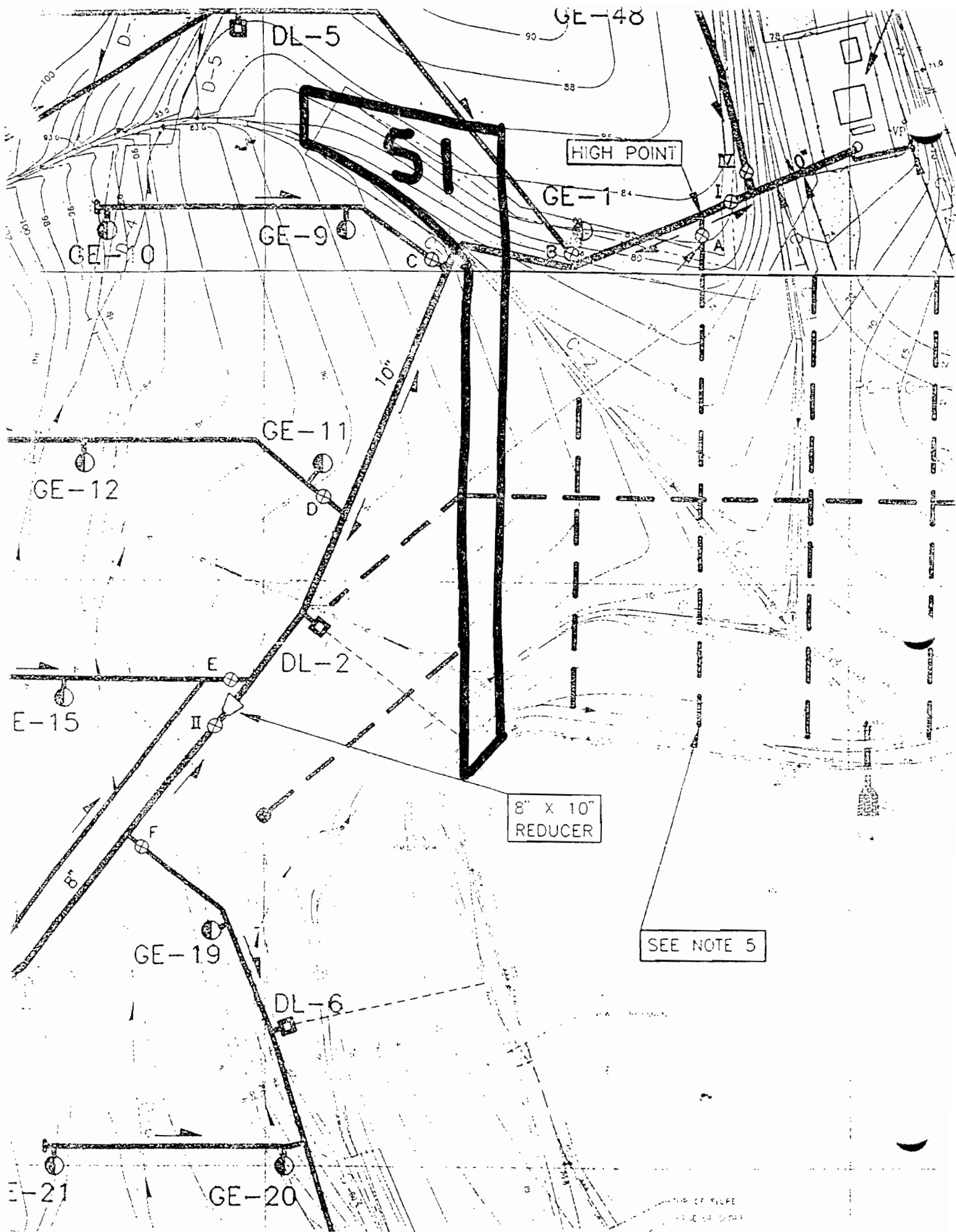
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

Lyle Luther
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Deane
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

Roy F. Weston
ROY F. WESTON OF NEW YORK, INC. QA MANAGER



OGDEN REMEDIATION SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDICATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/2/98

TIME: 8:00 AM

DWG. NO. 52

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Lutter

ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

Lyle Lutter

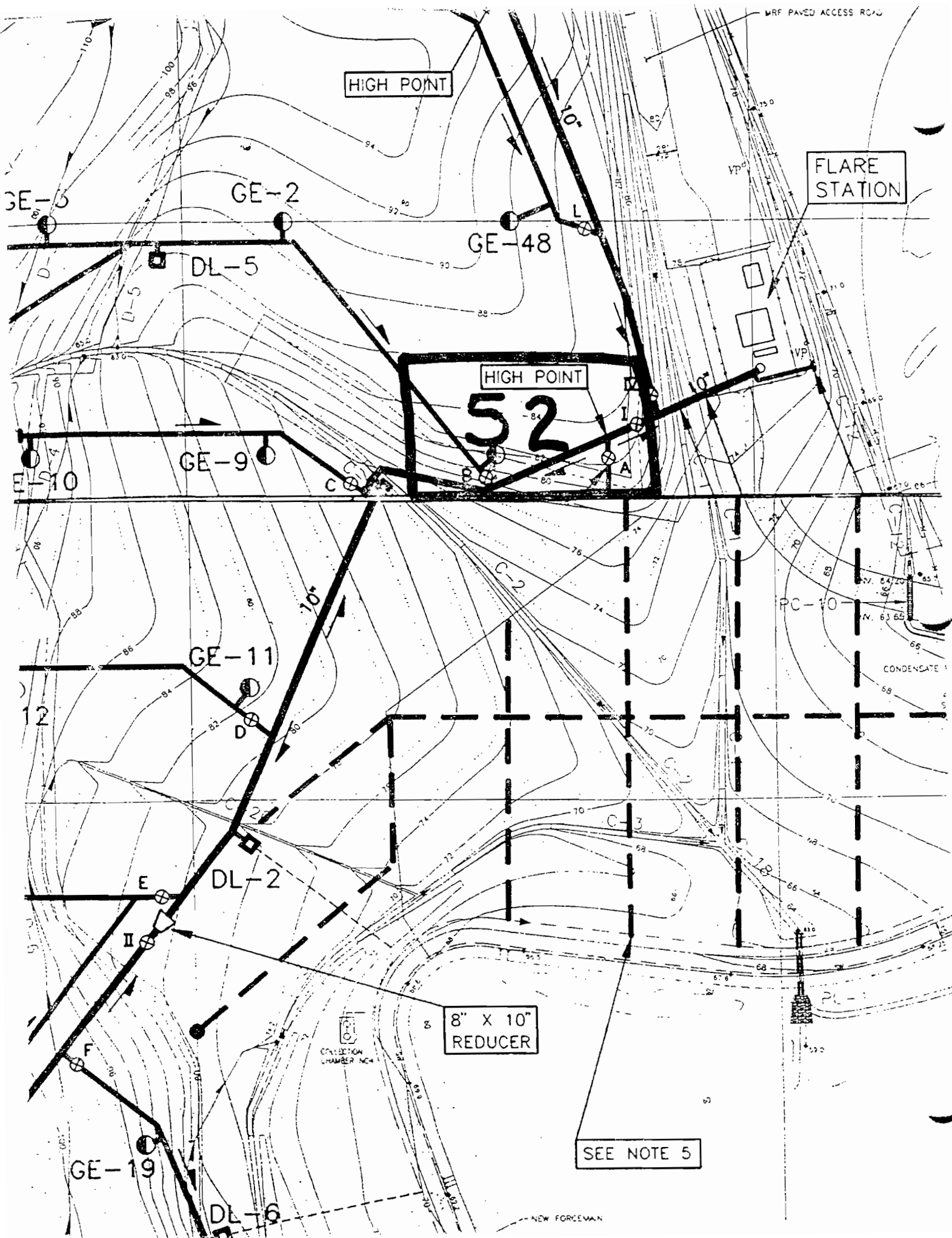
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Deane

OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

Roy F. Weston

ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDATION SERVICES CO., INC.

Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDATION OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/9/98

TIME: 10:30 AM

DWG. NO. 53

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIATION SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

Lyle Luther
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Deanna
OGDEN REMEDIATION SERVICES CO., INC. QC MANAGER

Roy F. Weston (7/28/98)
ROY F. WESTON OF NEW YORK, INC. QA MANAGER

NEW PAVEMENT
BE -IN
END FENCE REMOVAL
CUTOUT EXISTING
1-10-04 18
0

EXISTING
SLOPE
2-1-04
2

PROPOSED DRAINAGE
SWALL C-2

LANDFILL
SLOPE
2025
ALONG CR

PROPOSED PREPARATORY
GRADES FROM RAIA FILL

RELOCATED
DL-1

53

PROPOSED SLOPE
1-10-04
18
0



REMEDIAL SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 358 2720
Fax 914 358 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 9/16/98

TIME: 9:30 AM

DWG. NO. 54

ENVIRONMENTAL LINER, INC., OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther
ENVIRONMENTAL LINERS, INC. INSTALLATION MANAGER

Lyle Luther
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Danner
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

Ben A. Park (7/28/98)
ROY F. WESTON OF NEW YORK, INC. QA MANAGER





REMEDIAL SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 355 2720
Fax 914 355 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/20/98

TIME: 8:30

DWG. NO. 55

ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

Lyle Luther
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael J. Dianna
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

Roy F. Weston (7/20/98)
ROY F. WESTON OF NEW YORK, INC. QA MANAGER



26
70.35

62.0

59.0

0
0.25

VERTICAL CURVE
ADJUST CONTROL
ALONG GRADE LINE

PROPOSED PREPARATORY
GRADES FROM RAIN FILL

SS



REMEDIAL SERVICES CO., INC.



Clarkstown Project Office
166 Route 303
West Nyack, NY 10994
914 355 2720
Fax 914 355 2790

REMEDIAL OF CLARKSTOWN
SANITARY LANDFILL AND
LANDFILL CAPPING

DATE: 7/28/98

TIME: 2:00 PM

DWG. NO. 56

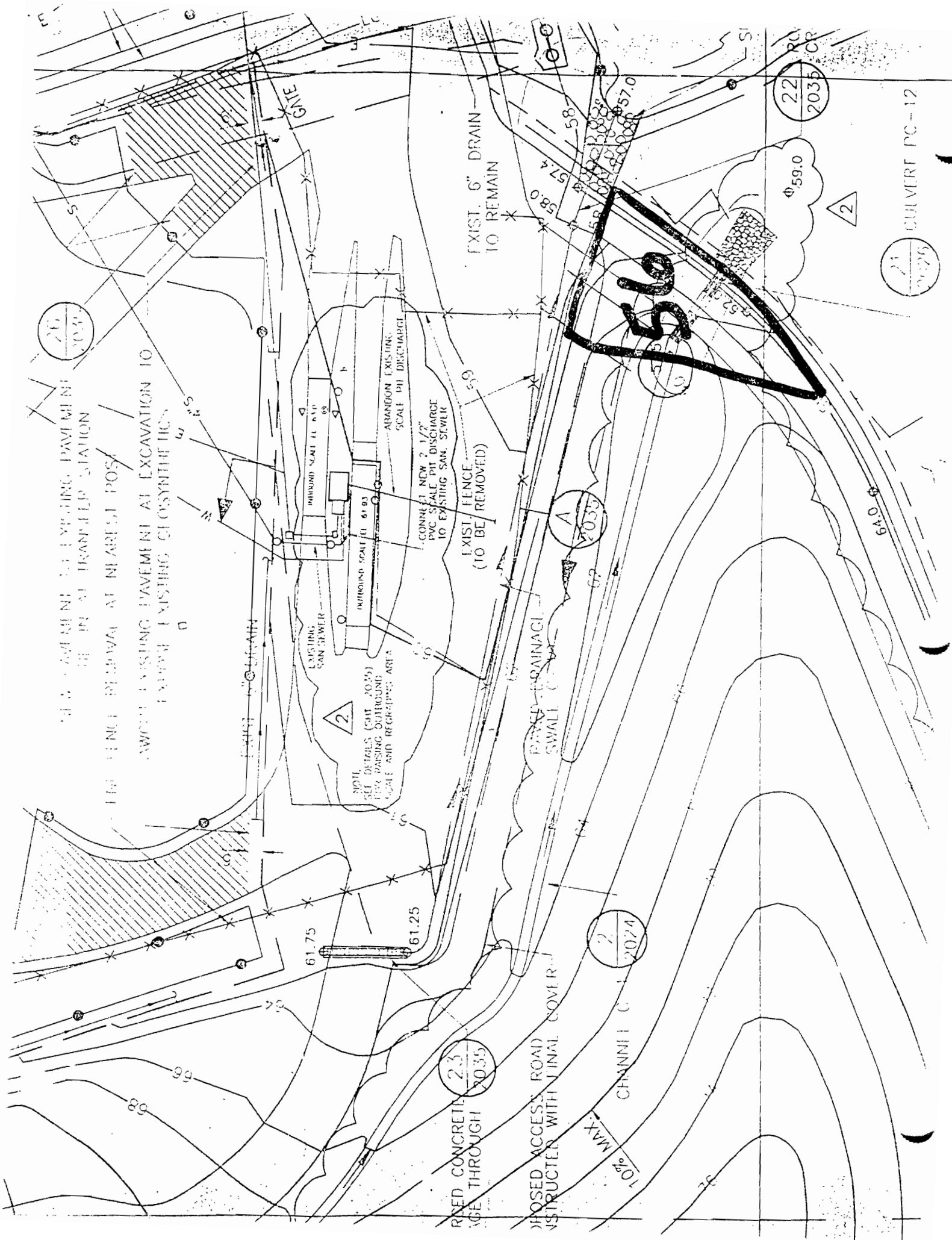
ENVIRONMENTAL LINER, INC. , OGDEN REMEDIAL SERVICES CO., INC. AND ROY F. WESTON OF NEW YORK HAS INSPECTED THE PREPARATORY GRADE SURFACE IN THE AREA SHOWN ON THE ATTACHED DRAWING AND HAS APPROVED SUCH PREPARATORY GRADE SURFACE AS ACCEPTABLE FOR LINER PLACEMENT. UPON THE SIGNATURE OF ACCEPTANCE OF ALL PARTIES BELOW, LINER PLACEMENT WILL THEN BEGIN.

Lyle Luther
ENVIRONMENTAL LINERS, INC. INSTALLTATION MANAGER

Lyle Luther
ENVIRONMENTAL LINERS, INC. FOREMAN

Michael A. Diana
OGDEN REMEDIAL SERVICES CO., INC. QC MANAGER

Roy F. Weston
ROY F. WESTON OF NEW YORK, INC. QA MANAGER



APPENDIX F3:

Field Seam Destructive Test Results

HISTORICAL FIELD DESTRUCT INFORMATION															HISTORICAL LABORATORY INFORMATION																													
ARCHIVE INFORMATION					FIELD TRIAL SEAM										M&T - NAMOW/TCJ JV - EMCON										NTH CONSULTANTS																			
Destruct Number	Date Sampled	Weld Type G-Glue H-Heat	Field Location	P1	P2	P3	P4	Avg. Peel (ppj)	S1	S2	S3	S4	Avg. Shear (ppj)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg. Peel (ppj)	S1	S2	S3	S4	S5	Avg. Shear (ppj)	P/F M&T J&L	P1	P2	P3	P4	P5	Avg. Peel (ppj)	S1	S2	S3	S4	S5	Avg. Shear (ppj)	P/F NTH			
1	DS-1	6/9/97	H-007	216/218	27	36	-	31.5	79	71	78	76	76.00	P	J&L	43.4	44.0	48.8	43.9	47.8	45.56	78.5	83.7	83.5	85.7	77.7	81.82	P																
2	DS-2	6/9/97	H-007	216/215	41	35		38.00	68	54			61.00	F	Missing																													
2A	DS-2R	06/12/97	G	216/215	32	29		30.50	83	78			80.50	P	M&T	20.1	19.8	18.7	-	-	19.53	87.8	96.1	92.6	-	-	92.17	P	35.1	36.6	35.2	35.9	34.4	35.44	94.8	88.1	79.9	83.4	82.4	85.72	P			
2B	DS-2R	06/12/97	G	216/215	32	29		30.50	83	78			80.50	P	J&L	25.8	27.0	26.6	26.5	26.1	26.37	79.97	75.13	82.30	76.28	70.46	76.83	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3	DS-3	06/10/97	H-007	215/212	50	46		48.00	82	83			82.50	P	J&L	45.6	41.2	45.6	45.7	47.5	45.12	78.91	79.61	75.52	79.76	78.82	78.52	P																
4	DS-4	06/10/97	H-007	213/214	48	46		47.00	78	79			78.50	P	J&L	38.0	41.0	36.5	42.6	47.8	41.17	74.98	77.88	76.95	75.18	76.63	76.32	P																
5	DS-5	06/10/97	H-007	106/214	41	42		41.50	76	69			72.50	F	Missing																													
5A	DS-5R	06/12/97	G	105A/212	34	32		33.00	89	89			89.00	P	M&T	27.1	24.3	17.3	20.7	14.5	20.78	91.6	92.1	85.0	85.5	88.5	88.54	P	43.4	39.1	37.7	39.4	38.2	39.56	92.1	84.3	92.8	84.9	90.4	88.90	P			
5B	DS-5R	06/12/97	"	"	"	"		N/A	"	"			N/A		J&L	31.8	30.6	31.2	26.6	30.7	30.18	82.1	88.5	81.5	79.3	86.8	83.64	P	-	-	-	-	-	-	-	-	-	-	-	-	-			
6	DS-6	06/11/97	H-007	213/211	39	36		37.50	74	83			78.50	P	J&L	39.1	40.1	41.5	40.9	37.6	39.81	78.8	79.3	80.8	79.7	84.5	80.62	P																
7	DS-7	06/11/97	H-007	211/206	30	29		29.50	81	84			82.50	P	J&L	30.0	28.7	27.5	28.7	27.6	28.49	89.38	84.38	78.95	75.65	69.36	79.54	P																
8	DS-8	06/17/97	G	210/206	26	32		29.00	86	80			83.00	P	M&T	13.3	15.2	19.5	-	-	16.00	75.4	86.5	76.1	-	-	79.33	P	27.4	28.6	25.4	27.2	31.0	27.92	87.2	80.1	87.5	79.0	83.8	83.52	P			
9	DS-9	06/17/97	G	107/207	39	31		35.00	79	75			77.00	P	M&T	23.3	14.9	22.0	-	-	20.07	82.0	72.1	74.4	-	-	76.17	P	32.2	38.9	35.9	42.1	35.4	36.90	75.2	76.6	79.0	86.5	78.4	79.14	P			
10	DS-10	06/17/97	H-007	204/207	-	-		N/A	69	72			70.50	F	Missing																													
10A	DS-10	06/18/97	"	"	-	-		N/A	73	68	77		72.67	F	Missing																													
10B	DS-10R	06/23/97	G	204/207	22	27		24.50	87	81			84.00	P	M&T	19.7	14.9	11.6	12.7	10.2	13.82	99.2	84.3	76.8	88.6	92.1	88.20	P	32.6	30.5	33.4	32.0	34.1	32.52	88.1	77.4	92.4	89.7	93.9	88.30	P			
10C	DS-10R	06/23/97	G	"	"	"		N/A	"	"			N/A		J&L	27.6	23.0	26.2	-	-	25.61	88.6	86.2	82.8	87.5	90.6	87.14	P	-	-	-	-	-	-	-	-	-	-	-	-	-			
11	DS-11	06/24/97	H-007	203/201	-	-	-	N/A	72	68			70.00	F	M&T	26.1	20.2	28.9	31.5	25.9	26.52	73.5	71.5	73.0	73.9	73.8	73.14	F																
11A	DS-11R	06/24/97	G	203/201	25	27		26.00	80	82			81.00	P	M&T	12.0	11.0	11.0	11.0	11.0	11.20	97.0	82.0	90.0	88.0	86.0	88.60	P	33.4	24.8	29.6	25.2	25.8	27.76	85.8	89.3	86.7	84.2	79.6	85.12	P			
11B	DS-11R	06/24/97	G	"	"	"		N/A	"	"			N/A		J&L	27.3	25.8	25.7	24.8	26.0	25.92	92.3	80.7	76.0	71.3	89.1	81.88	P	-	-	-	-	-	-	-	-	-	-	-	-	-			
12	DS-12	06/25/97	H-007	208/203	40	43		41.50	76	82			79.00	P	M&T	22.4	22.7	25.1	22.8	23.1	23.22	79.9	77.9	78.5	79.3	80.4	79.20	P																
12A	DS-12	06/25/97	H-007	208/203	"	"		N/A	"	"			N/A		J&L	39.5	39.6	39.7	39.3	39.4	39.49	72.32	80.37	75.85	73.45	78.92	76.18	F																
12B	DS-12R	07/01/97	G	208/203	Missing			N/A					N/A		J&L	23.0	22.5	23.4	23.5	22.1	22.90	83.68	83.06	86.42	85.96	82.48	84.32	P																

[illegible]

HISTORICAL FIELD DESTRUCT INFORMATION										HISTORICAL LABORATORY INFORMATION																															
ARCHIVE INFORMATION				FIELD TRIAL SEAM								M&T - NAMOW/TCL JV - EMCON										NTH CONSULTANTS																			
Destruct Number	Date Sampled	Weld Type	Field Location	P1	P2	P3	P4	Avg. Peel (ppf)	S1	S2	S3	S4	Avg. Shear (ppf)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F M&T J&L	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F NTH
37	DS-37	07/21/97	G	224A/224B	37	29		33.00	75	74			74.50	P	M&T	24.3	20.1	18.9	24.5	24.6	22.48	95.1	81.2	80.0	85.5	84.2	85.20	P	35.6	26.6	32.9	34.2	33.5	32.56	80.8	74.4	83.6	76.3	74.4	77.90	P
38	DS-38	07/21/97	G	276/224B	32	31		31.50	82	78			80.00	P	M&T	25.4	18.2	24.9	26.5	26.2	24.24	85.2	89.6	92.2	80.2	95.0	88.44	P	30.2	34.8	33.9	35.3	37.7	34.38	76.9	81.8	72.7	79.9	83.8	79.02	P
39	DS-39	07/21/97	G	268/280	34	31		32.50	991	84			N/A		M&T	21.2	17.2	19.3	21.7	23.9	20.66	82.4	89.4	88.5	82.9	77.9	84.22	P	37.4	33.0	37.1	37.9	34.1	35.90	80.1	73.1	84.1	79.6	87.1	80.80	P
40	DS-40	07/23/97	H-007	276/279	45	41		43.00	79	79			79.00	P	M&T	18.3	19.1	20.7	20.4	23.7	20.44	87.6	87.3	88.4	87.5	83.7	86.90	P	41.5	39.0	36.6	38.8	40.7	39.32	78.5	79.4	84.5	78.8	83.2	80.88	P
41	DS-41	07/23/97	H-007	278/279	48	39		43.50	87	87			87.00	P	M&T	21.4	22.7	20.7	25.5	22.8	22.62	80.4	79.6	80.5	79.2	79.4	79.82	P	37.2	31.9	42.8	35.4	37.3	37.52	72.7	67.4	73.3	71.6	67.3	70.46	F
42	DS-42	07/29/97	G	278/273	30	31		30.50	81	80			80.50	P	M&T	21.7	18.7	17.9	16.0	18.2	18.50	89.5	82.4	79.3	84.6	86.9	84.54	P	20.9	20.5	23.0	28.7	22.4	23.10	86.2	85.8	81.7	78.8	82.9	83.28	P
43	DS-43	07/29/97	G	223A/274	30	46		38.00	83	80			81.50	P	M&T	20.4	20.8	19.2	20.4	19.8	20.12	75.3	75.8	75.6	77.3	77.5	76.30	P	30.5	23.0	23.7	24.5	26.0	25.54	79.2	86.9	74.4	80.0	81.9	80.48	P
44	DS-44	07/29/97	G	274/268A	27	32		29.50	81	88			84.50	P	M&T	25.8	24.6	25.4	23.6	25.1	24.90	77.6	79.4	79.4	77.3	77.9	78.32	P	32.6	31.2	32.3	34.4	35.6	33.22	86.2	84.2	78.6	75.6	86.7	82.26	P
45	DS-45	07/29/97	G	273/277	32	33		32.50	92	88			90.00	P	M&T	17.8	18.2	16.4	19.1	20.9	18.48	90.7	85.6	84.1	78.5	79.5	83.68	P	28.9	28.7	29.4	29.2	29.3	29.10	75.9	80.8	85.6	84.5	82.3	81.82	P
46	DS-46	07/30/97	G	263A/263	25	29		27.00	85	77			81.00	P	M&T	19.7	22.4	18.7	22.6	17.2	20.12	93.0	86.2	88.8	83.8	92.8	88.92	P	46.0	40.2	37.4	37.8	33.8	39.04	84.1	75.5	75.5	84.9	83.7	80.74	P
47	DS-47	07/30/97	G	219/225	26	24		25.00	81	80			80.50	P	M&T	18.6	20.2	16.1	23.5	18.2	19.32	82.8	80.7	85.4	80.8	81.6	82.26	P	33.6	31.7	35.6	33.3	33.2	33.48	86.2	76.1	87.0	89.0	88.1	85.28	P
48	DS-48	07/30/97	G	219/266A	34	33		33.50	89	96			92.50	P	M&T	18.0	17.1	17.5	21.6	22.4	19.32	83.9	85.9	85.6	80.5	86.4	84.46	P	37.1	36.2	43.5	45.4	42.9	41.02	90.8	94.5	102.6	103.7	93.8	97.08	P
49	DS-49	08/01/97	G	226B/262	34	38		36.00	89	88			88.50	P	M&T	16.0	16.1	18.2	16.3	15.9	16.90	86.7	86.6	83.2	83.7	90.5	86.14	P	31.6	31.6	26.7	29.5	31.9	30.26	93.6	89.4	89.6	87.1	84.6	88.86	P
50	DS-50	08/04/97	G	226A/226	23	20		21.50	80	79			79.50	P	M&T	16.6	15.7	14.8	17.9	20.2	17.04	89.6	87.2	87.5	83.2	79.4	85.38	P	24.4	20.7	22.8	17.7	17.3	20.58	85.4	87.6	68.3	75.2	84.9	80.28	P
51	DS-51	08/01/97	G	271/226	28	25		26.50	83	80			81.50	P	M&T	17.7	17.4	18.7	20.2	20.7	18.94	84.3	80.8	79.8	87.5	81.7	82.82	P	28.0	22.8	22.8	31.1	30.7	27.08	99.1	96.9	100.7	99.2	101.0	99.38	P
52	DS-52	08/01/97	G	264/227	29	27		28.00	88	89			88.50	P	M&T	19.4	22.2	21.6	20.7	22.1	21.20	90.3	87.2	91.7	87.3	87.2	88.74	P	30.6	34.1	36.4	36.2	31.9	33.84	95.1	94.0	84.1	92.8	83.1	89.82	P
53	DS-53	08/04/97	H-007	227/284	40	39		39.50	81	81			81.00	P	M&T	24.2	19.4	22.5	22.6	24.2	22.58	94.7	94.7	85.6	82.6	90.7	89.66	P	31.1	31.2	34.8	39.3	30.3	33.34	83.5	83.0	81.8	86.9	86.1	84.26	P
54	DS-54	08/04/97	H-007	282/235	48	52		50.00	89	88			88.50	P	M&T	24.0	27.1	26.3	28.2	27.3	26.58	94.3	98.1	95.7	91.4	91.5	94.20	P	41.3	46.5	46.4	38.5	43.2	43.18	96.1	94.2	93.2	92.0	89.4	92.98	P
55	DS-55	08/06/97	H-007	235/232	46	50		48.00	83	82			82.50	P	M&T	42.7	42.0	42.1	42.3	41.8	42.18	89.5	89.8	89.1	88.6	90.0	89.40	P	43.0	43.1	46.7	45.4	42.7	44.18	83.4	81.8	79.2	82.6	80.7	81.54	P
56	DS-56	08/06/97	H-007	232/228	43	32		37.50	88	87			87.50	P	M&T	34.4	34.1	34.3	34.1	34.0	34.18	91.3	92.1	90.9	90.1	89.6	90.80	P	34.6	34.8	32.1	35.0	25.3	32.36	87.6	93.5	87.0	92.8	91.0	90.38	P
57	DS-57	08/06/97	H-007	228/298	42	48		45.00	89	95			92.00	P	M&T	41.5	41.1	42.0	41.3	41.0	41.38	87.5	89.4	87.4	88.9	83.8	87.40	P	45.1	44.9	30.0	44.3	31.2	39.10	77.5	78.8	80.6	84.9	78.6	79.48	P
58	DS-58	08/06/97	H-007	298/156A	41	45		43.00	84	80			82.00	P	M&T	42.6	41.8	42.1	42.0	41.7	42.04	85.6	84.2	80.1	79.9	80.0	81.96	P	31.7	29.2	24.6	30.1	31.4	29.40	70.4	78.4	73.5	79.6	76.1	75.60	F
59	DS-59	08/07/97	H-007	293/294	44	40		42.00	74	84			79.00	P	M&T	35.0	35.1	34.9	35.3	34.8	35.02	85.5	83.8	84.9	83.7	85.1	84.60	P	41.8	42.4	26.0	40.6	36.4	37.44	70.2	75.3	73.5	71.0	75.2	73.04	F
60	DS-60	08/07/97	G	293/228A	23	17		20.00	86	87			86.50	P	M&T	29.3	24.0	27.5	22.0	25.1	25.58	84.3	80.2	84.3	85.9	83.6	83.66	P	30.2	40.0	42.6	41.4	32.2	37.28	84.0	87.5	78.8	96.1	89.6	87.20	P
61	DS-61	08/07/97	G	291/294A	29	27		28.00	85	78			81.50	P	M&T	19.5	18.6	18.2	19.1	18.5	18.78	86.3	84.3	81.3	84.8	85.2	84.38	P	49.8	41.7	39.3	36.9	36.0	40.74	87.7	88.6	84.5	83.2	82.5	85.30	P
62	DS-62	08/08/97	H-007	291A/231	34	36		35.00	87	83			85.00	P	M&T	20.7	33.6	24.5	30.1	31.2	28.02	90.4	91.2	85.1	85.9	84.7	87.46	P	13.5	13.5	12.5	12.7	10.1	12.46	84.4	75.5	72.2	76.3	76.4	76.96	P
63	DS-63	08/08/97	H-007	289/244	47	43		45.00	86	86			86.00	P	M&T	36.2	37.1	31.8	39.4	33.6	35.62	80.3	86.2	82.4	82.7	84.4	83.20	P	47.6	42.3	42.3	43.5	43.4	43.82	87.8	83.1	81.6	83.9	85.0	84.28	P
64	DS-64	08/12/97	G	178B/296	32	32		32.00	92	89			90.50	P	M&T	36.9	32.1	34.2	30.7	30.4	32.86	79.2	83.8	85.1	81.5	86.2	83.16	P	34.3	30.7	34.2	32.9	29.2	32.06	95.2	87.6	87.9	94.9	98.3	92.78	P
65	DS-65	08/11/97	G	296/236	37	38		37.50	82	83			82.50	P	M&T	39.8	36.7	37.2	36.4	35.5	37.12	86.3	86.1	82.5	84.7	86.0	85.12	P	31.7	33.2	35.6	38.8	37.6	38.14	75.3	81.6	81.6	85.0	78.2	80.34	P
66	DS-66	08/11/97	G	403/404	46	46		46.00	83	86			84.50	P	M&T	27.1	28.5	29.4	27.0	29.5	28.30	92.0	87.9	89.1	91.1	90.3	90.08	P	37.9	39.6	38.8	37.6	36.8	36.14	75.3	81.6	81.6	85.0	78.2	80.34	P
67	DS-67	08/12/97	G	404/295	29	31		30.00	83	89			86.00	P	M&T	22.8	26.1	24.2	24.7	25.5	24.66	89.5	86.3	87.4	91.0	90.1	88.86	P	31.8	34.2	33.0	37.4	40.0	35.28	90.9	89.0	83.3	93.3	89.1	89.12	P
68	DS-68	08/12/97	G	295/405	34	32		33.00	81	88			84.50	P	M&T	27.3	26.4	32.6	32.9	26.7	29.18	83.4	88.4	85.8	82.9	83.3	84.76	P	33.1	34.2	35.7	33.2	32.5	33.74	87.6	75.4	82.3	69.8	80.6	79.14	P
69	DS-69	08/15/97	G	401/402	38	35		36.50	89	82			85.50	P	M&T	20.8	22.9	23.2	21.7	20.5	21.82	81.7	81.4	84.8	82.9	81.3	82.42	P	39.5	38.8	44.4	38.0	38.4	39.82	83.4	78.3	75.6	81.5	78.3	79.42	P
70	DS-70	08/15/97	G	402/407	30	33		31.50	79	74			76.50	P	M&T	30.0	23.0	26.9	24.5	23.1	25.50	80.8	78.8	87.7	84.5	83.6	83.08	P	37.7	33.0	32.5	32.									

HISTORICAL FIELD DESTRUCT INFORMATION															HISTORICAL LABORATORY INFORMATION																										
ARCHIVE INFORMATION					FIELD TRIAL SEAM										M&T - NAMOW/TCL JV - EMCON										NTH CONSULTANTS																
Destruct Number	Date Sampled	Weld Type G-Glue H-Heat	Field Location	P1	P2	P3	P4	Avg Peel (ppf)	S1	S2	S3	S4	Avg. Shear (ppf)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F M&T	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F NTH
37	DS-37 ✓ 07/21/97	G	224A/224B	37	29			33.00	75	74			74.50	P	M&T	24.3	20.1	18.9	24.5	24.6	22.48	95.1	81.2	80.0	85.5	84.2	85.20	P	35.6	26.6	32.9	34.2	33.5	32.56	80.8	74.4	83.6	76.3	74.4	77.90	P
38	DS-38 ✓ 07/21/97	G	276/224B	32	31			31.50	82	78			80.00	P	M&T	25.4	18.2	24.9	26.5	26.2	24.24	85.2	89.6	92.2	80.2	95.0	88.44	P	30.2	34.8	33.9	35.3	37.7	34.38	76.9	81.8	72.7	79.9	83.8	79.02	P
39	DS-39 ✓ 07/21/97	G	268/280	34	31			32.50	991	84			N/A		M&T	21.2	17.2	19.3	21.7	23.9	20.66	82.4	89.4	88.5	82.9	77.9	84.22	P	37.4	33.0	37.1	37.9	34.1	35.90	80.1	73.1	84.1	79.6	87.1	80.80	P
40	DS-40 ✓ 07/23/97	H-007	276/279	45	41			43.00	79	79			79.00	P	M&T	18.3	19.1	20.7	20.4	23.7	20.44	87.6	87.3	88.4	87.5	83.7	86.90	P	41.5	39.0	36.6	38.8	40.7	39.32	78.5	79.4	84.5	78.8	83.2	80.88	P
41	DS-41 ✓ 07/23/97	H-007	278/279	48	39			43.50	87	87			87.00	P	M&T	21.4	22.7	20.7	25.5	22.8	22.62	80.4	79.6	80.5	79.2	79.4	79.82	P	37.2	34.9	42.8	35.4	37.3	37.52	72.7	67.4	73.3	71.6	67.3	70.46	F
42	DS-42 ✓ 07/29/97	G	278/273	30	31			30.50	81	80			80.50	P	M&T	21.7	18.7	17.9	16.0	18.2	18.50	89.5	82.4	79.3	84.6	86.9	84.54	P	20.9	20.5	23.0	28.7	22.4	23.10	86.2	86.8	81.7	78.8	82.9	83.28	P
43	DS-43 ✓ 07/29/97	G	223A/274	30	46			38.00	83	80			81.50	P	M&T	20.4	20.8	19.2	20.4	19.8	20.12	75.3	75.8	75.6	77.3	77.5	76.30	P	30.5	23.0	23.7	24.5	26.0	25.54	79.2	86.9	74.4	80.0	81.9	80.48	P
44	DS-44 ✓ 07/29/97	G	274/268A	27	32			29.50	81	88			84.50	P	M&T	25.8	24.6	25.4	23.6	25.1	24.90	77.6	79.4	79.4	77.3	77.9	78.32	P	32.6	31.2	32.3	34.4	35.6	33.22	86.2	84.2	78.6	75.6	86.7	82.26	P
45	DS-45 ✓ 07/29/97	G	273/277	32	33			32.50	92	88			90.00	P	M&T	17.8	18.2	16.4	19.1	20.9	48.48	90.7	85.6	84.1	78.5	79.5	83.68	P	28.9	28.7	29.4	29.2	29.3	29.10	75.9	80.8	85.6	84.5	82.3	81.82	P
46	DS-46 ✓ 07/30/97	G	263A/263	25	29			27.00	85	77			81.00	P	M&T	19.7	22.4	18.7	22.6	17.2	20.12	93.0	86.2	88.8	83.8	92.8	88.92	P	46.0	40.2	37.4	37.8	33.8	39.04	84.1	75.5	75.5	84.9	83.7	80.74	P
47	DS-47 ✓ 07/30/97	G	219/225	26	24			25.00	81	80			80.50	P	M&T	18.6	20.2	16.1	23.5	18.2	49.32	82.8	80.7	85.4	80.8	81.6	82.26	P	33.6	31.7	35.6	33.3	33.2	33.48	86.2	76.1	87.0	89.0	88.1	85.28	P
48	DS-48 ✓ 07/30/97	G	219/266A	34	33			33.50	89	96			92.50	P	M&T	18.0	17.1	17.5	21.6	22.4	18.32	83.9	85.9	85.6	80.5	86.4	84.46	P	37.1	36.2	43.5	45.4	42.9	41.02	90.8	94.5	102.6	103.7	93.8	97.08	P
49	DS-49 ✓ 08/01/97	G	226B/262	34	38			36.00	89	88			88.50	P	M&T	18.0	16.1	18.2	16.3	15.9	16.90	86.7	86.6	83.2	83.7	90.5	86.14	P	31.6	31.6	26.7	29.5	31.9	30.26	93.6	89.4	89.6	87.1	84.6	88.86	P
50	DS-50 ✓ 08/04/97	G	226A/226	23	20			21.50	80	79			79.50	P	M&T	16.6	15.7	14.8	17.9	20.2	17.04	89.6	87.2	87.5	83.2	79.4	85.38	P	24.4	20.7	22.8	17.7	17.3	20.58	85.4	87.6	68.3	75.2	84.9	80.28	P
51	DS-51 ✓ 08/01/97	G	271/226	28	25			26.50	83	80			81.50	P	M&T	17.7	17.4	18.7	20.2	20.7	18.94	84.3	80.8	79.8	87.5	81.7	82.82	P	28.0	22.8	22.8	31.1	30.7	27.08	99.1	96.9	100.7	99.2	101.0	99.38	P
52	DS-52 ✓ 08/01/97	G	264/227	29	27			28.00	88	89			88.50	P	M&T	19.4	22.2	21.6	20.7	22.1	22.58	94.7	94.7	85.6	82.6	90.7	89.66	P	30.6	34.1	36.4	36.2	31.9	33.84	95.1	94.0	84.1	92.8	83.1	89.82	P
53	DS-53 ✓ 08/04/97	H-007	227/284	40	39			39.50	81	81			81.00	P	M&T	24.2	19.4	22.5	22.6	24.2	22.58	94.7	94.7	85.6	82.6	90.7	89.66	P	31.1	31.2	34.8	39.3	30.3	33.34	83.5	83.0	81.8	86.9	86.1	84.26	P
54	DS-54 ✓ 08/04/97	H-007	282/235	48	52			50.00	89	88			88.50	P	M&T	24.0	27.1	26.3	28.2	27.3	26.58	94.3	98.1	95.7	91.4	91.5	94.20	P	41.3	46.5	46.4	38.5	43.2	43.18	96.1	94.2	93.2	92.0	89.4	92.98	P
55	DS-55 ✓ 08/06/97	H-007	235/232	46	50			48.00	83	82			82.50	P	M&T	42.7	42.0	42.1	42.3	41.8	21.18	89.5	89.8	89.1	88.6	90.0	89.40	P	43.0	43.1	46.7	45.4	42.7	44.18	83.4	81.8	79.2	82.6	80.7	81.54	P
56	DS-56 ✓ 08/06/97	H-007	232/228	43	32			37.50	88	87			87.50	P	M&T	34.4	34.1	34.3	34.1	34.0	34.18	87.5	89.4	87.4	88.9	83.8	87.40	P	34.6												

HISTORICAL FIELD DESTRUCT INFORMATION										HISTORICAL LABORATORY INFORMATION																															
ARCHIVE INFORMATION				FIELD TRIAL SEAM								M&T - NAMOW/TCL JV - EMCON										NTH CONSULTANTS																			
Destruct Number	Date Sampled	Weld Type	Field Location	P1	P2	P3	P4	Avg. Peel (ppf)	S1	S2	S3	S4	Avg. Shear (ppf)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F NTH													
89	DS-89	09/26/97	G	172A/189A	38	40		39.00	88	90			89.00	P	M&T	35.6	39.7	36.8	37.9	39.6	37.92	83.2	95.4	90.8	92.2	91.6	90.64	P	36.4	41.9	33.3	47.9	45.2	40.94	88.5	88.2	85.2	85.5	82.5	85.98	P
90	DS-90	09/26/97	G	190/190A	40	42		41.00	86	79			82.50	P	M&T	34.6	37.9	33.0	39.4	35.2	36.02	92.3	94.8	96.6	92.2	87.6	92.70	P	37.8	37.2	34.1	32.9	34.9	35.38	86.4	82.3	84.8	88.7	89.8	86.40	P
91	DS-91	09/26/97	G	176/190	38	37		37.50	77	86			81.50	P	M&T	21.9	20.2	20.3	19.0	22.6	20.80	94.2	93.0	96.6	90.7	92.6	93.42	P	35.8	36.1	39.3	36.9	32.7	36.16	90.9	94.7	95.8	91.7	90.8	92.78	P
92	DS-92	09/26/97	G	175/175A	34	37		35.50	76	75			75.50	P	M&T	31.4	33.9	28.8	31.7	29.1	30.98	98.0	95.2	99.2	94.7	92.4	95.90	P	36.6	39.7	36.9	38.8	32.8	36.96	85.5	85.9	90.3	85.1	89.6	87.28	P
93	DS-93	10/06/97	G	192/178B	47	46		46.50	92	87			89.50	P	M&T	16.9	14.2	17.6	15.5	16.7	16.18	93.4	96.5	98.6	97.7	93.5	95.94	P	34.8	33.9	33.4	34.1	36.2	34.48	90.6	74.8	81.3	79.5	85.7	82.38	P
94	DS-94	10/06/97	G	199/156A	41	37		39.00	94	96			95.00	P	M&T	15.4	21.5	21.7	20.7	19.3	19.72	94.6	97.1	91.1	98.2	98.7	95.94	P	35.0	34.6	36.8	41.7	46.3	38.92	96.1	90.4	94.4	92.7	93.7	93.46	P
95	DS-95	10/09/97	G	192C/146	41	46		43.50	92	85			88.50	P	M&T	28.9	26.0	23.2	25.5	22.7	25.26	96.0	97.3	94.7	97.4	98.2	96.72	P	36.7	32.6	31.7	35.5	36.9	34.68	89.4	89.3	91.3	82.0	79.2	86.24	P
96	DS-96	10/06/97	G	177/146	43	41		42.00	84	85			84.50	P	M&T	20.9	24.9	26.0	23.4	25.6	24.16	99.5	96.7	98.7	95.5	93.6	96.80	P	32.1	32.2	32.8	32.2	33.3	32.52	85.7	86.6	80.8	83.1	86.0	84.44	P
97	DS-97	10/06/97	G	199/141	-	-	-	N/A	76	68	70	74	72.00	F	M&T	25.8	38.2	41.1	36.5	41.8	36.68	96.6	93.6	92.8	90.3	93.3	93.32	P	34.7	34.6	37.4	35.9	35.6	35.64	78.4	74.5	71.4	87.6	75.6	77.50	P
98	DS-98	10/07/97	G	198/163	45	40		42.50	83	80			81.50	P	M&T	18.8	22.0	22.0	24.7	23.1	22.12	92.7	94.3	92.0	92.7	94.6	93.26	P	40.6	32.2	39.2	38.2	39.1	37.86	79.4	80.3	87.1	80.0	86.4	82.64	P
99	DS-99	10/07/97	G	159/164	44	44		44.00	84	81			82.50	P	M&T	33.5	27.0	23.3	25.7	26.6	27.22	98.4	99.5	93.4	97.1	98.7	97.42	P	45.9	38.3	39.2	39.2	34.4	39.40	90.3	72.6	78.7	83.8	74.7	80.02	P
100	DS-100	10/08/97	G	125/160	40	45		42.50	76	87			81.50	P	M&T	26.7	31.4	22.3	26.2	25.9	26.50	95.4	99.1	95.1	94.3	92.9	95.36	P	37.9	37.6	41.7	40.9	43.8	40.38	78.6	87.0	87.7	96.6	75.6	85.10	P
101	DS-101	10/07/97	G	164A/183C	38	36		37.00	92	86			89.00	P	M&T	16.2	21.8	19.9	24.7	22.2	20.96	98.5	98.6	99.5	97.1	98.2	98.38	P	19.5	27.5	26.7	23.4	20.5	23.52	89.0	90.3	89.7	87.0	86.4	88.48	P
102	DS-102	10/13/97	G	154A/197	44	40		42.00	85	89			87.00	P	M&T	26.7	23.9	34.2	27.4	28.2	28.08	95.5	96.7	97.6	93.7	99.5	96.60	P	26.4	29.8	24.3	28.4	21.8	26.14	86.3	79.6	82.3	76.5	88.8	82.70	P
103	DS-103	10/13/97	G	162A/162B	35	35		35.00	81	78			79.50	P	M&T	33.6	24.2	30.3	26.3	25.1	27.90	99.2	96.2	99.0	94.7	96.2	97.06	P	27.4	26.0	25.1	26.5	29.9	26.98	75.2	80.4	71.0	89.2	74.5	78.06	P
104	DS-104	10/13/97	G	197/112	25	27		26.00	91	87			89.00	P	M&T	18.5	17.5	21.3	20.1	16.9	18.86	95.5	97.4	96.2	95.9	98.2	96.64	P	28.4	24.7	27.5	27.2	21.1	25.78	74.5	71.7	78.0	82.8	78.8	77.16	P
105	DS-105	10/14/97	H-008	131/171	49	52		50.50	77	79			78.00	P	M&T	28.3	35.4	36.2	28.3	23.7	31.58	96.6	96.5	96.9	97.7	95.1	96.96	P	33.2	40.1	32.8	42.0	40.0	37.62	74.3	73.9	74.3	78.6	72.6	74.74	F
106	DS-106	10/14/97	H-008	145/145A	44	47		45.50	79	84			81.50	P	M&T	36.2	27.7	28.1	25.5	26.1	28.72	98.2	99.2	94.4	94.7	92.0	95.70	P	44.8	27.3	26.3	41.5	24.9	32.96	76.1	76.8	73.0	72.4	73.8	74.42	F
107	DS-107	10/14/97	G	171/173A	39	47		43.00	91	90			90.50	P	M&T	24.2	32.2	26.9	29.1	28.4	28.16	99.7	91.0	95.1	96.2	89.9	94.38	P	31.1	29.5	27.2	27.7	29.3	28.96	94.0	79.0	74.5	81.0	86.0	82.90	P
108	DS-108	10/17/97	G	415/412	42	37		39.50	82	75			78.50	P	M&T	36.0	3																								

HISTORICAL FIELD DESTRUCT INFORMATION															HISTORICAL LABORATORY INFORMATION																										
ARCHIVE INFORMATION										FIELD TRIAL SEAM					M&T - NAMOW/TCJ JV - EMCON										NTH CONSULTANTS																
Destruct Number	Date Sampled	Weld Type	Field Location	P1	P2	P3	P4	Avg Peel (PPi)	S1	S2	S3	S4	Avg Shear (PPi)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg Peel (PPi)	S1	S2	S3	S4	S5	Avg Shear (PPi)	P/E M&T J&L	P1	P2	P3	P4	P5	Avg Peel (PPi)	S1	S2	S3	S4	S5	Avg Shear (PPi)	P/E NTH
89	DS-89 ✓	✓09/26/97	G	172A/189A	38	40		39.00	88	90			89.00	P	M&T	35.6	39.7	36.8	37.9	39.6	✓37.92	83.2	95.4	90.8	92.2	91.6	90.64	P	36.4	41.9	33.3	47.9	45.2	40.94	88.5	88.2	85.2	85.5	82.5	85.98	P ✓
90	DS-90 ✓	✓09/26/97	G	190/190A	40	42		41.00	86	79			82.50	P	M&T	34.6	37.9	33.0	39.4	35.2	✓36.02	92.3	94.8	96.6	92.2	87.6	92.70	P	37.8	37.2	34.1	32.9	34.9	35.38	86.4	82.3	84.8	88.7	89.8	86.40	P ✓
91	DS-91 ✓	✓09/26/97	G	176/190	38	37		37.50	77	86			81.50	P	M&T	21.9	20.2	20.3	19.0	22.6	✓20.80	94.2	93.0	96.6	90.7	92.6	93.42	P	35.8	36.1	39.3	36.9	32.7	36.16	90.9	94.7	95.8	91.7	90.8	92.78	P ✓
92	DS-92 ✓	✓09/26/97	G	175/175A	34	37		35.50	76	75			75.50	P	M&T	31.4	33.9	28.8	31.7	29.1	✓30.98	98.0	95.2	99.2	94.7	92.4	95.90	P	36.6	39.7	36.9	38.8	32.8	36.96	85.5	85.9	90.3	85.1	89.6	87.28	P ✓
93	DS-93 ✓	✓10/06/97	G	192/178B	47	46		46.50	92	87			89.50	P	M&T	16.9	14.2	17.6	15.5	16.7	✓16.18	93.4	96.5	98.6	97.7	93.5	95.94	P	34.8	33.9	33.4	34.1	36.2	34.48	90.6	74.8	81.3	79.5	85.7	82.38	P ✓
94	DS-94 ✓	✓10/06/97	G	199/156A	41	37		39.00	94	96			95.00	P	M&T	15.4	21.5	21.7	20.7	19.3	✓19.72	94.6	97.1	91.1	98.2	98.7	95.94	P	35.0	34.8	36.8	41.7	46.3	38.92	96.1	90.4	94.4	92.7	93.7	93.46	P ✓
95	DS-95 ✓	✓10/09/97	G	192C/146	41	46		43.50	92	85			88.50	P	M&T	28.9	26.0	23.2	25.5	22.7	✓25.26	96.0	97.3	94.7	97.4	98.2	96.72	P	36.7	32.6	31.7	35.5	36.9	34.68	89.4	89.3	91.3	82.0	79.2	86.24	P ✓
96	DS-96 ✓	✓10/06/97	G	177/146	43	41		42.00	84	85			84.50	P	M&T	20.9	24.9	26.0	23.4	25.6	✓24.16	99.5	96.7	98.7	95.5	93.6	96.80	P	32.1	32.2	32.8	32.2	33.3	32.52	85.7	86.6	80.8	83.1	86.0	84.44	P ✓
97	DS-97 ✓	✓10/06/97	G	199/141	-	-	-	N/A	76	68	70	74	72.00	F	M&T	28.8	38.2	41.1	36.5	41.8	✓36.68	96.6	93.6	92.8	90.3	93.3	93.32	P	34.7	34.6	37.4	35.9	35.6	35.64	78.4	74.5	✓71.4	87.6	75.6	77.50	P ✓
98	DS-98 ✓	✓10/07/97	G	198/163	45	40		42.50	83	80			81.50	P	M&T	18.8	22.0	22.0	24.7	23.1	✓22.12	92.7	94.3	92.0	92.7	94.6	93.26	P	40.6	32.2	39.2	38.2	39.1	37.86	79.4	80.3	87.1	80.0	86.4	82.64	P ✓
99	DS-99 ✓	✓10/07/97	G	159/164	44	44		44.00	84	81			82.50	P	M&T	33.5	27.0	23.3	25.7	26.6	✓27.22	98.4	99.5	93.4	97.1	98.7	97.42	P	45.9	38.3	39.2	39.2	34.4	39.40	90.3	✓72.6	78.7	83.8	74.7	80.02	P ✓
100	DS-100 ✓	✓10/08/97	G	125/160	40	45		42.50	76	87			81.50	P	M&T	26.7	31.4	22.3	26.2	25.9	✓26.50	95.4	99.1	96.1	94.3	92.9	95.36	P	37.9	37.6	41.7	40.9	43.8	40.38	78.6	87.0	87.7	96.6	75.6	85.10	P ✓
101	DS-101 ✓	✓10/07/97	G	164A/183C	38	36		37.00	92	86			89.00	P	M&T	16.2	21.8	19.9	24.7	22.2	✓20.96	98.5	98.6	99.5	97.1	98.2	98.38	P	19.5	27.5	26.7	23.4	20.5	23.52	89.0	90.3	89.7	87.0	86.4	88.48	P ✓
102	DS-102 ✓	✓10/13/97	G	154A/197	44	40		42.00	85	89			87.00	P	M&T	26.7	23.9	34.2	27.4	28.2	✓28.08	95.5	96.7	97.6	93.7	99.5	96.60	P	26.4	29.8	24.3	28.4	21.8	26.14	86.3	79.6	82.3	76.5	88.8	82.70	P ✓
103	DS-103 ✓	✓10/13/97	G	162A/162B	35	35		35.00	81	78			79.50	P	M&T	33.6	24.2	30.3	26.3	25.1	✓27.90	99.2	96.2	99.0	94.7	96.2	97.06	P	27.4	26.0	25.1	26.5	29.9	26.98	75.2	80.4	✓71.0	89.2	74.5	78.06	P ✓
104	DS-104 ✓	✓10/13/97	G	197/112	25	27		26.00	91	87			89.00	P	M&T	18.5	17.5	21.3	20.1	16.9	✓18.86	95.5	97.4	96.2	95.9	98.2	96.64	P	28.4	24.7	27.5	27.2	21.1	25.78	74.5	✓71.7	78.0	82.8	78.8	77.16	P ✓
105	DS-105 ✓	✓10/14/97	H-008	181/171	49	52		50.50	77	79			78.00	P	M&T	28.3	35.4	36.2	28.3	29.7	✓31.58	96.6	98.5	96.9	97.7	95.1	96.96	P	33.2	40.1	32.8	42.0	40.0	37.62	74.3	✓73.9	74.3	78.6	✓72.6	74.74	F
106	DS-106 ✓	✓10/14/97	H-008	145/145A	44	47		45.50	79	84			81.50	P	M&T	36.2	27.7	28.1	25.5	26.1	✓28.72	98.2	99.2	94.4	94.7	92.0	95.70	P	44.8	27.3	26.3	41.5	24.9	32.96	76.1	✓76.8	✓73.0	✓72.4	✓73.8	74.42	F
107	DS-107 ✓	✓10/14/97	G	171/173A	39	47		43.00	91	90			90.50	P	M&T	24.2	32.2	26.9	29.1	28.4	✓28.16	99.7	91.0	95.1	96.2	89.9	94.38	P	31.1	29.5	27.2	27.7	29.3	28.96	94.0	79.0	74.5	81.0	86.0	82.90	P ✓
108	DS-108 ✓	✓10/17/97	G	415/412	42	37		39.50	82	75			78.50	P	M&T	36.0	30.4	33.3	31.7	33.0	✓32.88	95.5	92.7	91.0	94.7	92.9	93.36	P	30.9	38.5	41.4	29.7	29.0	33.90	79.3	81.4	80.4	82.4	✓72.2	79.14	P ✓
109	DS-109 ✓	✓10/20/97	G	286/286B	43	50		46.50	98	96			97.00	P	M&T	37.4	36.4	33.8	32.1	36.6	✓35.26	92.9	90.1	95.2	93.7	93.1	93.00	P	44.2	56.8	52.8	55.6	48.4	51.56	85.8	90.9	99.5	100.7	80.4	91.46	P ✓
110	DS-110 ✓	✓10/20/97	G	145/286	37	41		39.00	97	86			91.50	P	M&T	27.9	25.2	30.0	29.1	31.7	✓28.78	92.4	85.6	93.1	95.2	90.7	91.40	P	37.0	31.2	32.9	39.6	35.7	34.48	94.2	91.8	92.4	76.1	96.4	90.18	P ✓
111	DS-111 ✓	✓10/22/97	G	285/286A	38	39		38.50	89	84			86.50	P	M&T	26.8	23.0	26.0	25.2	27.0	✓25.60	93.0	97.8	97.1	92.3	95.5	95.14	P	27.4	24.0	21.5	20.6	20.0	22.70	84.5	77.2	70.1	74.6	✓73.3	75.94	F
112	DS-112 ✓	✓10/22/97	G	248/265A	50	53		51.50	95	109			102.00	P	M&T	22.5	23.4	26.4	24.9	28.2	✓25.08	96.2	99.6	91.0	93.0	95.1	94.98	P	33.9	30.6	26.3	32.2	28.7	30.34	81.8	84.8	88.8	76.0	87.1	83.70	P ✓
113	DS-113 ✓	✓10/23/97	H-008	241/248A	57	57		57.00	88	81			84.50	P	M&T	37.8	49.2	52.1	48.8	45.3	✓44.64	97.3	95.3	94.9	98.4	95.1	96.20	P	50.1	56.0	51.2	47.0	48.1	50.48	86.6	78.6	88.0	86.4	82.5	84.42	P ✓
114	DS-114 ✓	✓10/17/97	H-008	168A/117	42	39		40.50	73	75	73		73.67	F	M&T	44.9	50.6	48.9	49.0	40.5	✓46.78	94.3	96.2	90.8	88.8	86.9	91.40	P	40.3	29.4	40.8	41.7	35.5	37.54	71.9	74.1	70.3	73.6	73.5	72.68	F
115	DS-115 ✓	✓04/28/98	H-008	169/170	25	29		27.00	85	81			83.00	P	M&T	30.1	31.9	18.6	6.4	4.8	✓18.36	84.7	✓73.5	95.3	83.2	88.0	84.94	F	59.8	51.4	54.2	55.3	55.8	55.30	90.6	83.6	88.7	87.3	94.3	89.10	P ✓
116	DS-116 ✓	✓10/23/97	H-008	246A/246	57	55		56.00	83	97			90.00	P	M&T	51.6	55.5	61.3	50.5	58.6	✓55.50	98.5	97.2	96.3	98.7	97.8	97.50	P	49.3	50.8	49.3	55.0	46.2	50.12	86.3	84.0	87.7	78.4	81.3	83.54	P ✓
117	DS-117 ✓	✓10/30/97	H-008	290/243	53	52		52.50	85	87			86.00	P	M&T	58.5	51.8	61.9	50.0	53.3	✓55.10	97.8	94.5	99.7	98.0	97.3	97.46	P	48.3	50.8	49.3	55.0	46.2	50.12	86.3	84.0	87.7	78.4	81.3	83.54	P ✓
118	DS-118 ✓	✓10/31/97	H-Twinnly	140A/140B	44	42		43.00	78	77			77.50	P	M&T	39.1	35.1	45.7	38.2	36.9	✓39.00	92.7	93.4	95.8	92.9	89.8	92.92	P	34.8	32.8	37.0	36.0	35.4	35.20	69.9	85.8	75.0	✓73.2	69.6	74.70	F
119	DS-119 ✓	✓10/17/97	G	124F/175A	42	43		42.50	99	103			101.00	P	M&T	27.2	23.7	28.5	26.1	25.9	✓26.28	90.6	89.5	97.3	92.7	99.1	93.84	P	46.3	40.7	48.6	51.3	45.1	46.40	86.6	86.8	82.4	✓72.8	86.3	82.98	P ✓
120	DS-120 ✓	✓10/30/97	H-Twinnly	124H/241A	26	37		31.50	91	87			89.00	P	M&T	17.6	18.9	14.1	16.0	19.3	✓17.18	97.3	98.1	95.0	98.8	98.4	97.52	P	18.9	17.2	17.6	18.5	14.2	17.28	90.0	82.4	85.2	78.6	92.0	85.64	P ✓
121	DS-121 ✓	✓10/31/97	H-003	245/290A	56	62		59.00	98	102			100.00	P	M&T	35.0	38.8	39.6	37.5	37.1	✓27.60	91.1	99.1	92.3	95.5	97.1	95.02	P	53.6	50.6	54.3	54.0	53.9	53.28	91.1	90.1	89.3	91.3	89.7	90.30	P ✓
122	DS-122 ✓	✓11/07/97	H-008	166/131	46	53																																			

HISTORICAL FIELD DESTRUCT INFORMATION															HISTORICAL LABORATORY INFORMATION																										
ARCHIVE INFORMATION					FIELD TRIAL SEAM										M&T - NAMOW/TCL JV - EMCON										NTH CONSULTANTS																
Destruct Number	Date Sampled	Weld Type	Field Location	P1	P2	P3	P4	Avg. Peel (ppf)	S1	S2	S3	S4	Avg. Shear (ppf)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F M&T J&L	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F NTH
143	DS-143	04/08/98	H-008	307/307A	53	50		51.50	80	78			79.00	P	M&T	52.6	48.2	59.5	57.1	48.7	53.22	89.9	91.1	89.4	91.2	94.5	91.22	P	55.5	44.8	51.0	52.6	50.0	50.78	68.8	73.1	70.2	73.4	72.4	71.58	F
144	DS-144	04/13/98	H-008	158/157	49	49		49.00	80	74			77.00	P	M&T	47.8	42.7	36.5	40.1	41.5	41.72	89.4	86.8	94.5	83.4	90.6	88.94	P	44.8	46.8	44.3	35.4	44.7	43.20	67.2	66.6	68.1	66.9	67.9	67.34	F
145	DS-145	04/13/98	H-008	155/158A	41	45		43.00	87	85			86.00	P	M&T	39.7	47.8	47.3	45.6	31.3	42.34	91.0	83.2	95.9	99.1	88.2	91.48	P	47.9	43.6	37.7	42.2	37.3	41.74	78.2	75.8	75.2	79.5	73.0	76.34	P
146	DS-146	04/21/98	H-008	305B/157F	38	41		39.50	80	86			83.00	P	M&T	25.8	33.7	40.6	29.2	36.6	33.18	98.6	94.0	91.4	95.8	87.7	93.50	P	41.4	43.9	36.5	27.1	40.1	37.80	70.9	70.2	66.8	72.9	69.9	70.14	F
147	DS-147	04/26/98	H-008	310C/421	45	47		46.00	75	80			77.50	P	M&T	38.3	56.4	38.5	28.9	24.0	37.22	91.1	92.0	92.4	90.9	85.4	90.36	P	40.6	37.6	42.2	40.4	29.0	37.96	66.2	69.4	75.1	74.6	70.5	71.16	F
148	DS-148	04/26/98	H-008	307A/238A	36	42		39.00	87	89			88.00	P	M&T	24.7	36.6	34.6	32.6	35.7	32.84	92.5	88.9	85.3	81.5	91.3	66.90	F	-	-	-	-	-	-	-	-	-	-	-	-	
148A	DS-148X	04/26/98	H-008	"	"	"	"	"	"	"	"	"	"	"	M&T	35.9	36.1	25.6	33.0	28.6	31.84	75.7	88.6	86.1	78.8	87.2	83.28	P	29.4	31.3	26.9	32.9	23.8	28.86	82.3	77.5	75.1	79.4	80.6	78.98	P
149	DS-149	04/27/98	H-008	421/238A	27	30		28.50	87	82			84.50	P	M&T	32.0	33.0	34.5	28.0	33.1	32.12	41.2	39.4	35.8	38.1	38.4	38.58	F	-	-	-	-	-	-	-	-	-	-	-	-	
149A	DS-149X	04/27/98	H-008	421/238A	"	"	"	"	"	"	"	"	"	"	M&T	28.2	26.0	26.7	23.7	28.7	26.66	72.8	73.8	70.0	82.5	76.9	75.20	F	-	-	-	-	-	-	-	-	-	-	-	-	
150	DS-150	04/29/98	H-008	315/311	45	40		42.50	75	77			76.00	P	M&T	33.1	32.0	46.4	41.8	45.2	39.70	78.5	83.3	76.2	78.8	74.3	78.22	P	45.8	48.3	47.4	41.6	44.6	45.54	84.0	73.5	81.3	82.3	80.4	80.30	P
151	DS-151	05/18/98	H-008	312A/314	Missing Report			N/A	-	-			N/A	-	M&T	40.7	36.9	37.1	40.0	39.4	38.82	81.5	79.9	80.1	79.9	75.4	79.36	P	42.9	43.5	38.2	44.0	46.3	42.98	75.3	69.3	68.2	67.7	61.9	68.48	F
152	DS-152	05/20/98	H-008	134A/134	21	30		25.50	77	75			76.00	P	M&T	43.4	34.4	39.8	21.6	25.1	32.86	75.5	77.5	83.4	78.5	86.5	80.28	P	46.5	33.3	30.3	41.6	33.2	36.98	81.5	72.8	67.7	79.4	75.8	75.44	F
153	DS-153		H-008	313/412	39	44		41.50	68	70			69.00	F	M&T	32.3	29.3	38.1	37.2	34.1	34.20	72.8	71.1	76.1	73.6	83.8	75.48	F	-	-	-	-	-	-	-	-	-	-	-	-	
153A	DS-153R	06/05/98	G	313/415	29	29		29.00	89	96	92		92.33	P	M&T	24.3	24.6	21.4	21.5	22.8	22.92	104.3	96.2	96.2	93.9	84.4	95.00	P	10.2	15.2	19.7	22.2	26.7	18.80	92.2	92.9	85.0	89.0	93.6	90.54	P
154	DS-154	05/20/98	H-008	134A/287	27	26		26.50	77	79			78.00	P	M&T	19.9	29.3	26.2	28.9	26.3	26.12	82.8	94.0	89.5	87.7	87.3	88.26	P	28.3	27.6	27.5	24.6	25.5	26.70	84.3	80.9	85.1	85.4	79.0	82.94	P
155	DS-155	05/22/98	H-008	319/319A	50	38		44.00	81	84			82.50	P	M&T	39.1	43.1	32.2	45.8	33.4	38.72	95.5	85.8	78.2	98.4	89.5	89.48	P	52.1	51.0	51.6	52.6	52.9	52.04	87.0	86.3	80.0	77.3	71.5	80.42	P
156	DS-156	05/22/98	H-008	316/319	49	44		46.50	75	75			75.00	P	M&T	46.4	45.1	46.4	35.1	41.7	42.94	80.5	77.7	80.0	80.1	87.7	81.20	P	35.3	55.1	44.5	46.1	47.4	45.68	73.2	67.1	72.2	75.1	67.2	70.96	F
157	DS-157	05/22/98	H-008	313/316	49	41		45.00	78	74			76.00	P	M&T	37.4	41.8	36.9	31.4	36.4	36.78	80.9	80.8	88.4	76.9	81.0	81.60	P	48.4	36.5	42.4	45.6	39.7	42.52	75.5	72.7	79.4	75.4	74.4	75.48	P
158	DS-158	05/28/98	G	311/134B	20	28		24.00	81	76			78.50	P	M&T	19.1	21.9	20.5	21.0	21.1	20.72	80.6	80.7	81.5	94.6	78.0	83.08	P	33.4	31.1	37.4	34.6	35.8	34.46	85.3	92.3	89.5	84.2	83.4	86.94	P
159	DS-159	06/08/98	H-008	310/310E	32	41		36.50	78	87			82.50	P	M&T	22.6	27.4	25.1	21.0	25.3	24.28	90.5	89.6	89.5	93.6	95.7	91.78	P	49.7	42.7	37.8	41.2	33.9	41.06	97.1	86.7					

HISTORICAL FIELD DESTRUCT INFORMATION															HISTORICAL LABORATORY INFORMATION																										
ARCHIVE INFORMATION				FIELD TRIAL SEAM											M&T - NAMOW/TCL JV - EMCON											NTH CONSULTANTS															
Destruct Number	Date Sampled	Weld Type G-Glue H-Heat	Field Location	P1	P2	P3	P4	Avg. Peel (ppf)	S1	S2	S3	S4	Avg. Shear (ppf)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F M&T J&L	P1	P2	P3	P4	P5	Avg. Peel (ppf)	S1	S2	S3	S4	S5	Avg. Shear (ppf)	P/F NTH
181C	DS-181S-E9	H-008	147/147A												EMC	37.67	47.43	43.17	42.18	46.56	43.40	81.12	77.87	80.43	78.88	77.5	79.16	P	-	-	-	-	-	-	-	-	-	-	-	-	
181D	DS-181N5	H-008	430A/147A												EMC	44.37	31.4	31.68	39.68	41.87	37.80	71.27	73.27	66.82	72.2	66.15	63.94	P	-	-	-	-	-	-	-	-	-	-	-	-	
181E	DS-181N8	H-008	430/147												EMC	33.77	33.06	45.16	33.87	31.56	35.48	80.98	85.06	87.38	82.93	84.3	84.13	P	-	-	-	-	-	-	-	-	-	-	-	-	
182D	DS-181 S-E9 CAP	G	147/CAP												EMC	25.25	24.87	26.27	25.06	26.73	25.64	89.68	91.87	89.68	85.93	92.6	89.95	P	-	-	-	-	-	-	-	-	-	-	-	-	
182	DS-182	7/28/98	H-008	144/144A	30	42							83.50	P	EMC	33.76	42.52	24.16	20.5	36.36	31.46	85.06	85.87	84.5	89	85.43	85.97	P	-	-	-	-	-	-	-	-	-	-	-	-	
183	DS-183	7/28/98	H-008	144/314	17	20							82.00	P	EMC	22.88	14.97	11.58	17.83	31.91	19.83	84.18	80.93	78.87	81.87	84.56	82.08	P	-	-	-	-	-	-	-	-	-	-	-	-	
184	DS-184	7/28/98	H-008	144A/430B	46	41							77.50	P	EMC	46.03	51.71	42.95	47.72	40.65	45.81	70.93	79.37	75.62	79.12	73.18	75.64	F	-	-	-	-	-	-	-	-	-	-	-	-	
184A	DS-184R	7/28/98	H-008	144/430B									N/A		EMC	23.37	22.22	24.75	24.65	22.5	23.50	80.06	74.43	83.68	69.75	79.43	77.47	P	-	-	-	-	-	-	-	-	-	-	-	-	
184B	DS-184S3	H-008	144A/143B												EMC	44.31	44.75	40.6	42.93	46.47	43.81	78	78.62	71.62	79.37	81.81	77.88	P	-	-	-	-	-	-	-	-	-	-	-	-	
184C	DS-184N2	H-008	144A/143B												EMC	35.25	36.81	42.07	44.5	32.22	38.17	76.05	70.25	74.12	75.12	74.37	73.98	P	-	-	-	-	-	-	-	-	-	-	-	-	

Note: 1. Sheet 2 of 6 of the 40 mil PVC Smooth and Embossed As-built Drawing (prepared by Environmental Liners, Inc.) shows two locations for destruct DS-143 (along seam 167/174 and along seam 307/307A). To the best of our knowledge, there is only one destruct DS-143. Based on Weston's QA reports and Environmental Liners QC reports, destruct DS-143 is located along seam 307/307A. The destruct shown along seam 167/174 does not belong there. Seam 167/174 was completed on 10/23/97. If there was a destruct cut out at that time, the number should be between DS-108 and DS-115. This was based on Environmental Liners pattern of numbering destructs and the dates of panel placement and seaming.

2. The average test values in the table have been accurately recalculated and do not necessarily coincide with the reported laboratory values.

3. DS-164 Cap, DS-166 Cap, DS-169 Cap, and DS-181 Cap are identified in this summary table as DS-164R, DS-166R, DS-169R, and DS-181R, respectively.

HISTORICAL FIELD DESTRUCT INFORMATION										FIELD TRIAL SEAM										HISTORICAL LABORATORY INFORMATION																					
ARCHIVE INFORMATION										M&T - NAMOWTCL JV - EMCON										NTH CONSULTANTS																					
Destruct Number	Date Sampled	Weld Type G-Glue H-Heat	Field Location	P1	P2	P3	P4	Avg Peel (PPI)	S1	S2	S3	S4	Avg Shear (PPI)	P/F NTH	Lab Origin	P1	P2	P3	P4	P5	Avg Peel (PPI)	S1	S2	S3	S4	S5	Avg Shear (PPI)	P/F M&T UCL	P1	P2	P3	P4	P5	Avg Peel (PPI)	S1	S2	S3	S4	S5	Avg Shear (PPI)	P/F NTH
143	DS-143 ✓ 04/08/98	H-008	307/307A	53	50			51.50	80	78			79.00	P	M&T	52.6	48.2	59.5	57.1	48.7	63.22	89.9	91.1	89.4	91.2	94.5	91.22	P	55.5	44.8	51.0	52.6	50.0	50.78	68.8	73.1	70.2	73.4	72.4	71.58	F
144	DS-144 ✓ 04/13/98	H-008	158/157	49	49			49.00	80	74			77.00	P	M&T	47.8	42.7	36.5	40.1	41.5	41.72	89.4	86.8	94.5	83.4	90.6	88.94	P	44.8	46.8	44.3	35.4	44.7	43.20	67.2	66.6	68.1	66.9	67.9	67.34	F
145	DS-145 ✓ 04/13/98	H-008	155/158A	41	45			43.00	87	85			86.00	P	M&T	39.7	47.8	47.3	45.6	31.3	42.34	91.0	83.2	95.9	99.1	88.2	91.48	P	47.9	43.6	37.7	42.2	37.3	41.74	78.2	75.8	75.2	79.5	73.0	76.34	P
146	DS-146 ✓ 04/21/98	H-008	305B/157F	38	41			39.50	80	86			83.00	P	M&T	25.8	33.7	40.6	29.2	36.6	33.18	98.6	94.0	91.4	95.8	87.7	93.50	P	41.4	43.9	36.5	27.1	40.1	37.80	70.9	70.2	66.8	72.9	69.9	70.14	F
147	DS-147 ✓ 04/26/98	H-008	310C/421	45	47			46.00	75	80			77.50	P	M&T	38.3	56.4	38.5	28.9	24.0	37.22	91.1	92.0	92.4	90.9	85.4	90.36	P	40.6	37.6	42.2	40.4	29.0	37.96	66.2	69.4	75.1	74.6	70.5	71.16	F
148	DS-148 ✓ 04/26/98	H-008	307A/238A	36	42			39.00	87	89			88.00	P	M&T	24.7	36.6	34.6	32.6	35.7	32.84	92.5	38.9	50.3	61.5	91.3	66.90	F	-	-	-	-	-	-	-	-	-	-	-	-	
148A	DS-148X ✓ 04/26/98	H-008	"	"	"			"	"	"			"	"	M&T	35.9	36.1	25.6	33.0	28.6	31.84	75.7	88.6	86.1	78.8	87.2	83.28	P	29.4	31.3	26.9	32.9	23.8	28.86	82.3	77.5	75.1	79.4	80.6	78.98	P
149	DS-149 ✓ 04/27/98	H-008	421/238A	27	30			28.50	87	82			84.50	P	M&T	32.0	33.0	34.5	28.0	33.1	32.12	41.2	39.4	35.8	38.1	38.4	38.58	F	-	-	-	-	-	-	-	-	-	-	-	-	
149A	DS-149X ✓ 04/27/98	H-008	421/238A	"	"			"	"	"			"	"	M&T	28.2	28.0	26.7	23.7	28.7	26.66	72.8	73.8	70.0	82.5	76.9	75.20	F	-	-	-	-	-	-	-	-	-	-	-	-	
150	DS-150 ✓ 04/29/98	H-008	315/311	45	40			42.50	75	77			76.00	P	M&T	33.1	32.0	46.4	41.8	45.2	39.70	78.5	83.3	76.2	78.8	74.3	78.22	P	45.8	46.3	47.4	41.6	44.6	45.54	84.0	73.5	81.3	82.3	80.4	80.30	P
151	DS-151 ✓ 05/18/98	H-008	312A/314	Missing	Report			N/A	-	-			N/A	-	M&T	40.7	36.9	37.1	40.0	39.4	38.82	81.5	79.9	80.1	79.9	75.4	79.36	P	42.9	43.5	38.2	44.0	46.3	42.98	75.3	69.3	68.2	67.7	61.9	68.48	F
152	DS-152 ✓ 05/20/98	H-008	134A/134	21	30			25.50	77	75			76.00	P	M&T	43.4	34.4	39.8	21.6	25.1	32.86	75.5	77.5	83.4	78.5	86.5	80.28	P	46.5	33.3	30.3	41.6	33.2	36.98	81.5	72.8	67.7	79.4	75.8	75.44	F
153	DS-153 ✓ 05/20/98	H-008	313/412	39	44			41.50	68	70			69.00	F	M&T	32.3	29.3	38.1	37.2	34.1	34.20	72.8	71.1	76.1	73.6	83.8	75.48	F	-	-	-	-	-	-	-	-	-	-	-	-	
153A	DS-153R ✓ 06/05/98	G	313/415	29	29			29.00	89	96	92		92.33	P	M&T	24.3	24.6	21.4	21.5	22.8	22.92	104.3	96.2	96.2	93.9	84.4	95.00	P	10.2	15.2	19.7	22.2	26.7	18.80	92.2	92.9	85.0	89.0	93.6	90.54	P
154	DS-154 ✓ 05/20/98	H-008	134A/287	27	26			26.50	77	79			78.00	P	M&T	19.9	29.3	26.2	28.9	26.3	26.12	82.8	94.0	89.5	87.7	87.3	88.26	P	28.3	27.6	27.5	24.6	25.5	26.70	84.3	80.9	85.1	85.4	79.0	82.94	P
155	DS-155 ✓ 05/22/98	H-008	319/319A	50	38			44.00	81	84			82.50	P	M&T	39.1	43.1	32.2	45.8	33.4	38.72	95.5	85.8	78.2	98.4	89.5	89.48	P	52.1	51.0	51.6	52.6	52.9	52.04	87.0	86.3	80.0	77.3	71.5	80.42	P
156	DS-156 ✓ 05/22/98	H-008	316/319	49	44			46.50	75	75			75.00	P	M&T	46.4	45.1	46.4	35.1	41.7	42.94	80.5	77.7	80.0	80.1	87.7	81.20	P	35.3	55.1	44.5	46.1	47.4	45.68	73.2	67.1	72.2	75.1	67.2	70.96	F
157	DS-157 ✓ 05/22/98	H-008	313/316	49	41			45.00	78	74			76.00	P	M&T	37.4	41.8	36.9	31.4	36.4	36.78	80.9	80.8	88.4	76.9	81.0	81.60	P	48.4	36.5	42.4	45.6	39.7	42.52	75.5	72.7	79.4	75.4	74.4	75.48	P
158	DS-158 ✓ 05/28/98	G	311/134B	20	28			24.00	81	76			78.50	P	M&T	19.1	21.9	20.5	21.0	21.1	20.72	80.6	80.7	81.5	94.6	78.0	83.08	P	33.4	31.1	37.4	34.6	35.8	34.46	85.3	92.3	89.5	84.2	83.4	86.94	P
159	DS-159 ✓ 06/08/98	H-008	310/310E	32	41			36.50	78	87			82.50	P	M&T	22.6	27.4	25.1	21.0	25.3	24.28	90.5	89.6	88.5	93.6	95.7	91.78	P	49.7	42.7	37.8	41.2	33.9	41.06	97.1	86.7	87.5	92.5	92.0	91.16	P
160	DS-160 ✓ 06/08/98	H-008	318/318A	46	44			45.00	82	80			81.00	P	M&T	48.6	35.2	29.3	34.5	51.2	39.76	93.2	90.1	87.9	89.7	896.3															

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-07
Project	CLARKSTOWN LANDFILL	Date:	06/12/97
Material	PVC	Tested By:	B.D.
WELD TYPE	FUSION	Checked By:	M.S.

SAMPLE # DS-1

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	43.38	0	SE1	F1B	
2	40.8	44.01	0	SE1	FTB	
3	40.5	48.76	0	SE1	FTB	
4	41.0	43.96	0	SE1	FTB	
5	41.0	47.76	0	SE1	FTB	
AVERAGE	40.9	45.57				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	78.5	9.61	SE1	FTB	
2	42.0	83.7	10.77	SE1	FTB	
3	42.0	83.5	9.88	SE1	FTB	
4	41.2	85.7	9.67	SE1	F1B	
5	41.0	77.7	9.76	SE1	FTB	
AVERAGE	41.4	81.82	9.94			



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Landfill Cap Site, Clarkstown
SAMPLE ID: DS-2R, BLKT 216/215 (Seam width 5")
SAMPLED BY: ORSC
PICKED UP/DELIVERED: ORCS (Federal Express)
TESTS: Thickness Peel Adhesion and Shear Strength

LAB #: FOB-001
REPORT#: MC-50
DATE SAMPLED: 6/12/97
DATE DELIVERED: 6/13/97
DATE TESTED: 6/18/97

1) THICKNESS MEASUREMENTS

Test Method: ASTM D1593

Sheet	Individual Measurements (mils)	Average (mils)
1	40, 40.5, 40.5, 40, 40	40.2
2	40, 40, 40, 39 1/2, 40 1/2	40
Job Specifications		40, +/- 5%

2) PEEL ADHESION TEST

Test Method: ASTM D413, Type A 90° peel, Sample width 1", Pulled at 2" per minute.

Test	Results (lbs/in of width)
Test 1	20.1
Test 2	19.8
Test 3	18.7
Average	19.5
Job Specification	10 min.

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab#: FOB-001 Report #: MC-50
Page 2 of 2

3) SHEAR STRENGTH TEST

Test Method: ASTM D3083, Para 9.3, 1" wide specimen, Seam width 5", Pulled along seam width.

Test	Result (lbs/in of width)	Failure
1	87.8	Broke out side seam
2	96.1	Broke out side seam
3	92.6	Broke out side seam
Average	92.2	-
Job Specification	74 min	Film tear bond (FTB)

4) **REMARKS:** The submitted seam coupons conform to the job specifications (06010 B, section 3.04).

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng.Sc.D., P.E.
Laboratory Manager
KRT/mp

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

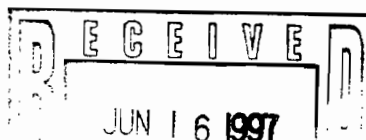
Job Number: 96S2111-08
 Date: 06/13/97
 Tested By: B.D.
 Checked By: M.S.

SAMPLE # DS-2R

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	25.75	100	AD	NON-FTB	
2	42.0	27	100	SE	FTB	
3	42.0	26.55	100	AD	NON-FTB	
4	41.0	26.5	100	AD	NON-FTB	
5	41.6	26.05	100	AD	NON-FTB	
AVERAGE	41.4	26.37				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.3	79.97	17.63	SE	FTB	
2	40.3	75.13	17.66	SE	FTB	
3	41.0	82.3	20.34	SE	FTB	
4	42.6	76.28	17.86	SE	FTB	
5	41.6	70.46	17.12	SE	FTB	
AVERAGE	41.4	76.83	18.12			

J&L TESTING COMPANY, INC.



06/13/97 OGD2R.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-07
Project	CLARKSTOWN LANDFILL	Date:	06/12/97
Material	PVC	Tested By:	B.D.
WELD TYPE	FUSION	Checked By:	M.S.

SAMPLE # DS-3

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.5	45.6	0	SE1	FTB	
2	41.5	41.2	0	SE1	FTB	
3	42.0	45.6	0	SE1	FTB	
4	41.0	45.7	5	SE1	FTB	
5	41.0	47.5	5	AD-BRK	FTB	
AVERAGE	41.40	45.12				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	78.91	12.30	SE1	FTB	
2	41.0	79.61	12.45	SE1	FTB	
3	41.8	75.52	11.72	SE1	FTB	
4	41.3	79.76	12.52	SE1	FTB	
5	41.8	78.82	12.02	SE1	FTB	
AVERAGE	41.38	78.52	12.20			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE FUSION

Job Number: 96S2111-07
 Date: 06/12/97
 Tested By: B.D.
 Checked By: M.S.

SAMPLE # DS-4

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	37.97	40	AD-BRK	FTB	
2	41.0	41.01	20	AD-BRK	FTB	
3	39.5	36.53	30	AD-BRK	FTB	
4	41.0	42.57	30	AD-BRK	FTB	
5	41.0	47.76	20	AD-BRK	FTB	
AVERAGE	40.7	41.17				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	74.98	11.75	SE1	FTB	
2	41.0	77.88	12.44	SE1	FTB	
3	41.5	76.95	12.20	SE1	FTB	
4	40.0	75.18	11.51	SE1	FTB	
5	40.3	76.63	12.44	SE1	FTB	
AVERAGE	40.8	76.32	12.07			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-10
Project	CLARKSTOWN LANDFILL	Date:	06/26/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-5R

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.7	31.8	100	AD	NON-FTB	
2	40.0	30.6	100	AD	NON-FTB	
3	40.0	31.2	100	AD	NON-FTB	
4	40.2	26.6	100	AD	NON-FTB	
5	40.2	30.7	100	AD	NON-FTB	
AVERAGE	40.2	30.18				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.3	82.1	14.78	SE	FTB	
2	40.7	83.5	15.30	SE	FTB	
3	41.0	81.5	13.65	SE	FTB	
4	40.7	79.3	12.79	SE	FTB	
5	41.8	86.8	14.92	SE	FTB	
AVERAGE	41.1	83.64	14.29			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE FUSION

Job Number: 96S2111-07
 Date: 06/12/97
 Tested By: B.D.
 Checked By: M.S.

SAMPLE # DS-6

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	39.08	30	AD-BRK	FTB	
2	41.7	40.05	60	AD-BRK	FTB	
3	41.5	41.45	50	AD-BRK	FTB	
4	41.5	40.86	30	AD-BRK	FTB	
5	40.5	37.6	35	AD-BRK	FTB	
AVERAGE	41.2	39.81				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.6	78.8	9.77	SE1	FTB	
2	41.5	79.3	9.74	SE1	FTB	
3	41.0	80.8	10.89	SE1	FTB	
4	41.5	79.7	10.37	SE1	FTB	
5	40.5	84.5	11.40	SE1	FTB	
AVERAGE	41.2	80.62	10.43			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-07
 Date: 06/12/97
 Tested By: B.D.
 Checked By: M.S.

SAMPLE # DS-7

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.5	29.96	100	AD	NON-FTB	
2	41.2	28.67	100	AD	NON-FTB	
3	40.0	27.5	100	AD	NON-FTB	
4	41.0	28.68	100	AD	NON-FTB	
5	41.0	27.62	100	AD	NON-FTB	
AVERAGE	40.7	28.49				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.5	89.38	10.30	SE	FTB	
2	41.5	84.38	9.82	SE	FTB	
3	41.5	78.95	9.26	SE	FTB	
4	41.5	75.65	9.13	SE	FTB	
5	40.5	69.36	9.70	SE	FTB	F
AVERAGE	41.3	79.54	9.64			



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLE ID: Dest #8, Dest #9
SAMPLED BY: ORSC
PICKUP/DEL BY: ORCS (Federal Express)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-51
DATE SAMPLED: 6/17/97
DATE DELIVERED: 6/18/97
DATE TESTED: 6/19/97

1) SAMPLE DESCRIPTION

1. Dest #8: BLKT 210/206, Seam J.G., Seam width 5".
2. Dest #9: BLKT 107/207, Seam J.G., Seam width 5".

2) THICKNESS MEASUREMENTS

Test Method: ASTM D1593

Sample	Sheet	Individual Measurements (mils)	Average (mils)
Dest #8	1	39.5, 40, 40, 40, 40 1/2	40
	2	40.5, 39.5, 40, 40.5, 40.5	40.2
Dest #9	1	39, 38.5, 38.5, 39, 39	38.8
	2	40.5, 39.5, 40, 40.5, 40.5	40.2
Job Specifications		40, +/- 5%	40, +/- 5%

3) PEEL ADHESION TEST

Test Method: ASTM D413, Type A, 90° peel, Sample width 1", Pulled at 2" per minute.

Test	Test Results (lbs/in of width)	
	Dest #8	Dest #9
Test 1	13.3	23.3
Test 2	15.2	14.9
Test 3	19.5	22.0
Average	16.0	20.1
Job Specification	10 min.	10 min.

M&T/NAMOW/TCL □ J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-51
Page 2 of 2

4) SHEAR STRENGTH TEST

Test Method: ASTM D3083, Para 9.3, 1" wide specimen, Seam width 5", Pulled along seam width.

Test	Results (lbs/in of width)		Failure	
	Dest #8	Dest #9	Dest #8	Dest #9
1	75.4	82.0	Broke out side seam	Broke out side seam
2	86.5	72.1	Broke out side seam	Broke out side seam
3	76.1	74.4	Broke out side seam	Broke out side seam
Average	79.3	76.2	-	-
Job Specification	74 min.	74 min	Film tear bond (FTB)	Film tear bond (FTB)

5) **REMARKS:** The submitted seam coupons conform to the job specifications (06010 B, section 3.04).

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng.Sc.D., P.E.
Laboratory Manager
KRT/mp

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-10
Project	CLARKSTOWN LANDFILL	Date:	06/26/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-10R

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	27.62	100	AD	NON-FTB	
2	40.7	23	100	AD	NON-FTB	
3	41.0	26.22	100	AD	NON-FTB	
4						
5						
AVERAGE	40.9	25.61				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	88.6	19.31	SE	FTB	
2	41.0	86.2	18.91	SE	FTB	
3	40.0	82.8	17.63	SE	FTB	
4	40.0	87.5	13.89	SE	FTB	
5	40.0	90.6	17.00	SE	FTB	
AVERAGE	40.4	87.14	17.35			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client:	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-10
Project:	CLARKSTOWN LANDFILL	Date:	06/26/97
Material:	PVC	Tested By:	B.D.
WELD TYPE:	SOLVENT	Checked By:	M.S.

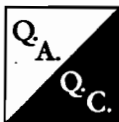
SAMPLE # DS-11R

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.8	27.3	100	AD	NON-FTB	
2	40.7	25.8	100	AD	NON-FTB	
3	40.8	25.7	100	AD	NON-FTB	
4	40.5	24.8	100	AD	NON-FTB	
5	40.7	26	100	AD	NON-FTB	
AVERAGE	40.7	25.92				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.2	92.3	17.81	SE	FTB	
2	40.0	80.7	15.57	SE	FTB	
3	40.7	76	14.16	SE	FTB	
4	40.5	71.3	13.46	SE	FTB	
5	41.0	89.1	18.73	SE	FTB	
AVERAGE	40.5	81.58	16.95			



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORCS (Federal Express)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-53
DATE DELIVERED: 6/26/97
DATE TESTED: 6/30/97

A. Thickness (mils) (Specified 40 mils. + 2/-2), ASTM D1593

Sample ID	11R	13	14
Top	40	40	41
	40	40	41
	40	40	41
	40	40	41
	40	40	41
Average	40	40	41
Bottom	40	40	41
	40	40	41
	40	40	41
	40	40	41
	40	40	41
Average	40	40	41

B. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	11R	13	14
	12	30	15
	11	30	16
	11	30	18
	11	31	14
	11	29	18
Average	11	30	16

M&T/NAMOW/TCL □ J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-50
Page 2 of 2

C. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	11R	13	14
	97	75	88
	82	74	90
	90	80	85
	88	78	81
	86	77	80
Average	89	77	85

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORCS (Federal Express)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-54
DATE DELIVERED: 6/26/97
DATE TESTED: 7/01/97

A. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	5R (Seam width 4")	12 (Seam width 1 1/2")	15 (Seam width 5")	10R (Seam width 7")	11 (Seam width 1 1/2")
Top	40	40	39.5	40	40.5
	40	40	39	39.5	40
	40 1/2	40	39	39.5	40.5
	40	39 1/2	39	39.5	40
	40	39 1/2	39	39	40.5
Average	40	40	39	39.5	40
Bottom	40	40	39	40	40.5
	39 1/2	40	40	40	41
	40	39	40	40	41
	40	39 1/2	39.5	40	41
	40	39 1/2	39.5	40	41
Average	40	40	40	40	41

B. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in), ASTM D413

Sample Id	5R	12	15	10R	11
	27.1	22.4	20.5	19.7	26.1
	24.3	22.7	18.6	14.9	20.2
	17.3	25.1	15.4	11.6	28.9
	20.7	22.8	14.2	12.7	31.5
	14.5	23.1	18.9	10.2	25.9
Average	20.8	23.2	17.6	13.8	26.5

M&T/NAMOW/TCL □ J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-54
Page 2 of 2

C. Shear Strength (lbs/in) (Specified 74 lbs/in), ASTM D3083

Sample ID	5R	12	15	10R	11
	91.6	79.9	85.9	99.2	73.5
	92.1	77.9	74.3	84.3	71.5
	85.0	78.5	74.6	76.8	73.0
	85.5	79.3	72.0	88.6	73.9
	88.5	80.4	78.9	92.1	73.8
Average	88.5	79.2	77.1	88.2	73.7

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng.Sc.D., P.E.
Laboratory Manager
KRT/mp

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-10
Project	CLARKSTOWN LANDFILL	Date:	06/26/97
Material	PVC	Tested By:	B.D.
WELD TYPE	FUSION	Checked By:	M.S.

SAMPLE # DS-12

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.5	39.52	15	AD-BRK	FTB	
2	40.7	39.6	20	AD-BRK	FTB	
3	39.7	39.7	25	AD-BRK	FTB	
4	40.0	39.27	25	AD-BRK	FTB	
5	40.5	39.35	25	AD-BRK	FTB	
AVERAGE	40.3	39.49				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.5	72.32	8.11	SE1	FTB	
2	40.3	80.37	11.26	SE1	FTB	
3	40.5	75.85	9.47	SE1	FTB	
4	40.0	73.45	9.70	SE1	FTB	
5	40.2	78.92	9.61	SE1	FTB	
AVERAGE	40.3	76.15	9.63			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-11
Project	CLARKSTOWN LANDFILL	Date:	07/01/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-12R

PEEL STRENGTH
ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mil	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	23	100	AD	NON-FTB	
2	41.0	22.5	100	AD	NON-FTB	
3	41.0	23.4	100	AD	NON-FTB	
4	40.7	23.5	100	AD	NON-FTB	
5	40.7	22.1	100	AD	NON-FTB	
AVERAGE	40.7	22.90				

SEAM SHEAR STRENGTH
ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mil	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.5	83.68	14.00	SE	FTB	
2	40.5	83.06	13.02	SE	FTB	
3	40.0	86.42	12.71	SE	FTB	
4	40.3	85.96	13.38	SE	FTB	
5	40.7	82.48	13.31	SE	FTB	
AVERAGE	40.4	84.32	13.29			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-10
Project	CLARKSTOWN LANDFILL	Date:	06/26/97
Material	PVC	Tested By:	B.D.
WELD TYPE	FUSION	Checked By:	M.S.

SAMPLE # DS-13

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	35.5	10	AD-BRK	FTB	
2	39.7	34.97	20	AD-BRK	FTB	
3	40.0	37.95	30	AD-BRK	FTB	
4	40.0	41.72	20	AD-BRK	FTB	
5						
AVERAGE	39.9	37.54				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	72.25	6.99	SEI	FTB	
2	39.8	64.17	5.84	SEI	FTB	
3	40.7	76.85	8.34	SEI	FTB	
4	40.0	74.77	7.44	SEI	FTB	
5	39.5	80.15	9.74	SEI	FTB	
AVERAGE	40.0	73.64	7.67			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	ODDEN REMEDIATION SERVICES	Job Number:	96S2111-11
Project	CLARKSTOWN LANDFILL	Date:	07/01/97
Material	PVC	Tested By:	M.J.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-13R

PEEL STRENGTH
ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	21.3	100	AD	NON-FTB	
2	40.0	21.1	100	AD	NON-FTB	
3	40.3	21	100	AD	NON-FTB	
4	40.7	20.2	100	AD	NON-FTB	
5	40.7	21.6	100	AD	NON-FTB	
AVERAGE	40.5	21.04				

SEAM SHEAR STRENGTH
ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	82.03	17.81	SE	FTB	
2	40.0	81.26	12.60	SE	FTB	
3	40.0	86.38	16.21	SE	FTB	
4	41.0	82.18	13.99	SE	FTB	
5	40.7	78.68	13.17	SE	FTB	
AVERAGE	40.3	82.11	14.75			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-10
Project	CLARKSTOWN LANDFILL	Date:	06/26/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-14

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	39.0	22.75	100	AD	NON-FTB	
2	40.2	26.3	100	AD	NON-FTB	
3	42.8	20.22	100	AD	NON-FTB	
4	40.8	24.97	100	AD	NON-FTB	
5						
AVERAGE	40.7	23.56				

SEAM SHEAR STRENGTH ASTM D-3383

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.5	70.12	10.02	SE	FTB	
2	41.0	70.03	8.95	SE	FTB	
3	41.0	71.95	9.37	SE	FTB	
4	41.0	76.72	10.80	SE	FTB	
5	41.0	85.3	11.31	SE	FTB	
AVERAGE	41.1	74.82	10.09			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-11
Project	CLARKSTOWN LANDFILL	Date:	07/01/97
Material	PVC	Tested By:	M.J.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-14R

PEEL STRENGTH
ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	24.85	100	AD	NON-FTB	
2	41.7	22.56	100	AD	NON-FTB	
3	41.3	24.52	100	AD	NON-FTB	
4	41.0	24.6	100	AD	NON-FTB	
5	41.3	22.6	100	AD	NON-FTB	
AVERAGE	41.3	23.83				

SEAM SHEAR STRENGTH
ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	89.72	18.17	SE	FTB	
2	41.0	83.43	14.64	SE	FTB	
3	40.7	91.55	14.99	SE	FTB	
4	41.5	84.72	14.33	SE	FTB	
5	41.7	88.25	13.77	SE	FTB	
AVERAGE	41.0	87.53	15.18			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	95S2111-10
Project	CLARKSTOWN LANDFILL	Date:	06/26/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-15

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	39.2	23.95	100	AD	NON-FTB	
2	40.2	25.35	100	AD	NON-FTB	
3	39.0	24.72	100	AD	NON-FTB	
4	39.2	25.02	100	AD	NON-FTB	
5	41.5	24.57	100	AD	NON-FTB	
AVERAGE	39.8	24.72				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	79.2	15.43	SE	FTB	
2	40.5	71	13.47	SE	FTB	
3	40.2	76.7	14.15	SE	FTB	
4	41.0	80.3	15.61	SE	FTB	
5	39.2	82.6	15.24	SE	FTB	
AVERAGE	40.2	77.96	14.78			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-12
Project	CLARKSTOWN LANDFILL	Date:	07/07/97
Material	PVC	Tested By:	B.D./M.J.
WELD TYPE	SOLVENT	Checked By:	M.S. <i>mjd</i>

SAMPLE # DS-16

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.8	29.47	100	AD	NON-FTB	<i>Pass mjd</i>
2	41.6	32.65	100	AD	NON-FTB	
3	41.0	34.05	100	AD	NON-FTB	
4	41.6	36.5	100	AD	NON-FTB	
5	41.3	33.82	100	AD	NON-FTB	
AVERAGE	41.5	33.30				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	39.7	80.7	6.75	SE	FTB	<i>Pass mjd</i>
2	40.0	86.7	9.48	SE	FTB	
3	40.7	79.6	8.51	SE	FTB	
4	40.7	76.8	8.52	SE	FTB	
5	40.7	79.5	8.81	SE	FTB	
AVERAGE	40.3	80.66	8.41			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-12
Project	CLARKSTOWN LANDFILL	Date:	07/07/97
Material	PVC	Tested By:	B.D./M.J.
WELD TYPE	SOLVENT	Checked By:	M.S. <i>mjd</i>

SAMPLE # DS-17

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.5	29.8	100	AD	NON-FTB	<i>Pass</i> ↓ <i>mjd</i>
2	40.8	29.2	100	AD	NON-FTB	
3	41.0	29	100	AD	NON-FTB	
4	40.7	29.5	100	AD	NON-FTB	
5	41.0	26.1	100	AD	NON-FTB	
AVERAGE	40.8	28.72				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.7	79.2	10.18	SE	FTB	<i>Pass</i> ↓ <i>mjd</i>
2	41.3	78.5	10.24	SE	FTB	
3	41.0	79.8	10.28	SE	FTB	
4	41.2	74	9.85	SE	FTB	
5	41.0	81.7	11.56	SE	FTB	
AVERAGE	41.0	78.64	10.43			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-12
Project	CLARKSTOWN LANDFILL	Date:	07/07/97
Material	PVC	Tested By:	B.D./M.J.
WELD TYPE	SOLVENT	Checked By:	M.S. <i>mjd</i>

SAMPLE # DS-18

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	30.17	100	AD	NON-FTB	<i>Pass mjd</i> ↓
2	40.7	31.22	100	AD	NON-FTB	
3	41.0	34.77	100	AD	NON-FTB	
4	41.2	31.12	100	AD	NON-FTB	
5	41.0	31.65	100	AD	NON-FTB	
AVERAGE	41.0	31.79				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.7	87.3	12.59	SE	FTB	<i>Pass mjd</i> ↓
2	41.0	78	9.81	SE	FTB	
3	40.7	80.8	9.21	SE	FTB	
4	40.7	84.6	10.37	SE	FTB	
5	40.2	85.4	10.48	SE	FTB	
AVERAGE	40.6	83.22	10.49			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-13
Project	CLARKSTOWN LANDFILL	Date:	07/08/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-19

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	32.97	100	AD	NON-FTB	PASS MJD
2	40.4	29.3	100	AD	NON-FTB	
3	40.0	30.3	100	AD	NON-FTB	
4	40.0	32.5	100	AD	NON-FTB	
5	40.2	30.22	100	AD	NON-FTB	
AVERAGE	40.2	31.05				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	75.5	10.91	SE	FTB	Pass MJD
2	40.0	88.5	13.02	SE	FTB	
3	40.0	87.3	11.30	SE	FTB	
4	39.9	91.8	12.74	SE	FTB	
5	40.5	90.6	13.08	SE	FTB	
AVERAGE	40.1	85.74	12.21			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-15
 Date: 07/15/97
 Tested By: B.D.
 Checked By: M.S., *mgd*

SAMPLE # DS-20

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	32.1	100	AD	NON-FTB	<i>Pass</i> ↓
2	40.2	32.58	100	AD	NON-FTB	
3	40.1	31.7	100	AD	NON-FTB	
4	40.3	28.33	100	AD	NON-FTB	
5	40.7	30.35	100	AD	NON-FTB	
AVERAGE	40.3	31.01				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	95.51	13.37	SE	FTB	<i>Pass</i> ↓
2	40.0	97.63	13.66	SE	FTB	
3	40.0	94.63	13.19	SE	FTB	
4	39.9	93.05	12.70	SE	FTB	
5	40.5	94.28	13.43	SE	FTB	
AVERAGE	40.1	95.02	13.27			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-14
 Date: 07/11/97
 Tested By: B.D.
 Checked By: M.S. *mjd*

SAMPLE # DS-21

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	27.2	100	AD	NON-FTB	<i>Pass</i> ↓
2	40.5	26.73	100	AD	NON-FTB	
3	41.0	28.7	100	AD	NON-FTB	
4	40.5	26.5	100	AD	NON-FTB	
5	40.8	28.03	100	AD	NON-FTB	
AVERAGE	40.6	27.43				

SEAM SHEAR STRENGTH ASTM D-3683						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	92	14.00	SE	FTB	<i>Pass</i> ↓
2	40.0	86.21	10.82	SE	FTB	
3	40.0	85.23	12.44	SE	FTB	
4	39.9	88.61	13.19	SE	FTB	
5	40.5	90.83	12.86	SE	FTB	
AVERAGE	40.1	88.58	12.66			

J&L TESTING COMPANY, INC.

07/12/97 OGPSS21.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-14
 Date: 07/11/97
 Tested By: B.D.
 Checked By: M.S. *mjd*

SAMPLE # DS-22

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	42.3	19.3	100	AD	NON-FTB	<i>Pass</i> ↓
2	41.2	22.5	100	AD	NON-FTB	
3	41.2	20.8	100	AD	NON-FTB	
4	42.0	19.7	100	AD	NON-FTB	
5	42.0	22.2	100	AD	NON-FTB	
AVERAGE	41.7	20.90				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	42.5	80.7	9.63	SE	FTB	<i>Pass</i> ↓
2	42.5	85	10.20	SE	FTB	
3	42.6	79.6	9.55	SE	FTB	
4	42.0	84.2	11.18	SE	FTB	
5	42.0	77.8	8.04	SE	FTB	
AVERAGE	42.3	81.46	9.72			

J&L TESTING COMPANY, INC.

07/12/97 OGPSS22.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-14
Project	CLARKSTOWN LANDFILL	Date:	07/11/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-23

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	29.78	100	AD	NON-FTB	Pass mjd
2	41.8	22.86	100	AD	NON-FTB	
3	40.5	28.18	100	AD-BRK	FTB	
4	41.3	29.83	100	AD	NON-FTB	
AVERAGE	40.9	27.66				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	77.05	11.61	SE	FTB	Pass mjd
2	40.0	75.95	6.76	SE	FTB	
3	40.0	86.22	9.43	SE	FTB	
4	39.9	88.06	9.38	SE	FTB	
5	40.5	68.55	7.12	SE	FTB	
AVERAGE	40.1	79.17	8.86			

J&L TESTING COMPANY, INC.

07/12/97 OGPSS23.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-14
Project	CLARKSTOWN LANDFILL	Date:	07/11/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-24

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.5	26.08	100	AD	NON-FTB	Pass ↓
2	40.5	31.78	100	AD	NON-FTB	
3	40.0	27.23	100	AD	NON-FTB	
4	51.2	28.66	100	AD	NON-FTB	
5	40.0	29.46	100	AD	NON-FTB	
AVERAGE	42.4	28.64				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	97.12	14.50	SE	FTB	Pass ↓
2	40.8	90.77	13.71	SE	FTB	
3	41.0	93.77	13.81	SE	FTB	
4	41.0	80.51	10.28	SE	FTB	
5	41.0	87.03	11.68	SE	FTB	
AVERAGE	41.0	89.84	12.80			

J&L TESTING COMPANY, INC.

07/12/97 OGPSS24.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-14
Project	CLARKSTOWN LANDFILL	Date:	07/11/97
Material	PVC	Tested By:	B.D.
WELD TYPE	SOLVENT	Checked By:	M.S.

SAMPLE # DS-25

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	27.8	100	AD	NON-FTB	<i>Pass</i> <i>mjd</i> 
2	40.0	27.7	100	AD	NON-FTB	
3	40.5	27.37	100	AD	NON-FTB	
4	40.0	27.5	100	AD	NON-FTB	
5	40.0	26.86	100	AD	NON-FTB	
AVERAGE	40.2	27.45				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.3	85.2	13.20	SE	FTB	<i>Pass</i> <i>mjd</i> 
2	40.3	86.7	14.77	SE	FTB	
3	40.6	77	11.79	SE	FTB	
4	40.6	79.6	12.31	SE	FTB	
5	40.0	86.3	13.92	SE	FTB	
AVERAGE	40.4	82.96	13.20			

J&L TESTING COMPANY, INC.

07/12/97 OGPSS25.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-14
 Date: 07/11/97
 Tested By: B.D.
 Checked By: M.S. *mjt*

SAMPLE # DS-26

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	33.1	100	AD	NON-FTB	<i>Pass</i> <i>mjt</i>
2	41.0	30.6	100	AD	NON-FTB	
3	41.0	32.7	100	AD	NON-FTB	
4	41.0	31.8	100	AD	NON-FTB	
5	40.7	31.75	100	AD	NON-FTB	
AVERAGE	40.9	31.99				

SEAM SHEAR STRENGTH ASTM D-3083						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.0	88.5	13.28	SE	FTB	<i>Pass</i> <i>mjt</i>
2	40.0	98.5	18.19	SE	FTB	
3	40.0	92.3	11.92	SE	FTB	
4	39.9	103.3	13.83	SE	FTB	
5	40.5	101.3	13.78	SE	FTB	
AVERAGE	40.1	96.78	14.20			

J&I TESTING COMPANY, INC.

07/12/97 OGPSS26.WK4

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-15
 Date: 07/17/97
 Tested By: B.D./M.J.
 Checked By: M.S., *mjd*

SAMPLE # DS-27

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	34.72	100	AD	NON-FTB	<i>Pass</i> ↓
2	39.7	34.15	100	AD	NON-FTB	
3	40.8	35.6	100	AD	NON-FTB	
4	40.0	34.5	100	AD	NON-FTB	
5	40.3	33.05	100	AD	NON-FTB	
AVERAGE	40.4	34.40				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	39.2	77.22	7.24	SE	FTB	<i>Pass</i> ↓
2	40.5	82.95	9.27	SE	FTB	
3	40.7	89.2	10.77	SE	FTB	
4	40.8	79	8.41	SE	FTB	
5	40.3	85.95	9.72	SE	FTB	
AVERAGE	40.3	82.86	9.08			

J&L TESTING COMPANY, INC.

07/18/97 OGPSS27.WK4

*copies: MJD PHM CUDL
 JEB FFX*

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-15
 Date: 07/17/97
 Tested By: B.D./M.J.
 Checked By: M.S.

SAMPLE # DS-28

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	42.8	42.1	100	AD	NON-FTB	Pass ↓
2	43.0	37.1	100	AD	NON-FTB	
3	41.8	35.2	100	AD	NON-FTB	
4	41.8	39.2	100	AD	NON-FTB	
5	41.0	39.2	100	AD	NON-FTB	
AVERAGE	42.1	38.56				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.7	95.3	17.21	SE	FTB	Pass
2	40.8	96.7	17.51	SE	FTB	Pass
3	41.3	73.3	12.61	SE	FTB	Fail
4	41.0	84	15.41	SE	FTB	Pass
5	41.3	71.2	12.40	SE	FTB	Fail
AVERAGE	41.2	84.10	15.03			

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
 PROJECT: Clarkstown Landfill
 SAMPLE ID: Des #28
 SAMPLED BY: ORSC
 PICKUP/DEL BY: ORCS (Federal Express)
 TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
 REPORT#: MC-55

DATE DELIVERED: 7/21/97
 DATE TESTED: 7/21/97

1) **SAMPLE DESCRIPTION**

1. Dest #28: BLKT 252A/237, Seam R.J., 7/9/97, Seam width 4".

2) **THICKNESS MEASUREMENTS**

Test Method: ASTM D1593

Sample	Sheet	Individual Measurements (mils)	Average (mils)
Dest #28	1	40.5, 40.5, 40.5, 40.5, 40.5	40.5
	2	40.5, 40, 40, 40, 39.5	40
Job Specifications		40, +/- 5%	40, +/- 5%

3) **PEEL ADHESION TEST**

Test Method: ASTM D413, Type A, 90° peel, Sample width 1", Pulled at 2" per minute.

Test No.	Test Results (lbs/in of width)
	Dest #28
Test 1	11.9
Test 2	15.7
Test 3	15.9
Test 4	16.8
Test 5	16.9
Average	15.4
Job Specification	10 min.

Roy F. Weston, Inc. Sutton Park
 Lab #: FOB-001 Report #: MC-50
 Page 2 of 2

4) **SHEAR STRENGTH TEST**

Test Method: ASTM D3083, Para 9.3, 1" wide specimen, Seam width 4", Pulled along seam width.

Test	Results (lbs/in of width)	
	Dest #28	Dest #28
1	94.1	Broke out side seam
2	91.7	Broke out side seam
3	87.8	Broke out side seam
4	90.2	Broke out side seam
5	94.2	Broke out side seam
Average	91.2	-
Job Specification	74 min.	Film tear bond (FTB)

5) **REMARKS:** The submitted seam coupons conform to the job specifications (06010 B, section 3.04).

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng.Sc.D., P.E.
 Laboratory Manager
 KRT/mp

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-15
 Date: 07/17/97
 Tested By: B.D./M.J.
 Checked By: M.S. *mjd*

SAMPLE # DS-29

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	27.52	100	AD	NON-FTB	<i>Pass mjd</i> ↓
2	40.7	27.42	100	AD	NON-FTB	
3	42.2	28.12	100	AD	NON-FTB	
4	41.8	31.35	100	AD	NON-FTB	
5	42.3	25.67	100	AD	NON-FTB	
AVERAGE	41.6	28.02				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	43.0	84.75	11.46	SE	FTB	<i>Pass mjd</i> ↓
2	42.0	91.67	11.53	SE	FTB	
3	42.7	90.5	11.97	SE	FTB	
4	42.0	91.55	12.04	SE	FTB	
5	41.0	81.1	8.73	SE	FTB	
AVERAGE	42.1	87.91	11.15			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-15
 Date: 07/17/97
 Tested By: B.D./M.J.
 Checked By: M.S. *mjd*

SAMPLE # DS-30

PEEL STRENGTH ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.7	39.2	100	AD	NON-FTB	<i>Pass</i> ↓
2	40.3	34	100	AD	NON-FTB	
3	40.3	32.6	100	AD	NON-FTB	
4	40.3	31.6	100	AD	NON-FTB	
5	40.7	34.8	100	AD	NON-FTB	
AVERAGE	40.5	34.44				

SEAM SHEAR STRENGTH ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	40.7	93	17.07	SE	FTB	<i>Pass</i> ↓
2	40.7	93.3	16.70	SE	FTB	
3	40.3	90.5	15.53	SE	FTB	
4	40.3	90	15.54	SE	FTB	
5	40.3	87.9	14.11	SE	FTB	
AVERAGE	40.5	90.94	15.79			

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client OGDEN REMEDIATION SERVICES
 Project CLARKSTOWN LANDFILL
 Material PVC
 WELD TYPE SOLVENT

Job Number: 96S2111-15
 Date: 07/17/97
 Tested By: B.D./M.J.
 Checked By: M.S., *mjd*

SAMPLE # DS-31

PEEL STRENGTH
ASTM D-413

SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.3	25	100	AD	NON-FTB	<i>Pass</i> ↓
2	41.0	28.62	100	AD	NON-FTB	
3	41.2	26.2	100	AD	NON-FTB	
4	41.0	29	100	AD	NON-FTB	
5	41.0	28.4	100	AD	NON-FTB	
AVERAGE	41.1	27.44				

*mjd*SEAM SHEAR STRENGTH
ASTM D-3083

SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	84.7	17.01	SE	FTB	<i>Pass</i> <i>Pass</i> <i>Fail</i> <i>Pass</i> <i>Pass</i>
2	41.0	87.8	18.46	SE	FTB	
3	41.0	72.7	14.03	SE	FTB	
4	41.5	86	16.45	SE	FTB	
5	41.0	82.2	14.91	SE	FTB	
AVERAGE	41.1	82.68	16.17			

mjd

GEOMEMBRANE SEAM PEEL & SHEAR TEST RESULTS

Client	OGDEN REMEDIATION SERVICES	Job Number:	96S2111-15
Project	CLARKSTOWN LANDFILL	Date:	07/17/97
Material	PVC	Tested By:	B.D./M.J.
WELD TYPE	SOLVENT	Checked By:	M.S., <i>mjd</i>

SAMPLE # DS-32

PEEL STRENGTH ASTM D-413						
SPECIMEN No.	AVERAGE THICKNESS mils	MAXIMUM TENSION (lb/in)	% PEEL	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	41.0	35.52	100	AD	NON-FTB	<i>Pass</i> ↓
2	41.7	36.6	100	AD	NON-FTB	
3	42.0	39.82	100	AD	NON-FTB	
4	42.0	35.1	100	AD	NON-FTB	
5	42.0	37.3	100	AD	NON-FTB	
AVERAGE	41.7	36.87				

SEAM SHEAR STRENGTH ASTM D-3683						
SPECIMEN No.	AVERAGE THICKNESS mils	SHEAR FORCE (lb/in)	ELONGATION @ BREAK (in)	LOCUS OF BREAK	FAILURE MODE	PASS/FAIL
1	42.0	84.4	70.92	SE	FTB	<i>Pass</i> ↓
2	42.0	85.67	7.28	SE	FTB	
3	41.8	84.97	7.18	SE	FTB	
4	42.3	89.67	7.37	SE	FTB	
5	42.3	89.68	6.59	SE	FTB	
AVERAGE	42.1	86.88	19.87			



TESTWELL CRAIG
LABORATORIES INCORPORATED

CORPORATE HEADQUARTERS: 47 HUDSON STREET, OSSINING, N.Y. 10562 (914) 762-9000 FAX (914) 762-9638

V. REDDY KANCHARLA, P.E., DIRECTOR
(NYS LIC. NO. 068162)

WORKSHEET TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLES: 3 Geo-Synthetic 15' x 12' Seams
SAMPLED BY: ORSC
PICKUP/DEL BY: ORCS
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#:
DATE SAMPLED:
DATE DELIVERED: 7/23/97
DATE TESTED: 7/23/97

A. Thickness (mils) (Specified 40 mils, + 2/-2). ASTM D1593

Sample ID	DS 34	DS 35	DS 36		
Top	42	42.7	41.5		
	42	42.7	41.5		
	42	42.7	41.5		
	42	42.7	41.5		
	42	42.7	41.5		
Average	42	42.7	41.5		
Bottom	42	42	41.8		
	42	42	41.8		
	42	42	41.8		
	42	42	41.8		
	42	42	41.8		
Average	42	42	41.8		

B. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in). ASTM D413

Sample Id					
	18.4	16.5	35.1		
	15.1	31.7	36.2		
	17.9	31.6	33.1		
	19.4	32.6	35.6		
	18.0	33.7	32.9		
Average	17.8	30.8	34.4		

C. Shear Strength (lbs/in) (Specified 74 lbs/in). ASTM D3083

Sample ID					
	90.2	74.6	81.8		
	91.4	85.6	84.7		
	90.7	85.7	54.2		
	91.6	85.8	83.9		
	90.0	84.4	84.5		
Average	90.8	84.8	83.8		

D. Comments: The Samples conform to job specifications

WORKSHEET
TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
 PROJECT: Clarkstown Landfill
 SAMPLES: 33, 37, 38, 39, 40, 41
 SAMPLED BY: ORSC
 PICKUP/DEL BY: ORCS ~~(Sutton Park)~~
 TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
 REPORT#:
 DATE SAMPLED:
 DATE DELIVERED: 7/24/97
 DATE TESTED: 7/24/97

A. Thickness (mils) (Specified 40 mils. + 2/2), ASTM D1593

Seam Width	2 1/4"	3 3/4"	4"	4 1/8"	1 3/4"	1 3/4"
Sample ID	33	37	38	39	40	41
Top	41 41 41 41 41	42 42 42 42 42	42 42 42 42 42	41.5 41.5 41.5 41.5 41.5	42 42 42 42 42	41 41 41 41 41
Average	41	42	42	41.5	42	41
Bottom	41 41 41 41 41	42 42 42 42 42	42 42 42 42 42	41.5 41.5 41.5 41.5 41.5	42 42 42 42 42	41 41 41 41 41
Average	41	42	42	41.5	42	41

B. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in), ASTM D413

Sample ID	33	37	38	39	40	41
	18.4 16.5 18.4 17.1 21.7	24.3 20.1 18.9 24.5 24.6	25.4 18.2 24.9 26.5 26.2	21.2 17.2 19.3 21.7 23.9	18.9 19.1 20.7 20.4 23.7	21.4 22.7 20.7 25.5 22.8
Average	18.4	22.5	24.2	20.6	20.4	22.6

C. Shear Strength (lbs/in) (Specified 74 lbs/in), ASTM D3083

Sample ID	33	37	38	39	40	41
	91.8 86.2 90.2 84.7 85.7	95.1 81.2 80.0 85.5 84.2	85.2 89.6 92.2 80.2 95.0	82.4 89.4 88.5 82.9 77.9	87.6 87.3 88.4 87.5 83.7	80.4 79.6 80.5 79.2 79.4
Average	87.7	85.2	88.4	84.2	86.9	79.8

D. Comments: All sample conformed to spec values



TESTWELL CRAIG
LABORATORIES INCORPORATED

CORPORATE HEADQUARTERS: 47 HUDSON STREET, OSSINING, N.Y. 10562 (914) 762-9000 FAX (914) 762-9638

V. REDDY KANCHARLA, P.E., DIRECTOR
(NYS LIC. NO. 068162)

WORKSHEET TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLES: DS 42, 43, 44
SAMPLED BY: ORSC
PICKUP/DEL BY: ORCS (Eastman F. P.)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#:
DATE SAMPLED:
DATE DELIVERED: 7/31/97
DATE TESTED: 7/31/97

A. Thickness (mils) (Specified 40 mils. $\pm 2\%$), ASTM D1593

Seam to 200	5"	4.5"	4.5"		
Sample ID	DS 42	DS 43	DS 44		
Top	41	41	41		
	41	41	41		
	41	41	41		
	41	41	41		
Average	41	41	41		
Bottom	41	41.5	40.4		
	41	41.5	40.4		
	41	41.5	40.4		
	41	41.5	40.4		
Average	41	41.5	40.4		

B. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in), ASTM D413

Sample ID					
	31.7	30.4	25.8		
	18.7	30.8	34.6		
	17.9	19.2	25.4		
	16.0	30.4	23.6		
	18.2	19.8	25.1		
Average	18.5	20.1	24.9		

C. Shear Strength (lbs/in) (Specified 74 lbs/in), ASTM D3083

Sample ID					
	89.5	75.3	77.6		
	82.4	75.8	79.4		
	79.3	75.6	79.4		
	84.6	77.3	77.3		
	86.9	77.5	77.9		
Average	84.5	76.3	78.3		

D. ^{Comments:} Sample Description: The Samples Conform to Specification.



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLE: DS 45 to DS 48
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-59
DATE SAMPLED: 7/29/97, 7/30/97
DATE DELIVERED: 8/04/97
DATE TESTED: 8/05/97

A. Sample Description:

DS45 BLKT #273/277, JC 7/29/97
DS46 BLKT #263/263A, JD 7/30/97
DS47 BLKT #219/225, JD 7/30/97
DS48 BLKT #219/266A, JG 7/30/97

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Seam Width	3 3/4"	5"	5"	4 3/4"
Sample ID	DS 45	DS 46	DS 47	DS 48
Top	39	40.5	41	42
	39	40.5	41	42
	39	40.5	41	42
	39	40.5	41	42
	39	40.5	41	42
Average	39	40.5	41	42
Bottom	39.5	41.5	40	41.5
	39.5	41.5	40	41.5
	39.5	41.5	40	41.5
	39.5	41.5	40	41.5
	39.5	41.5	40	41.5
Average	39.5	41.5	40	41.5

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in), ASTM D413

Sample Id	DS 45	DS 46	DS 47	DS 48
	17.8	19.7	18.6	18.0
	18.2	22.4	20.2	17.1
	16.4	18.7	16.1	17.5
	19.1	22.6	23.5	21.6
	20.9	17.2	18.2	22.4
Average	18.5	20.1	19.3	19.3

M&T/NAMOW/TCL-J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-59
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in), ASTM D3083

Sample ID	DS 45	DS 46	DS 47	DS 48
	90.7	93.0	82.8	83.9
	85.6	86.2	80.7	85.9
	84.1	88.8	85.4	85.6
	78.5	83.8	80.8	80.5
	79.5	92.8	81.6	86.4
Average	83.7	88.9	82.3	84.5

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng.Sc.D., P.E.
Laboratory Manager
KRT/mp



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: Dest 49 - 54
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-60
DATE SAMPLED: 8/01/97, 8/04/97
DATE DELIVERED: 8/06/97
DATE TESTED: 8/06/97

A. Sample Description:

Dest 49 226B/262 Seamer/JC 8/01/97
Dest 50 226A/226 Seamer/JD 8/01/97 mm#1
Dest 51 271/226 Seamer/JD 8/01/97
Dest 52 264/227 Seamer/JC 8/01/97
Dest 53 227/284 Seamer/RP 8/04/97 mm#1
Dest 54 282/235 Seamer/RP 8/04/97

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Seam Width	5"	5 1/4"	6"	4 1/4"	1 5/8"	1 5/8"
Sample ID	49	50	51	52	53	54
Top	42	40	40	41	39.5	39.5
	42	40	40	41	39.5	39.5
	42	40	40	41	39.5	39.5
	42	40	40	41	39.5	39.5
	42	40	40	41	39.5	39.5
Average	42	40	40	41	39.5	39.5
Bottom	41.5	40.5	41	39	41.5	39
	41.5	40.5	41	39	41.5	39
	41.5	40.5	41	39	41.5	39
	41.5	40.5	41	39	41.5	39
	41.5	40.5	41	39	41.5	39
Average	41.5	40.5	41	39	41.5	39

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in. min), ASTM D413

Sample Id	49	50	51	52	53	54
	18.0	16.6	17.7	19.4	24.2	24.0
	16.1	15.7	17.4	22.2	19.4	27.1
	18.2	14.8	18.7	21.6	22.5	26.3
	16.3	17.9	20.2	20.7	22.6	28.2
	15.9	20.2	20.7	22.1	24.2	27.3
Average	16.9	17.0	18.9	21.2	22.6	26.6

&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-60
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in. min). ASTM D3083

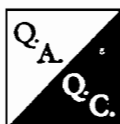
Sample ID	49	50	51	52	53	54
	86.7	89.6	84.3	90.3	94.7	94.3
	86.6	87.2	80.8	87.2	94.7	98.1
	83.2	87.5	79.8	91.7	85.6	95.7
	83.7	83.2	87.5	87.3	82.6	91.4
	90.5	79.4	81.7	87.2	90.7	91.5
Average	86.1	85.4	82.8	88.7	89.7	94.2

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-61
DATE DELIVERED: 8/11/97
DATE TESTED: 8/11/97

A. Sample Description:

DS55 Seam Width 1.5"
DS56 Seam Width 1.5"
DS57 Seam Width 1.5"
DS58 Seam Width 1.5"
DS59 Seam Width 1.5"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 55	DS 56	DS 57	DS 58	DS 59
Top	40	40	40	40	40.4
	40	40	40	40	40.4
	40	40	40	40	40.4
	40	40	40	40	40.4
	40	40	40	40	40.4
Average	40	40	40	40	40.4
Bottom	40	40	40	40.3	40
	40	40	40	40.3	40
	40	40	40	40.3	40
	40	40	40	40.3	40
	40	40	40	40.3	40
Average	40	40	40	40.3	40

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 55	DS 56	DS 57	DS 58	DS 59
	42.7	34.4	41.5	42.6	35.0
	42.0	34.1	41.1	41.8	35.1
	42.1	34.3	42.0	42.1	34.9
	42.3	34.1	41.3	42.0	35.3
	41.8	34.0	41.0	41.7	34.8
Average	42.2	34.2	41.4	42.0	35.0

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-61
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 55	DS 56	DS 57	DS 58	DS 59
	89.5	91.3	87.5	85.6	85.5
	89.8	92.1	89.4	84.2	83.8
	89.1	90.9	87.4	80.1	84.9
	88.6	90.1	88.9	79.9	83.7
	90.0	89.6	83.8	80.0	85.1
Average	89.4	90.8	87.4	82.0	84.6

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-62
DATE DELIVERED: 8/11/97
DATE TESTED: 8/12/97

A. Sample Description:

Dest 60 293/228A JC 8/07/97 – Seam width 4 ½"

Dest 61 291/294A RP 8/07/97 – Seam width 4"

Dest 62 291/231 JG 8/08/97 – Seam width 1 ½"

Dest 63 289/244 JG 8/08/97 – Seam width 1 ½"

B. Thickness (mils) (Specified 40 mils. + 2/-2), ASTM D1593

Sample ID	DS 60	DS 61	DS 62	DS 63
Top	40	40	40.5	41
	40	40	40.5	41
	40	40	40.5	41
	40	40	40.5	41
	40	40	40.5	41
Average	40	40	40.5	41
Bottom	40	40	39.5	39.5
	40	40	39.5	39.5
	40	40	39.5	39.5
	40	40	39.5	39.5
	40	40	39.5	39.5
Average	40	40	39.5	39.5

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 60	DS 61	DS 62	DS 63
	29.3	19.5	20.7	36.2
	24.0	18.6	33.6	37.1
	27.5	18.2	24.5	31.8
	22.0	19.1	30.1	39.4
	25.1	18.5	31.2	33.6
Average	25.7	18.8	28.0	35.6

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

M&T/NAMOW/TCL □ J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-62
Page 2 of 2

Sample ID	DS 60	DS 61	DS 62	DS 63
	84.3	86.3	90.4	80.3
	80.2	84.3	91.2	86.2
	84.3	81.3	85.1	82.4
	85.9	84.8	85.9	82.7
	83.6	85.2	84.7	84.4
Average	83.7	84.4	87.5	83.2

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-67
DATE DELIVERED: 8/18/97
DATE TESTED: 8/19/97

A. Sample Description:

DS 64 179B/296 JG 8/12/97 – Seam width 4 ¼"
DS 65 296/236 JG 8/11/97 – Seam width 4 ¼"
DS 66 403/404 JC 8/11/97 – Seam width 5"
DS 67 404/295 JC 8/12/97 – Seam width 5 ¼"
DS 68 295/405 JC 8/12/97 – Seam width 4 ¾"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 64	DS 65	DS 66	DS 67	DS 68
Top	38 ½	41	40	40	40.5
	38 ½	41	40	40	40.5
	38 ½	41	40	40	40.5
	38 ½	41	40	40	40.5
	38 ½	41	40	40	40.5
Average	38 ½	41	40	40	40.5
Bottom	41	40	40.5	41	41.5
	41	40	40.5	41	41.5
	41	40	40.5	41	41.5
	41	40	40.5	41	41.5
	41	40	40.5	41	41.5
Average	41	40	40.5	41	41.5

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 64	DS 65	DS 66	DS 67	DS 68
	36.9	39.8	27.1	22.8	27.3
	32.1	36.7	28.5	26.1	26.4
	34.2	37.2	29.4	24.2	32.6
	30.7	36.4	27.0	24.7	32.9
	30.4	35.5	29.5	25.5	26.7
Average	32.9	37.1	28.3	24.7	29.2

M&T/NAMOW/TCL □ J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-67
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 64	DS 65	DS 66	DS 67	DS 68
	79.2	86.3	92.0	89.5	83.4
	83.8	86.1	87.9	86.3	88.4
	85.1	82.5	89.1	87.4	85.8
	81.5	84.7	91.1	91.0	82.9
	86.2	86.0	90.3	90.1	83.3
Average	83.2	85.1	90.0	88.9	84.8

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp



M&T/NAMOW/TCL-J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-68
DATE DELIVERED: 8/23/97
DATE TESTED: 8/25/97

A. Sample Description:

DS 69 401/402 JG 8/15/97 - Seam width 4 1/4"
DS 70 402/407 JG 8/15/97 - Seam width 5 1/8"
DS 71 407/406 JC 8/15/97 - Seam width 5 1/4"

B. Thickness (mils) (Specified 40 mils. + 2/-2), ASTM D1593

Sample ID	DS 69	DS 70	DS 71
Top	41	41	39
	41	41	39
	41	41	39
	41	41	39
	41	41	39
Average	41	41	39
Bottom	41	42	39.5
	41	42	39.5
	41	42	39.5
	41	42	39.5
	41	42	39.5
Average	41	42	39.5

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 69	DS 70	DS 71
	20.8	30.0	22.7
	22.9	23.0	20.8
	23.2	26.9	23.1
	21.7	24.5	23.8
	20.5	23.1	24.1
Average	21.8	25.5	22.9

M&T/NAMOW/TCL-J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-68
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 69	DS 70	DS 71
	81.7	80.8	82.9
	81.4	78.8	81.3
	84.8	87.7	79.4
	82.9	84.5	81.1
	81.3	83.6	82.7
Average	82.4	83.0	81.5

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
 PROJECT: Clarkstown Landfill
 SAMPLED BY: ORSC
 PICKUP/DEL BY: ORSC
 TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
 REPORT#: MC-69
 DATE DELIVERED: 8/29/97
 DATE TESTED: 8/29/97

A. Sample Description:

DS 72 406/283 JC 8/25/97 MM #007 – Seam width 1 1/2"
 DS 73 281/281A JG 8/25/97 MM #007 – Seam width 1 1/2"
 DS 74 409/408 RJ 8/25/97 – Seam width 5"
 DS 75 242A/242 JC 8/27/97 – Seam width 4 3/4"
 DS 76 411/413 RJ 8/26/97 – Seam width 4 3/4"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 72	DS 73	DS 74	DS 75	DS 76
Top	40	41	39.5	42	40
	40	41	39.5	42	40
	40	41	39.5	42	40
	40	41	39.5	42	40
	40	41	39.5	42	40
Average	40	41	39.5	42	40
Bottom	41	40	41	40	41
	41	40	41	40	41
	41	40	41	40	41
	41	40	41	40	41
	41	40	41	40	41
Average	41	40	41	40	41

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 72	DS 73	DS 74	DS 75	DS 76
	22.2	16.2	27.4	26.1	31.9
	21.2	14.5	29.1	28.1	25.3
	24.0	15.1	24.9	28.5	30.3
	23.7	16.7	28.7	25.7	29.4
	25.1	15.3	23.5	24.9	28.5
Average	23.2	15.6	27.7	26.7	29.1

Corporate Headquarters □ 47 Hudson Street □ Ossining, N.Y. 10562 □ Tel: 914-762-9000 □ Fax: 914-762-9633

M&T/NAMOW/TCL-J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-69
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 72	DS 73	DS 74	DS 75	DS 76
	84.3	83.5	87.8	93.3	84.1
	88.2	78.0	91.0	89.7	86.2
	86.1	81.7	90.7	89.1	80.8
	82.7	85.2	88.5	92.5	82.7
	85.0	82.6	90.3	91.0	85.5
Average	85.3	82.2	90.0	91.1	83.7

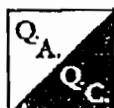
E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL-J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
 PROJECT: Clarkstown Landfill
 SAMPLED BY: ORSC
 PICKUP/DEL BY: ORSC (Federal Express)
 TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
 REPORT#: MC-86
 DATE DELIVERED: 9/22/97
 DATE TESTED: 9/23/97

A. Sample Description:

DS 77 193A/185 JG 9/05/97
 DS 78 185/292B JC 9/05/97
 DS 79 283A/408 JG 9/04/97
 DS 80 413/414 JG 9/05/97

B. Thickness (mils) (Specified 40 mils. + 2/-2), ASTM D1593

Sample ID	DS 77	DS 78	DS 79	DS 80
Top	40	38.5	39.5	40
	40	38.5	39.5	40
	40	38.5	39.5	40
	40	38.5	39.5	40
	40	38.5	39.5	40
Average	40	38.5	39.5	40
Bottom	39.5	41	40.5	41
	39.5	41	40.5	41
	39.5	41	40.5	41
	39.5	41	40.5	41
	39.5	41	40.5	41
Average	39.5	41	40.5	41

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 77	DS 78	DS 79	DS 80
	20.0	22.9	20.3	25.7
	19.3	21.7	24.2	26.9
	17.6	20.7	20.3	26.0
	19.5	23.4	23.5	26.3
	18.1	24.0	24.7	26.7
Average	18.9	22.5	22.6	26.3

Corporate Headquarters = 47 Hudson Street = Ossining, N.Y. 10562 = Tel: 914-762-9000 = Fax: 914-762-9638

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-86
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 77	DS 78	DS 79	DS 80
	90.5	91.5	88.3	92.6
	99.1	93.1	94.6	95.5
	97.3	95.6	97.6	89.9
	94.2	90.7	92.9	90.4
	94.6	92.3	94.1	93.4
Average	95.1	92.6	93.5	92.4

E. Comments: All samples comply with job specifications

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-89
DATE DELIVERED: 9/25/97
DATE TESTED: 9/26/97

A. Sample Description:

DS 81 BIKT 195/196 JG 9/16/97 - Seam Width 5"
DS 82 BIKT 191/195 RM 9/16/97 - Seam Width 4 1/4"
DS 83 BIKT 180/180A JG 9/17/97 - Seam Width 6 1/4"
DS 85 153/153A JD MX #08 9/18/97 - Seam Width 1 1/2"
DS 86 153/150 JG 9/18/97 - Seam Width 1 1/2"
DS 88 188B/Tie-in JG 9/17/97 - Seam Width 4 1/2"

B. Thickness (mils) (Specified 40 mils. + 2/-2), ASTM D1593

Sample ID	DS 81	DS 82	DS 83	DS 85	DS 86	DS 88
Top	39.5	41.0	40.5	41.0	40.0	40.5
	39.5	41.0	40.5	41.0	40.0	40.5
	39.5	41.0	40.5	41.0	40.0	40.5
	39.5	41.0	40.5	41.0	40.0	40.5
	39.5	41.0	40.5	41.0	40.0	40.5
Average	39.5	41.0	40.5	41.0	40.0	40.5
Bottom	39.0	40.0	40.0	41.0	41.0	39.5
	39.0	40.0	40.0	41.0	41.0	39.5
	39.0	40.0	40.0	41.0	41.0	39.5
	39.0	40.0	40.0	41.0	41.0	39.5
	39.0	40.0	40.0	41.0	41.0	39.5
Average	39.0	40.0	40.0	41.0	41.0	39.5

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in. min), ASTM D413

Sample Id	DS 81	DS 82	DS 83	DS 85	DS 86	DS 88
	17.1	20.1	25.7	23.0	27.0	26.4
	10.5	21.3	26.0	25.3	29.8	24.4
	19.5	22.2	30.8	24.2	32.1	24.4
	20.5	25.8	29.3	24.3	32.0	24.4
	20.9	28.4	29.0	21.7	31.5	24.4
Average	17.7	23.56	28.16	23.7	30.48	24.4

M&T/NAMOW/TCL-J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-89
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in., min), ASTM D3083

Sample ID	DS 81	DS 82	DS 83	DS 85	DS 86	DS 88
	87.5	88.8	82.2	98.6	81.9	95.6
	81.5	82.8	96.9	97.9	95.7	93.8
	80.5	80.1	98.1	98.4	88.4	94.9
	85.1	98.7	98.5	90.5	81.8	97.0
	83.6	89.7	98.2	97.9	88.9	93.5
Average	83.64	86.88	96.78	96.66	87.34	94.95

E. Comments: All samples comply with job specifications except peel adhesion strengths of sample DS88.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL-J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-90
DATE DELIVERED: 9/17/97
DATE TESTED: 9/26/97
DATE TESTED: 9/30/97

A. Sample Description:
DS 84 180 JD 9/17/97 - Seam Width 4 1/2"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 84
Top	40
	40
	40
	40
	40
Average	40
Bottom	40
	40
	40
	40
	40
Average	40

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 84
	13.4
	16.1
	12.7
	16.4
	15.0
Average	14.7

M&T/NAMOW/TCL-J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-89
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 84
	87.4
	93.1
	90.1
	87.0
	90.2
Average	89.6

E. Comments: All samples comply with job specifications.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL-J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
 PROJECT: Clarkstown Landfill
 SAMPLED BY: ORSC
 PICKUP/DEL BY: ORSC (Federal Express)
 TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
 REPORT#: MC-97
 DATE DELIVERED: 10/03/97
 DATE TESTED: 10/03/97

A. Sample Description:

DS 89 BLKT 172A/189A JC 9/26/97 - Seam Width 4 1/2"
 DS 90 BLKT 190/190A JG 9/26/97 - Seam Width 5 1/4"
 DS 91 BLKT 176/190 JG 9/26/97 - Seam Width 5 3/4"
 DS 92 BLKT 175/175A JC 9/26/97 - Seam Width 4 3/4"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 89	DS 90	DS 91	DS 92
Top	38.5	39	41	40.5
	38.5	39	41	40.5
	38.5	39	41	40.5
	38.5	39	41	40.5
	38.5	39	41	40.5
Average	38.5	39	41	40.5
Bottom	39.5	39	40	40
	39.5	39	40	40
	39.5	39	40	40
	39.5	39	40	40
	39.5	39	40	40
Average	39.5	39	40	40

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 89	DS 90	DS 91	DS 92
	35.6	34.6	21.9	31.4
	39.7	37.9	20.2	33.9
	36.8	33.0	20.3	28.8
	37.9	39.4	19.0	31.7
	39.6	35.2	22.6	29.1
Average	37.9	36.0	20.8	31.0

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-97
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 89	DS 90	DS 91	DS 92
	83.2	92.3	94.2	98.0
	95.4	94.8	93.0	95.2
	90.8	96.6	96.6	99.2
	92.2	92.2	90.7	94.7
	91.6	87.6	92.6	92.4
Average	90.6	92.7	93.4	96.8

E. Comments: All samples comply with job specifications.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
 PROJECT: Clarkstown Landfill
 SAMPLED BY: ORSC
 PICKUP/DEL BY: ORSC (Federal Express)
 TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
 REPORT#: MC-113
 DATE DELIVERED: 10/17/97
 DATE TESTED: 10/20/97

A. Sample Description:

DS93 BLKT 192/TIE-IN – 10/06/97 JG – Seam Width 5 ½"
 DS94 BLKT 192C/146 – 10/06/97 JG – Seam Width 4 ¾"
 DS95 BLKT 192C/146 – 10/09/97 JC – Seam Width 5 ½"
 DS96 177/146 – 10/06/97 JC – Seam Width 5"
 DS98 198/163 – 10/07/97 JC – Seam Width 3 ¾"
 DS99 BLKT 159/169 – 10/07/97 – Seam Width 5"
 DS100 BLKT 125/160 – 10/08/97 JG – Seam Width 4 ¾"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 93	DS 94	DS 95	DS 96	DS 98	DS 99	DS 100
Top	40	39.5	40.5	39.5	40	39.5	39.5
	40	39.5	40.5	39.5	40	39.5	39.5
	40	39.5	40.5	39.5	40	39.5	39.5
	40	39.5	40.5	39.5	40	39.5	39.5
	40	39.5	40.5	39.5	40	39.5	39.5
Average	40	39.5	40.5	39.5	40	39.5	39.5
Bottom	39	39	40	40	39.5	39	40
	39	39	40	40	39.5	39	40
	39	39	40	40	39.5	39	40
	39	39	40	40	39.5	39	40
	39	39	40	40	39.5	39	40
Average	39	39	40	40	39.5	39	40

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 93	DS 94	DS 95	DS 96	DS 98	DS 99	DS100
	16.9	15.4	28.9	20.9	18.8	33.5	26.7
	14.2	21.5	26.0	24.9	22.0	27.0	31.4
	17.6	21.7	21.2	26.0	22.0	23.3	22.3
	15.5	20.7	25.5	23.4	24.7	25.7	26.2
	16.7	19.3	22.7	25.6	23.1	26.6	25.9
Average	16.2	19.7	25.3	24.2	22.4	27.2	26.5

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-97
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 93	DS 94	DS 95	DS 96	DS 98	DS 99	DS 100
	93.4	94.6	96.0	99.5	92.7	98.4	95.4
	96.5	97.1	97.3	96.7	94.3	99.5	99.1
	98.6	91.1	94.7	98.7	92.0	93.4	95.1
	97.7	98.2	97.4	95.5	92.7	97.1	94.3
	93.5	98.7	98.2	93.6	94.6	98.7	92.9
Average	95.9	95.9	96.7	96.3	93.3	97.4	95.4

Comments: All samples comply with job specifications.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwony 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC (Federal Express)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-114
DATE DELIVERED: 10/17/97
DATE TESTED: 10/20/97

A. Sample Description:

DS101 164A/TIE IN – 10/07/97 JG – Seam Width 4 ¾"
DS102 154*/197 – 10/07/97 JC – Seam Width 3 ¾"
DS103 162*/162B – 10/07/97 JC – Seam Width 4 ½"
DS104 197/TIE IN – 10/07/97 JG – Seam Width 5 ¼"
DS105 181/171 – 10/14/97 JG – Seam Width 1 ½"
DS106 145A/145 – 10/14/97 – Seam Width 1 ½"

B. Thickness (mils) (Specified 40 mils. + 2/-2), ASTM D1593

Sample ID	DS 101	DS 102	DS 103	DS104	DS105	DS 106
Top	41	41	40	40.5	40	39.5
	41	41	40	40.5	40	39.5
	41	41	40	40.5	40	39.5
	41	41	40	40.5	40	39.5
	41	41	40	40.5	40	39.5
Average	41	41	40	40.5	40	39.5
Bottom	38.5	40.5	39.5	39.5	38.5	39
	38.5	40.5	39.5	39.5	38.5	39
	38.5	40.5	39.5	39.5	38.5	39
	38.5	40.5	39.5	39.5	38.5	39
	38.5	40.5	39.5	39.5	38.5	39
Average	38.5	40.5	39.5	39.5	38.5	39

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in. min). ASTM D413

Sample Id	DS 101	DS 102	DS 103	DS 104	DS 105	DS 106
	16.2	26.7	33.6	18.5	28.3	36.2
	21.8	23.9	24.2	17.5	35.4	27.7
	19.9	34.2	30.3	21.3	36.2	28.1
	24.7	27.4	26.3	20.1	28.3	25.5
	22.2	28.2	25.1	16.9	29.7	26.1
Average	21.0	28.0	27.9	18.8	31.6	28.7

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-114
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in. min). ASTM D3083

Sample ID	DS 101	DS 102	DS 103	DS 104	DS 105	DS 106
	98.5	95.5	99.2	95.5	96.6	98.2
	98.6	96.7	96.2	97.4	98.5	99.2
	99.5	97.6	99.0	96.2	96.9	94.4
	97.1	93.7	94.7	95.9	97.7	94.7
	98.2	99.5	96.2	98.2	95.1	92.0
Average	98.4	96.6	97.0	96.6	97.0	95.7

Comments: All samples comply with job specifications.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwony 1, file 1, bill 1/mp



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park

PROJECT: Clarkstown Landfill

SAMPLED BY: ORSC

PICKUP/DEL BY: ORSC (Federal Express)

TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001

REPORT#: MC-118

DATE DELIVERED: 11/04/97

DATE TESTED: 11/05/97

A. Sample Description:

DS87-R BLKT 153A/188 – 10/01/97 JG – Seam Width 5"

DS97 BLKT 199/141 – 10/06/97 – Seam Width 4¼"

DS114 168/117 MX #008- 10/17/97 JG – Seam Width 1½"

DS116 168A/117 MX #008– 10/23/97 LL – Seam Width 1½"

DS113 248A/241 MX #008 – 10/23/97 LL – Seam Width 1 9/16"

DS117 243/290 MX #008– 10/30/97 JG – Seam Width 1½"

DS120 124H/241 MX #TWINNY – 10/30/97 – Seam Width 2"

DS118 140A/140B MX #TWINNY – 10/30/97 – Seam Width 1 7/8"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 87R	DS 97	DS 114	DS116	DS113	DS 117	DS 120	DS 118
Top	39.5	40.0	39.0	41.2	40.5	40.8	40.5	40.0
	39.5	40.7	39.0	41.2	40.7	39.8	40.5	39.5
	39.0	40.5	39.5	41.6	40.7	39.5	40.2	39.5
	39.2	40.0	39.5	41.0	40.5	40.5	39.8	40.0
	39.2	39.8	39.5	41.2	41.0	40.7	40.0	40.0
Average	39.3	40.2	39.3	41.2	40.7	40.3	40.2	39.8
Bottom	40.0	40.0	39.7	42.0	40.5	40.5	41.0	38.5
	40.0	40.0	40.0	42.0	40.7	40.7	41.0	38.5
	40.0	40.2	39.5	42.0	40.7	40.8	41.2	39.0
	40.5	41.0	40.5	42.0	40.7	41.0	41.3	38.5
	39.5	40.5	40.2	42.0	40.6	41.0	41.2	38.5
Average	40.0	40.3	40.0	42.0	40.6	40.8	41.1	38.6

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 87R	DS 97	DS 114	DS 116	DS 113	DS 117	DS 120	DS 118
	31.3	25.8	44.9	51.6	37.8	58.5	17.6	39.1
	33.7	38.2	50.6	55.5	49.2	51.8	18.9	35.1
	34.8	41.1	48.9	61.3	52.1	61.9	14.1	45.7
	33.9	36.5	49.0	50.5	38.8	50.0	16.0	38.2
	30.6	41.8	40.5	58.6	45.3	53.3	19.3	36.9
Average	32.9	37.3	46.8	55.5	44.8	55.1	17.2	39.0

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-116
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 87R	DS 97	DS 114	DS 116	DS 113	DS 117	DS 120	DS 118
	98.4	96.6	94.3	98.5	97.3	97.8	97.3	92.7
	96.8	93.6	96.2	97.2	95.3	94.5	98.1	93.4
	91.9	92.8	90.8	95.3	94.9	99.7	95.0	95.8
	88.6	90.3	88.8	98.7	98.4	98.0	98.8	92.9
	97.6	93.3	86.9	97.8	95.1	97.3	98.4	89.8
Average	94.7	93.3	91.4	97.7	96.2	97.4	97.5	92.9

Comments: All samples comply with job specifications.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park

PROJECT: Clarkstown Landfill

SAMPLED BY: ORSC

PICKUP/DEL BY: ORSC (Federal Express)

TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001

REPORT#: MC-126

DATE DELIVERED: 11/21/97

DATE TESTED: 11/24/97

A. Sample Description:

DS88-R 188B/CAP - 10/27/97 JG - Seam Width 4 1/4"

DS107 171/173A - 10/14/97 - Seam Width 5"

DS108 415/412 - 10/17/97 JG - Seam Width 5 1/4"

DS109 286/286B - 10/20/97 JC - Seam Width 5"

DS110 145/286 - 10/20/97 JG - Seam Width 4 1/2"

DS111 285/286A - 10/22/97 JC - Seam Width 4 1/2"

DS112 248/285A - 10/22/97 JC - Seam Width 4 1/2"

DS119 124F/175A - 10/17/97 JC - Seam Width 4 1/2"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 88R	DS 107	DS 108	DS109	DS110	DS 111	DS 112	DS 119
Top	40.0	40.5	41.0	41.0	40.5	41.0	41.5	40.0
	40.0	40.5	41.0	41.0	40.5	41.0	41.5	40.0
	40.0	40.5	41.0	41.0	40.5	41.0	41.5	40.0
	40.0	40.5	41.0	41.0	40.5	41.0	41.5	40.0
	40.0	40.5	41.0	41.0	40.5	41.0	41.5	40.0
Average	40.0	40.5	41.0	41.0	40.5	41.0	41.5	40.0
Bottom	41.0	40.0	41.0	41.0	41.5	41.0	41.0	39.0
	41.0	40.0	41.0	41.0	41.5	41.0	41.0	39.0
	41.0	40.0	41.0	41.0	41.5	41.0	41.0	39.0
	41.0	40.0	41.0	41.0	41.5	41.0	41.0	39.0
	41.0	40.0	41.0	41.0	41.5	41.0	41.0	39.0
Average	41.0	40.0	41.0	41.0	41.5	41.0	41.0	39.0

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 88R	DS 107	DS 108	DS 109	DS 110	DS 111	DS 112	DS 119
	21.5	24.2	36.0	37.4	27.9	26.8	22.5	27.2
	23.6	32.2	30.4	36.4	25.2	23.0	23.4	23.7
	19.0	26.9	33.3	33.8	30.0	26.0	26.4	28.5
	19.9	29.1	31.7	32.1	29.1	25.2	24.9	26.1
	22.7	28.4	33.0	36.6	31.7	27.0	28.2	25.9
Average	21.3	28.2	32.9	35.3	28.8	25.6	25.1	26.3

M&T/NAMOW/TCL-J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-126
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in, min), ASTM D3083

Sample ID	DS 88R	DS 107	DS 108	DS 109	DS 110	DS 111	DS 112	DS 119
	99.1	99.7	95.5	92.9	92.4	93.0	96.2	90.6
	92.7	91.0	92.7	90.1	85.6	97.8	99.6	89.5
	90.3	95.1	91.0	95.2	93.1	97.1	91.0	97.3
	95.1	96.2	94.7	93.7	95.2	92.3	93.0	92.7
	96.0	89.9	92.9	93.1	90.7	95.5	95.1	99.1
Average	94.6	94.4	93.4	93.0	91.4	95.1	95.0	93.8

Comments: All samples comply with job specifications.

TESTWELL CRAIG LABORATORIES, INC.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: Kwony 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC (Federal Express)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-132
DATE DELIVERED: 12/24/97
DATE TESTED: 12/26/97

A. Sample Description:

DS128 128/126 LL003 – 11/21/97 – Seam Width 4¾"
DS129 126/120 LL003 – 12/03/97 – Seam Width 2"
DS130 119/119A LL003 – 12/08/97 – Seam Width 2"
DS131 149A/133 LL003 – 12/08/97 – Seam Width 2"
DS132 149/137 LL003 – 12/08/97 – Seam Width 2¼"
DS133 137/152 LL003 – 12/08/97 – Seam Width 2"
DS134 151/161 LL003 – 12/09/97 – Seam Width 2"
DS135 155/151 LL003 – 12/09/97 JC – Seam Width 2"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 128	DS 129	DS 130	DS131	DS132	DS 133	DS 134	DS 135
Top	40.0	39.5	39.5	40.0	39.5	40.5	39.5	39.5
	40.0	39.5	39.5	40.0	39.5	40.5	39.5	39.5
	40.0	39.5	39.5	40.0	39.5	40.5	39.5	39.5
	40.0	39.5	39.5	40.0	39.5	40.5	39.5	39.5
	40.0	39.5	39.5	40.0	39.5	40.5	39.5	39.5
Average	40.0	39.5	39.5	40.0	39.5	40.5	39.5	39.5
Bottom	38.0	39.0	40.5	40.0	38.5	40.0	39.0	40.0
	38.0	39.0	40.5	40.0	38.5	40.0	39.0	40.0
	38.0	39.0	40.5	40.0	38.5	40.0	39.0	40.0
	38.0	39.0	40.5	40.0	38.5	40.0	39.0	40.0
	38.0	39.0	40.5	40.0	38.5	40.0	39.0	40.0
Average	38.0	39.0	40.5	40.0	38.5	40.0	39.0	40.0

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 128	DS 129	DS 130	DS 131	DS 132	DS 133	DS 134	DS 135
	27.5	38.9	41.5	30.0	36.7	34.0	38.4	33.2
	33.8	41.4	32.9	34.8	40.6	35.6	34.2	28.6
	32.7	35.2	34.3	39.0	39.3	34.5	39.3	28.2
	32.1	36.0	37.9	36.7	32.7	36.7	40.7	32.9
	30.8	35.2	40.2	40.2	38.1	34.8	36.6	32.7
Average	31.4	37.3	37.4	36.1	37.5	35.1	37.8	31.3

M&T/NAMOW/TCL □ J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-132
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in. min), ASTM D3083

Sample ID	DS 128	DS 129	DS 130	DS 131	DS 132	DS 133	DS 134	DS 135
	98.3	99.1	95.7	94.5	90.1	92.7	93.2	93.3
	93.7	99.1	98.4	98.6	85.0	97.7	95.1	95.1
	96.1	95.9	99.2	99.4	96.9	91.1	91.3	96.5
	97.2	94.1	96.9	96.1	92.6	93.7	93.5	92.4
	92.3	93.7	98.0	98.7	92.0	91.9	96.9	95.9
Average	95.5	96.4	97.6	97.5	91.3	93.4	94.0	94.6

Comments: All samples comply with job specifications.

M & T / NAMOW / TCL / J.V.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston, Inc., Sutton Park
PROJECT: Clarkstown Landfill
SAMPLED BY: ORSC
PICKUP/DEL BY: ORSC (Federal Express)
TESTS: Thickness, Peel Adhesion and Shear Strength

LAB#: FOB-001
REPORT#: MC-133
DATE DELIVERED: 1/12/98
DATE TESTED: 1/13/98

A. Sample Description:

DS121 245/290A LL(MX003) – 10/31/97 – Seam Width 2"
DS122 166/131 LL(MX003) – 11/07/97 – Seam Width 2"
DS123 127/143 LL(MX003) – 11/13/97 – Seam Width 2"
DS124 127/123 LL(MX003) – 11/19/97 – Seam Width 2"
DS125 123/138 LL(MX003) – 11/19/97 – Seam Width 2"
DS126 124/132 LL(MX003) – 11/18/97 – Seam Width 2"
DS127 165/139 LL(MX003) – 11/18/97 – Seam Width 2"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS121	DS 122	DS 123	DS 124	DS 125	DS126	DS 127
Top	42.0	39.0	41.0	39.5	39.0	40.0	39.5
	42.0	39.0	41.0	39.5	39.0	40.0	39.5
	42.0	39.0	41.0	39.5	39.0	40.0	39.5
	42.0	39.0	41.0	39.5	39.0	40.0	39.5
	42.0	39.0	41.0	39.5	39.0	40.0	39.5
Average	42.0	39.0	41.0	39.5	39.0	40.0	39.5
Bottom	40.0	41.0	39.5	39.5	40.0	39.0	40.0
	40.0	41.0	39.5	39.5	40.0	39.0	40.0
	40.0	41.0	39.5	39.5	40.0	39.0	40.0
	40.0	41.0	39.5	39.5	40.0	39.0	40.0
	40.0	41.0	39.5	39.5	40.0	39.0	40.0
Average	40.0	41.0	39.5	39.5	40.0	39.0	40.0

C. Peel Adhesion Strength (lbs/in) (Specified 10 lbs/in, min), ASTM D413

Sample Id	DS 121	DS 122	DS 123	DS 124	DS 125	DS 126	DS 127
	35.0	35.7	31.6	34.3	39.9	33.2	31.0
	38.8	32.9	36.4	36.2	35.0	36.0	34.7
	39.6	27.9	33.3	36.0	33.8	31.3	37.9
	37.5	30.3	35.8	37.1	34.2	35.2	36.1
	37.1	27.5	32.7	39.7	32.8	36.2	32.8
Average	37.6	30.9	34.0	36.7	35.1	34.4	34.5

M&T/NAMOW/TCL J.V.

Roy F. Weston, Inc. Sutton Park
Lab #: FOB-001 Report #: MC-133
Page 2 of 2

D. Shear Strength (lbs/in) (Specified 74 lbs/in. min), ASTM D3083

Sample ID	DS 121	DS 122	DS 123	DS 124	DS 125	DS 126	DS 127
	91.1	95.1	99.3	91.7	94.8	93.3	92.7
	99.1	94.87	97.4	93.3	92.9	96.1	94.9
	92.3	94.2	90.3	91.9	98.2	95.2	92.9
	95.5	92.7	95.2	97.1	97.4	96.0	93.5
	97.1	92.9	94.5	97.3	48.0	94.3	94.6
Average	95.0	93.9	95.3	94.3	96.3	95.0	93.7

Comments: All samples comply with job specifications.

M & T / NAMOW / TCL / J.V.



Kaspal R. Thumma, Eng. Sc.D., P.E.
Laboratory Manager
KRT/mp

cc: rfwoy 1, file 1, bill 1/mp



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupons 136 to 140
SAMPLED BY: OE&C
PICKUP/DEL BY: OE&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-143
DATE PICKUP/DEL: 04/20/98
DATE TESTED: 04/22/98

A. Sample Description:

DS 136 209 Old/420 New LL CGLUC 04/01/98 – Seam Width 4.6”
DS 137 290A/290B LL (MX008) 04/01/98 – Seam Width 1.5”
DS 138 419A/306 LL (MX008) 04/07/98 – Seam Width 1.5”
DS 130 419A/422 LL (MX008) 04/03/98 – Seam Width 5”
DS 140 306A/305B LL (MX008) 04/07/98 – Seam Width 1.5”

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS136	DS137	DS138	DS139	DS140
Top	40.0	40.0	39.0	40.0	40.0
	40.0	40.0	40.0	40.0	40.0
	40.0	40.0	40.0	40.0	40.0
	40.0	40.0	40.0	40.0	40.0
	40.0	40.0	40.0	40.0	40.0
Average	40.0	40.0	39.8	40.0	40.0
Bottom	40.0	40.0	39.0	40.0	40.0
	40.0	40.0	40.0	40.0	40.0
	40.0	40.0	39.0	40.0	40.0
	40.0	40.0	39.0	40.0	40.0
	40.0	40.0	39.0	40.0	40.0
Average	40.0	40.0	39.5	40.0	40.0

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS136	DS137	DS138	DS139	DS140
	49.7	48.9	50.6	47.8	53.0
	45.3	50.4	47.3	46.9	51.2
	50.5	57.1	48.1	48.7	50.1
	48.7	56.3	48.9	50.9	49.8
	47.9	49.5	50.3	54.7	50.3
Average	48.4	52.4	49.0	49.8	50.9



M&T/NAMOW/TCL □ J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: Mc-143
Page 2 Of 3

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D33083

Sample ID	DS136	DS137	DS138	DS139	DS140
	98.7	98.7	97.4	83.2	96.5
	86.9	100.1	93.4	84.3	101.3
	84.1	105.6	96.8	91.1	88.1
	89.1	97.4	91.0	95.6	84.6
	87.3	95.3	96.3	75.8	91.3
Average	89.2	99.4	95.0	86.0	92.4

Comments: All samples comply with job specifications

M & T / NAMOW / TCL / J.V.

Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwoy 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupons 141 to 145
SAMPLED BY: OE&C
PICKUP/DEL BY: OE&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-144
DATE PICKUP/DEL: 04/20/98
DATE TESTED: 04/22/98

A. Sample Description:

DS 141 148/303 LL (MX008) 04/08/98 – Seam Width 1.5”
DS 142 305/305A LL (MX008) 04/02/98 – Seam Width 1.8”
DS 143 307A/307 LL (MX008) 04/08/98 – Seam Width 1.5”
DS 144 158/157 LL (MX008) 04/13/98 – Seam Width 1.5”
DS 145 155/158A LL (MX008) 04/13/98 – Seam Width 1.5”

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS141	DS142	DS143	DS144	DS145
Top	40.0	38.0	39.0	40.0	40.0
	39.0	39.0	40.0	40.0	40.0
	39.0	38.0	40.0	40.0	40.0
	39.0	39.0	39.0	40.0	40.0
	39.0	39.0	39.0	40.0	40.0
Average	39.2	38.6	39.4	40.0	40.0
Bottom	40.0	38.0	39.0	40.0	40.0
	39.0	39.0	39.0	40.0	40.0
	39.0	39.0	39.0	40.0	40.0
	39.0	39.0	39.0	40.0	40.0
	39.0	39.0	40.0	40.0	40.0
Average	39.2	38.7	39.3	40.0	40.0

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS141	DS142	DS143	DS144	DS145
	46.7	50.2.9	52.6	47.8	39.7
	48.9	53.0	48.2	42.7	47.8
	50.1	51.6	59.5	36.5	47.3
	47.3	50.3	57.1	40.1	45.6
	49.1	49.5	48.7	41.5	31.3
Average	48.4	50.9	53.2	41.7	42.3



M&T/NAMOW/TCL □ J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: Mc-144
Page 2 of 3

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D33083

Sample ID	DS141	DS142	DS143	DS144	DS145
	84.0	87.4	89.9	89.4	91.0
	88.4	87.7	91.1	86.8	83.2
	91.4	89.4	89.4	94.5	95.9
	91.6	87.0	91.2	83.4	99.1
	89.8	92.0	94.5	90.6	88.2
Average	89.0	88.7	91.2	88.9	91.5

Comments: All samples comply with job specifications

M & T / NAMOW / TCL / J.V.

Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwony 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupons No. 146
SAMPLED BY: OE&C
PICKUP/DEL BY: OE&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-145
DATE PICKUP/DEL: 04/2898
DATE TESTED: 04/29/98

- A. Sample Description:
DS 146 305B/157F LL (MX008) 04/21/98 – Seam Width 1.5"
- B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS146
Top	40.0 40.0 40.0 39.0 39.0
Average	39.6
Bottom	39.0 40.0 40.0 39.0 39.0
Average	39.4

- C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in). ASTM D413

Sample ID	DS146
	25.8 33.7 40.6 29.2 36.6
Average	33.2



M&T/NAMOW/TCL □ J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: Mc-145
Page 2 of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D33083

Sample ID	DS146
	98.6
	94.0
	91.4
	95.8
	87.7
Average	93.5

Comments: The sample complies with job specifications

M & T / NAMOW / TCL / J.V.

Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwoy 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupons (115, 147, 148, and 149)
SAMPLED BY: OE&C
PICKUP/DEL BY: OF&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-147
DATE PICKUP/DEL: 05/02/98
DATE TESTED: 05/05/98

A. Sample Description:

DS 115 170/169 JG (MX008) – Seam Width 1.5"
DS 147 310C/421 LL (MX008) 04/26/98 – Seam Width 1.5"
DS 148 307A/238A LL (MX008) 04/26/98 – Seam Width 1.5"
DS 149 421/233A LL (MX008) 04/27/98 – Seam Width 1.5"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS115	DS147	DS148	DS149
Top	40.0	40.0	39.0	40.0
	40.0	40.0	40.0	40.0
	40.0	40.0	40.0	40.0
	39.0	40.0	40.0	40.0
	40.0	40.0	40.0	40.0
Average	39.8	40.0	39.8	40.0
Bottom	40.0	40.0	40.0	40.0
	39.0	40.0	40.0	40.0
	39.0	40.0	40.0	40.0
	39.0	39.0	40.0	40.0
	40.0	39.0	40.0	40.0
Average	39.4	39.6	40.0	40.0

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS115	DS147	DS148	DS149
	30.1	38.3	24.7	32.0
	31.9	56.4	36.6	33.0
	18.6	38.5	34.6	34.5
	6.4	28.9	32.6	28.0
	4.8	24.0	35.7	33.1
Average	18.4	37.2	32.8	32.1



M&T/NAMOW/TCL-J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: Mc-147
Page 2 of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D33083

Sample ID	DS115	DS147	DS148	DS149
	84.7	91.1	92.5	41.2
	73.5	92.0	38.9	39.4
	95.3	92.4	50.3	35.8
	83.2	90.9	61.5	38.1
	88.0	85.4	91.3	38.4
Average	84.9	90.4	66.9	38.6

Comments: All samples comply with job specifications

M & T / NAMOW / TCL / J.V.

Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwoy 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupon No. 151
SAMPLED BY: OE&C
PICKUP/DEL BY: OE&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-153
DATE PICKUP/DEL: 05/19/98
DATE TESTED: 05/19/98

Page 1 of 2

A. Sample Description:
DS 151 BLKT (MX008) 05/18/98 – Seam Width 1.5"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS151
Top	39.5
	39.5
	39.5
	40.0
	40.0
Average	39.7
Bottom	40.0
	40.0
	40.0
	40.0
	40.5
Average	40.1

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS151
	40.7
	36.9
	37.1
	40.0
	39.4
Average	38.8



M&T/NAMOW/TCL □ J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: Mc-153
Page 2 of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D3083

Sample ID	DS151
	81.5*
	79.9*
	80.1*
	79.9*
	75.4*
Average	79.2

* Broke just outside the bond in the virgin material.

Comments: All samples comply with job specifications

M & T / NAMOW / TCL / J.V.

Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwoy 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

(Revised on 06/03/98)*

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupons (148, 149, and 150)
SAMPLED BY: OE&C
PICKUP/DEL BY: OE&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-154
DATE PICKUP/DEL: 05/20/98
DATE TESTED: 05/21/98

Page 1 of 2

*Comments revised in this revision.

A. Sample Description:

DS 148 307A/238A LL (MX008) 04/26/98 – Seam Width 1.5"

DS 149 421/238A LL (MX008) 04/27/98 – Seam Width 1.5"

DS 150 315/311 LL (MX008) 04/29/98 – Seam Width 1.5"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS148	DS149	DS150
Top	40.0	40.0	40.0
	40.0	40.0	40.0
	40.0	40.0	40.0
	40.0	41.0	40.0
	40.0	40.0	40.0
Average	40.0	40.2	40.0
Bottom	39.0	41.0	40.0
	39.0	40.0	40.0
	39.0	41.0	40.0
	40.0	41.0	40.0
	40.0	41.0	40.0
Average	39.4	40.8	40.0

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS148	DS149	DS150
	35.9	28.2	33.1
	36.1	26.0	32.0
	25.6	26.7	46.4
	33.0	23.7	41.8
	28.6	28.7	45.2
Average	31.8	26.7	39.7

M&T/NAMOW/TCL □ J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: MC-154
Page 2 Of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D3083

Sample ID	DS148	DS149	DS150
	75.7	72.8	78.5
	88.6	73.8	83.3
	86.1	70.0	76.2
	78.8	82.5	78.8
	87.2	76.9	74.3
Average	83.3	75.2	78.2

Note: All samples broke in virgin material outside the seam.

Comments: All samples comply with job specifications, except shear strength of sample DS 149. Three out of five shear tests of sample DS 149 show shear strengths lower than minimum specified.

M & T / NAMOW / TCL / J.V.



Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwony 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL □ J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

(Revised on 06/03/98)*

CLIENT: Roy F. Weston of New York

LAB#: FOB-001

PROJECT: Clarkstown Landfill cap Site

REPORT#: MC-157

SAMPLED ID: Destruct Coupons 152, 153, 154, 155, 156, and 157

DATE PICKUP/DEL: 05/28/98

SAMPLED BY: OE&C

DATE TESTED: 06/01/98

PICKUP/DEL BY: OE&C (Federal Express)

TESTS: Thickness, Peel Adhesion, and Shear Strength

Page 1 of 2

*Comments revised in this revision

A. Sample Description:

DS 152 134/134A LL (MX008) 05/20/98 – Seam Width 1.5"

DS 153 412/313 LL (MX008) 05/20/98 – Seam Width 1.5"

DS 154 287/134A LL (MX008) 05/20/98 – Seam Width 1.5"

DS 155 319/319A LL (MX008) 05/22/98 – Seam Width 1.5"

DS 156 316/319 LL (MX008) 05/22/98 – Seam Width 1.5"

DS 157 313/316 LL (MX008) 05/22/98 – Seam Width 1.5"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 152	DS 153	DS 154	DS 155	DS 156	DS 157
Top	40.0	39.0	39.0	41.0	39.0	40.0
	39.0	39.0	39.0	40.0	39.0	39.0
	39.0	39.0	39.0	40.0	39.0	39.0
	39.0	39.0	39.0	40.0	39.0	40.0
	39.0	39.0	39.0	41.0	39.0	39.0
Average	39.2	39.0	39.0	40.4	39.0	39.4
Bottom	39.0	40.0	40.0	40.0	40.0	40.0
	39.0	40.0	40.0	40.0	40.0	39.0
	40.0	40.0	40.0	40.0	40.0	39.0
	40.0	40.0	40.0	40.0	40.0	39.0
	39.0	40.0	40.0	40.0	40.0	39.0
Average	39.4	40.0	40.0	40.0	40.0	39.2

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	152	153	154	155	156	157
	43.4	32.3	19.9	39.1	46.4	37.4
	34.4	29.3	29.3	43.1	45.1	41.8
	39.8	38.1	26.2	32.2	46.4	36.9
	21.6	37.2	28.9	45.8	35.1	31.4
	25.1	34.1	26.3	33.4	41.7	36.4
Average	32.9	34.2	26.1	38.7	42.9	36.8

M&T/NAMOW/TCL J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: MC-157
Page 2 of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D3083

Sample ID	152	153	154	155	156	157
	75.5	72.8	82.8	95.5	80.5	80.9
	77.5	71.1	94.0	85.8	77.7	80.8
	83.4	76.1	89.5	78.2	80.0	88.4
	78.5	73.6	87.7	98.4	80.1	76.9
	86.5	83.8	87.3	89.5	87.7	81.0
Average	80.3	75.5	87.7	89.5	81.2	81.6

Note: All samples broke in virgin material outside the seam.

Comments: All samples comply with job specifications, except shear strength of sample DS 153. Three out of five shear tests of sample DS 153 show shear strengths lower than minimum specified.

M & T / NAMOW / TCL / J.V.



Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
T/ajf

cc: rfwoy 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
PROJECT: Clarkstown Landfill cap Site
SAMPLED ID: Destruct Coupon No. 153 R
SAMPLED BY: OE&C
PICKUP/DEL BY: OE&C (Federal Express)
TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
REPORT#: MC-158
DATE PICKUP/DEL: 06/10/98
DATE TESTED: 06/11/98

Page 1 of 2

A. Sample Description:
DS 153 R 06/05/98 – Seam Width 4.0"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 153R
Top	40.0
	40.0
	40.0
	40.0
	39.0
Average	39.8
Bottom	40.0
	40.0
	40.0
	40.0
	40.0
Average	40.0

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS 153R
	24.3
	24.6
	21.4
	21.5
	22.8
Average	22.9

M&T/NAMOW/TCL □ J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: Mc-158
Page 2 of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D3083

Sample ID	DS 153R
	104.3**
	96.2**
	96.2**
	93.9*
	84.4*
Average	95.0

* The sample broke in the virgin material away from bond and grip.

** The sample did not break

Comments: The sample complies with job specifications

M & T / NAMOW / TCL / J.V.



Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwony 1, file 1, bill 1 / ajf



M&T/NAMOW/TCL J.V.

TESTING OF FIELD SEAM COUPONS OF GEOSYNTHETIC SHEETS

CLIENT: Roy F. Weston of New York
 PROJECT: Clarkstown Landfill cap Site
 SAMPLED ID: Destruct Coupons 158, 159, 160, and 161
 SAMPLED BY: OE&C
 PICKUP/DEL BY: OE&C (Federal Express)
 TESTS: Thickness, Peel Adhesion, and Shear Strength

LAB#: FOB-001
 REPORT#: MC-160
 DATE PICKUP/DEL: 06/23/98
 DATE TESTED: 06/24/98

Page 1 of 2

A. Sample Description:

DS 158 311/134B NB GLUE 05/28/98 – Seam Width 1"
 DS 159 310/310E LL (MX008) 06/08/98 – Seam Width 1"
 DS 160 318/318A LL (MX008) 06/08/98 – Seam Width 1"
 DS 161 318A/302 NB GLUE 06/10/98 – Seam Width 1"

B. Thickness (mils) (Specified 40 mils, + 2/-2), ASTM D1593

Sample ID	DS 158	DS 159	DS 160	DS 161
Top	39.0	39.0	40.0	40.0
	39.0	39.0	40.0	40.0
	39.0	39.0	40.0	40.0
	39.0	39.0	40.0	40.0
	39.0	39.0	40.0	40.0
Average	39.0	39.0	40.0	40.0
Bottom	40.0	39.0	39.0	39.0
	40.0	40.0	40.0	39.0
	40.0	39.0	40.0	39.0
	40.0	39.0	40.0	39.0
	40.0	39.0	40.0	39.0
Average	40.0	39.2	39.8	39.0

C. Peel Adhesion Strength (lbs./in) (Specified 10 lbs./in), ASTM D413

Sample ID	DS 158	DS 159	DS 160	DS 161
	19.1	22.6	48.6	21.5
	21.9	27.4	35.2	25.2
	20.5	25.1	29.3	21.2
	21.0	21.0	34.5	23.0
	21.1	25.3	51.2	21.7
Average	20.7	24.3	39.8	22.5

Corporate Headquarters - 47 Hudson Street - Ossining, N.Y. 10562 - Tel: 914-762-9000 - Fax: 914-762-9638

M&T/NAMOW/TCL-J.V.

Roy F. Weston of New York
Lab #: FOB-001 Rpt. #: MC-160
Page 2 of 2

D. Shear Strength (lbs./in) (Specified 74 lbs./in, min), ASTM D3083

Sample ID	DS 158	DS 159	DS 160	DS 161
	80.6	90.5	93.2	83.5
	80.7	89.6	90.1	87.2
	81.5	89.5	87.9	95.3
	94.6	93.6	89.7	90.7
	78.0	95.7	89.7	96.3
Average	83.1	91.2	90.1	90.6

Note: All samples broke in virgin material outside the seam.

Comments: All samples comply with job specifications.

M & T / NAMOW / TCL / J.V.

Kaspal R. Thumma, Eng. Sc. D., P.E.
Laboratory Manager
KRT/ajf

cc: rfwoy 1, file 1, bill 1 / ajf

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-162
 Seam No.: 302A/302
 Seamed by: ND GLUF
 Date Seamed:

Sample Size: 1" x 10"
 Material: PVC
 Weld Type: SOLVENT
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.
 Length of Seam: 6.5"

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	29.26	AD
2		29.45	AD
3		29.12	AD
4		29.60	AD
5		26.25	AD

Average Load (Weld A Inside Peel) 28.74 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	83.31	BREAK AT SEAM EDGE
2		78.12	BREAK AT SEAM EDGE
3		75.68	BREAK AT SEAM EDGE
4		80.00	BREAK AT SEAM EDGE
5		72.12	BREAK AT SEAM EDGE

Average Load (Shear) 77.85 pounds

EMONY-GLLINERSVP+S\CLRK-162.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-163
 Seam No.:
 Seamed by: OLUE
 Date Seamed:

Sample Size: 1" x 10"
 Material: PVC
 Weld Type: SOLVENT
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.
 Length of Seam: 5"

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.038	29.60	AD
2		21.68	AD
3		24.12	AD
4		21.31	AD
5		23.36	AD

Average Load (Weld A Inside Peel) 24.01 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.038	91.87	BREAK AT SEAM EDGE
2		79.12	BREAK AT SEAM EDGE
3		78.56	BREAK AT SEAM EDGE
4		78.50	BREAK AT SEAM EDGE
5		87.75	BREAK AT SEAM EDGE

Average Load (Shear) 83.16 pounds

EMMY-GLLINERSP+SCLRK-163.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LE CAPTING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-164
 Seam No.:
 Seamed by: LL MC8
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.042	30.31	AD-BRK 60% ADHESION FAILURE
2		30.37	AD-BRK 70% ADHESION FAILURE
3		32.43	AD-BRK 40% ADHESION FAILURE
4		29.75	AD-BRK 40% ADHESION FAILURE
5		29.37	AD

Average Load (Weld A Inside Peel) 30.45 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.042	70.50	BREAK AT SEAM EDGE
2		71.68	BREAK AT SEAM EDGE
3		71.62	BREAK AT SEAM EDGE
4		70.56	BREAK AT SEAM EDGE
5		71.06	BREAK AT SEAM EDGE

Average Load (Shear) 71.08 pounds

EMNY-GLALINERSP+SVCLRK-164.XLS

ID:

AUG 05'98 13:37 No.004 P.05

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-5-98

Sample No.: DS-164S2
 Seam No.: 320/165
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	23.01	AD
2		30.56	AD
3		27.25	AD
4		23.98	AD
5		25.00	AD

Average Load (Weld A Inside Peel) 25.96 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	77.87	BREAK AT SEAM EDGE
2		78.25	BREAK AT SEAM EDGE
3		78.22	BREAK AT SEAM EDGE
4		79.87	BREAK AT SEAM EDGE
5		76.87	BREAK AT SEAM EDGE

Average Load (Shear) 78.22 pounds

EMNY-00LNERSVP+S\CLRK164S.XLS

Received: 08/05/98 02:05:00 From:

ID:

AUG 05 '98 13:37 No.004 P.06

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY P. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: K.S.A.
 Date Tested: 8-5-98

Sample No.: DS-164N2
 Seam No.: 320/165
 Scanned by:
 Date Scanned:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	32.81	AD
2		31.28	AD
3		27.81	AD
4		26.61	AD
5		31.43	AD

Average Load (Weld A Inside Peel) 29.92 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	79.68	BREAK AT SEAM EDGE
2		78.75	BREAK AT SEAM EDGE
3		82.25	BREAK AT SEAM EDGE
4		80.32	BREAK AT SEAM EDGE
5		79.00	BREAK AT SEAM EDGE

Average Load (Shear) 80.00 pounds

EMNY-GL/LINERS/J+S/CLRK164N.XLS

Received: 08/05/98 02:05:00 From:

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 85738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-164 CAP
 Seam No.:
 Spamed by:
 Data Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in/min.
 SHEAR 20 in/min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	18.62	AD
2		17.27	AD
3		16.77	AD
4		19.60	AD
5		17.35	AD

Average Load (Weld A Inside Peel) 17.92 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	82.42	BREAK AT SEAM EDGE
2		78.10	BREAK AT SEAM EDGE
3		84.12	BREAK AT SEAM EDGE
4		81.45	BREAK AT SEAM EDGE
5		86.75	BREAK AT SEAM EDGE

Average Load (Shear) 82.57 pounds

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-165
 Seam No.:
 Seamed by: LL MXS
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.042	32.50	AD
2		34.31	AD
3		38.06	AD-BRK 40% ADHESION FAILURE
4		30.62	AD
5		29.00	AD

Average Load (Weld A Inside Peel) 32.90 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.042	81.50	BREAK AT SEAM EDGE
2		78.25	BREAK AT SEAM EDGE
3		81.12	BREAK AT SEAM EDGE
4		81.81	BREAK AT SEAM EDGE
5		80.12	BREAK AT SEAM EDGE

Average Load (Shear) 80.56 pounds

EMNY-OLILINERSP+SCLRK-165.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-166
 Seam No.:
 Seamed by: LL MX8
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.042	33.81	AD-BRK 10% ADHESION FAILURE
2		30.25	AD-BRK 90% ADHESION FAILURE
3		23.43	AD-BRK 30% ADHESION FAILURE
4		33.12	AD
5		35.81	AD-BRK 30% ADHESION FAILURE

Average Load (Weld A Inside Peel) 31.28 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.042	69.56	BREAK AT SEAM EDGE
2		67.31	BREAK AT SEAM EDGE
3		68.87	BREAK AT SEAM EDGE
4		67.07	BREAK AT SEAM EDGE
5		63.62	BREAK AT SEAM EDGE

Average Load (Shear) 67.29 pounds

EMNY-GLLINERSP+S\CLRK-166.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: S673R.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-5-98

Sample No.: DS-166S2
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (pool) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	23.16	AD
2		14.12	AD
3		14.10	AD
4		16.13	AD
5		14.50	AD

Average Load (Weld A Inside Pool) 16.40 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	87.96	BREAK AT SEAM EDGE
2		86.81	BREAK AT SEAM EDGE
3		92.15	BREAK AT SEAM EDGE
4		94.75	BREAK IN SHEETING
5		91.87	BREAK AT SEAM EDGE

Average Load (Shear) 90.71 pounds

EMNY-OL-LINERS+SEAM1662.XLS

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY P. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-166N8
 Seam No.: 319/329A
 Seamed by: LL MX8
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.039	36.81	AD
2		37.65	AD
3		35.75	AD
4		29.22	AD
5		31.87	AD-BRK 20% ADHESION FAILURE

Average Load (Weld A Inside Peel) 34.26 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.039	79.70	BREAK AT SEAM EDGE
2		77.05	BREAK AT SEAM EDGE
3		80.50	BREAK AT SEAM EDGE
4		80.10	BREAK AT SEAM EDGE
5		80.72	BREAK AT SEAM EDGE

Average Load (Shear) 79.61 pounds

EMCON **GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT** **LABORATORY TEST RESULTS**

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-11-98

Sample No.: DS-166
 Seam No.: CAP
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	29.96	AD
2		31.97	AD
3		29.37	AD
4		28.08	AD
5		29.33	AD

Average Load (Weld A Inside Peel) 29.74 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	93.91	BREAK AT SEAM EDGE
2		90.63	BREAK AT SEAM EDGE
3		93.68	BREAK AT SEAM EDGE
4		81.11	BREAK AT SEAM EDGE
5		79.93	BREAK AT SEAM EDGE

Average Load (Shear) 87.83 pounds

EMMY-GILINERS:P+S\CLRK166CJLS

ID:

JUL 28'98 12:46 No.003 P.07

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
Client: ROY F. WESTON
Project No.: 86738.001

Assigned by: N.N.
Tested by: K.H.
Checked by: R.S.A.
Date Tested: 7-23-98

Sample No.: DS-167
Seam No.:
Seamed by: LL MX8
Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
Material: PVC
Weld Type: HEAT BOND
Strain Rate: 2 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	19.93	AD
2		34.68	AD-BRK 20% ADHESION FAILURE
3		30.37	AD-BRK 30% ADHESION FAILURE
4		41.81	AD
5		27.75	AD

Average Load (Weld A Inside Peel) 30.21 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	82.75	BREAK AT SEAM EDGE
2		87.50	BREAK AT SEAM EDGE
3		77.62	BREAK AT SEAM EDGE
4		73.50	BREAK AT SEAM EDGE
5		87.00	BREAK AT SEAM EDGE

Average Load (Shear) 81.67 pounds

EMNY-GLLINERSVP+S\CLRK-167.XLS

Received: 07/28/98 01:18:22 From:

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-168
 Seam No.:
 Seamed by: LL MX8
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	38.43	AD-BRK 20% ADHESION FAILURE
2		35.57	AD-BRK 20% ADHESION FAILURE
3		40.00	AD-BRK 60% ADHESION FAILURE
4		38.87	AD-BRK 20% ADHESION FAILURE
5		36.00	AD-BRK 20% ADHESION FAILURE

Average Load (Weld A Inside Peel) 37.77 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	74.75	BREAK AT SEAM EDGE
2		75.56	BREAK AT SEAM EDGE
3		76.60	BREAK AT SEAM EDGE
4		88.31	BREAK AT SEAM EDGE
5		76.81	BREAK AT SEAM EDGE

Average Load (Shear) 78.41 pounds

EMNY-GLJINERS\F+S\CLRK-168.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-169
 Seam No.:
 Seamed by: LL MX8
 Date Seamed:

Sample Size: 1" x 6" (pool) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	44.75	SE
2		45.43	SE
3		34.50	AD-BRK 10% ADHESION FAILURE
4		44.87	SE
5		36.40	AD-BRK 50% ADHESION FAILURE

Average Load (Weld A Inside Peel) 41.19 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	80.12	BREAK AT SEAM EDGE
2		78.50	BREAK AT SEAM EDGE
3		77.93	BREAK AT SEAM EDGE
4		70.25	BREAK AT SEAM EDGE
5		67.87	BREAK AT SEAM EDGE

Average Load (Shear) 74.23 pounds

EMNY-GLALINERSP+SCLRK-169.XLS

ID:

AUG 05 '98 13:36 No.004 P.03

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-169N2
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)		
1	0.041	46.40	AD-BRK	20%	ADHESION FAILURE
2		31.37	AD-BRK	10 %	ADHESION FAILURE
3		40.56	AD-BRK	10 %	ADHESION FAILURE
4		41.62	SE		
5		44.12	SE		

Average Load (Weld A Inside Peel) 40.81 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	79.27	BREAK AT SEAM EDGE
2		70.87	BREAK AT SEAM EDGE
3		72.00	BREAK AT SEAM EDGE
4		72.32	BREAK AT SEAM EDGE
5		78.75	BREAK AT SEAM EDGE

Average Load (Shear) 74.64 pounds

EMNY-GLULINERSP+S\CLRK169N.XLS

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738 001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-169N4
 Seam No.: 326A329
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	39.45	SE
2		41.56	SE
3		42.82	SE
4		43.31	SE
5		45.27	SE

Average Load (Weld A Inside Peel) 42.43 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	77.43	BREAK AT SEAM EDGE
2		73.37	BREAK AT SEAM EDGE
3		78.68	BREAK AT SEAM EDGE
4		79.57	BREAK AT SEAM EDGE
5		77.31	BREAK AT SEAM EDGE

Average Load (Shear) 77.33 pounds

ID:

AUG 05'98 13:36 No.004 P.04

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: \$6738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-5-98

Sample No.: DS-169S5
 Seam No.: 326A/325
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	32.46	AD
2		41.62	AD-BRK 80% ADHESION FAILURE
3		33.00	AD-BRK 90% ADHESION FAILURE
4		42.82	AD-BRK 80% ADHESION FAILURE
5		33.56	AD

Average Load (Weld A Inside Peel) 36.69 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	74.83	BREAK AT SEAM EDGE
2		75.01	BREAK AT SEAM EDGE
3		77.93	BREAK AT SEAM EDGE
4		75.25	BREAK AT SEAM EDGE
5		74.72	BREAK AT SEAM EDGE

Average Load (Shear) 75.55 pounds

EMNY-GLLINERSP+SCLRK169S.XLS

Received: 08/05/98 02:05:00 From:

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY P. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-6-98

Sample No.: DS-169CAP
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.041	15.43	AD
2		16.63	AD
3		16.00	AD
4		16.42	AD
5		16.66	AD

Average Load (Weld A Inside Peel) 15.23 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.041	84.06	BREAK AT SEAM EDGE
2		70.38	BREAK AT SEAM EDGE
3		84.40	BREAK AT SEAM EDGE
4		79.15	BREAK AT SEAM EDGE
5		88.61	BREAK AT SEAM EDGE

Average Load (Shear) 81.32 pounds

EMNY-OLILINERSP+SCLRK169C.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPTING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-170
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.039	46.56	AD-BRK 10% ADHESION FAILURE
2		44.50	AD-BRK 10% ADHESION FAILURE
3		42.87	AD-BRK 20% ADHESION FAILURE
4		42.50	AD-BRK 10% ADHESION FAILURE
5		35.18	SE

Average Load (Weld A Inside Peel) 42.32 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.039	84.62	BREAK AT SEAM EDGE
2		80.75	BREAK AT SEAM EDGE
3		75.95	BREAK AT SEAM EDGE
4		82.81	BREAK AT SEAM EDGE
5		67.55	BREAK AT SEAM EDGE

Average Load (Shear) 78.34 pounds

EMNY-GLLINERS\PS\CLRK-170.XLS

ID:

JUL 28 '98 12:47 No.003 P.11

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-171
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	42.25	AD-BRK 10% ADHESION FAILURE
2		35.93	AD-BRK 20% ADHESION FAILURE
3		39.25	AD-BRK 20% ADHESION FAILURE
4		37.68	AD-BRK 30% ADHESION FAILURE
5		34.81	AD-BRK 30% ADHESION FAILURE

Average Load (Weld A Inside Peel) 37.98 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	75.25	BREAK AT SEAM EDGE
2		77.93	BREAK AT SEAM EDGE
3		77.47	BREAK AT SEAM EDGE
4		81.31	BREAK AT SEAM EDGE
5		70.40	BREAK AT SEAM EDGE

Average Load (Shear) 76.47 pounds

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-172
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.039	39.06	AD-BRK 10% ADHESION FAILURE
2		33.68	AD-BRK 30% ADHESION FAILURE
3		33.68	AD-BRK 10% ADHESION FAILURE
4		40.00	SE
5		37.12	AD-BRK 30% ADHESION FAILURE

Average Load (Weld A Inside Peel) 37.11 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.039	74.06	BREAK AT SEAM EDGE
2		73.95	BREAK AT SEAM EDGE
3		80.18	BREAK AT SEAM EDGE
4		83.40	BREAK AT SEAM EDGE
5		78.75	BREAK AT SEAM EDGE

Average Load (Shear) 78.07 pounds

EMNY-GLULINERSP+8\CLRK-172.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-23-98

Sample No.: DS-173
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.039	30.20	AD
2		24.12	AD
3		35.00	AD
4		17.32	AD
5		27.43	AD

Average Load (Weld A Inside Peel) 26.81 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.039	99.87	BREAK AT SEAM EDGE
2		98.18	BREAK AT SEAM EDGE
3		97.56	BREAK AT SEAM EDGE
4		87.62	BREAK AT SEAM EDGE
5		98.18	BREAK AT SEAM EDGE

Average Load (Shear) 26.28 pounds

EMWY-GLINERSVP+8'CLRK-173.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-25-98

Sample No.: DS-174
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	17.50	AD
2		18.50	AD
3		22.30	AD
4		22.48	AD
5		19.58	AD

Average Load (Weld A Inside Peel) 20.07 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	92.58	BREAK IN THE SHEETING
2		95.98	BREAK AT SEAM EDGE
3		85.12	BREAK AT SEAM EDGE
4		85.13	BREAK IN THE SHEETING
5		85.10	BREAK AT SEAM EDGE

Average Load (Shear) 88.78 pounds

EMNY-OLMLNERSP+SICLRK-174.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-25-98

Sample No.: DS-175
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.039	40.13	AD 15% ADHESION FAILURE
2		53.12	SE
3		46.12	AD 15% ADHESION FAILURE
4		43.71	AD
5		33.60	AD

Average Load (Weld A Inside Peel) 43.34 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.039	94.50	BREAK AT SEAM EDGE
2		91.98	BREAK AT SEAM EDGE
3		91.88	BREAK AT SEAM EDGE
4		92.67	BREAK AT SEAM EDGE
5		90.02	BREAK AT SEAM EDGE

Average Load (Shear) 92.21 pounds

EMNY-GLLINERSP+S\CLRK-175.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY P. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-25-98

Sample No.: DS-176
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 6" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	52.12	AD 25% ADHESION FAILURE
2		53.13	SE
3		54.12	SE
4		43.12	SE
5		48.16	SE

Average Load (Weld A Inside Peel) 50.13 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	93.08	BREAK AT SEAM EDGE
2		90.12	BREAK AT SEAM EDGE
3		88.78	BREAK AT SEAM EDGE
4		94.58	BREAK AT SEAM EDGE
5		93.51	BREAK AT SEAM EDGE

Average Load (Shear) 92.01 pounds

EMMNY-GLL1NERSVP+S\CLRK-176.XLS

EMCON **GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT** **LABORATORY TEST RESULTS**

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY P. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 7-25-98

Sample No.: DS-177
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	45.32	AD-BRK 40% ADHESION FAILURE
2		49.91	SE
3		50.12	SE
4		48.78	SE
5		42.62	AD-BRK 20% ADHESION FAILURE

Average Load (Weld A Inside Peel) 47.39 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	89.38	BREAK AT SEAM EDGE
2		84.45	BREAK AT SEAM EDGE
3		85.52	BREAK AT SEAM EDGE
4		85.71	BREAK AT SEAM EDGE
5		87.17	BREAK AT SEAM EDGE

Average Load (Shear) 86.45 pounds

EMMNY-GLALINERS/P+S/CLRK-177.XLS

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-178
 Seam No.: 427A/427D
 Seamed by: LL MX8
 Date Seamed: 7-24-98

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	49.15	AD-BRK 40% ADHESION FAILURE
2		49.30	AD-BRK 20% ADHESION FAILURE
3		45.90	AD-BRK 10% ADHESION FAILURE
4		44.38	AD-BRK 40% ADHESION FAILURE
5		50.15	AD-BRK 20% ADHESION FAILURE

Average Load (Weld A Inside Peel) 47.78 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	87.56	BREAK AT SEAM EDGE
2		95.00	BREAK AT SEAM EDGE
3		102.68	BREAK AT SEAM EDGE
4		97.68	BREAK AT SEAM EDGE
5		88.62	BREAK AT SEAM EDGE

Average Load (Shear) 94.31 pounds

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-179
 Seam No.: 427B/426B
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	40.07	AD
2		41.42	AD-BRK 90% ADHESION FAILURE
3		42.23	AD-BRK 70% ADHESION FAILURE
4		46.80	AD-BRK 40% ADHESION FAILURE
5		47.42	AD-BRK 40% ADHESION FAILURE

Average Load (Weld A Inside Peel) 43.59 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	95.81	BREAK AT SEAM EDGE
2		98.43	BREAK AT SEAM EDGE
3		96.37	BREAK AT SEAM EDGE
4		94.87	BREAK AT SEAM EDGE
5		95.93	BREAK AT SEAM EDGE

Average Load (Shear) 94.28 pounds

ID:

AUG 04'98 11:13 No.008 P.02

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-180
 Seam No.: 430/426A
 Seamed by: LL MCX8
 Date Seamed: 7-28-98

Sample Size: 1" x 6" (peel) 1" x 3" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	49.01	SE
2		48.66	SE
3		40.65	AJ>BRK 60% ADHESION FAILURE
4		46.75	SE
5		44.57	AJ>BRK 10% ADHESION FAILURE

Average Load (Weld A Inside Peel) 45.93 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	94.07	BREAK AT SEAM EDGE
2		93.93	BREAK AT SEAM EDGE
3		86.25	BREAK AT SEAM EDGE
4		95.12	BREAK AT SEAM EDGE
5		89.45	BREAK AT SEAM EDGE

Average Load (Shear) 91.76 pounds

EMNY-OL/LINERSP+S/CLRK-180.XLS

Received: 08/04/98 11:42:20 From:

ID:

AUG 04'98 11:14 No.008 P.03

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86733.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-181
 Seam No.: 430A/147A
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	40.57	SE
2		39.06	AD-BRK 20% ADHESION FAILURE
3		39.53	AD-BRK 10% ADHESION FAILURE
4		39.63	AD-BRK 60% ADHESION FAILURE
5		41.57	AD-BRK 60% ADHESION FAILURE

Average Load (Weld A Inside Peel) 40.07 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	69.87	BREAK AT SEAM EDGE
2		70.76	BREAK AT SEAM EDGE
3		80.62	BREAK AT SEAM EDGE
4		75.08	BREAK AT SEAM EDGE
5		70.43	BREAK AT SEAM EDGE

Average Load (Shear) 73.35 pounds

EMNY-GLINERSP+S\CLRK-181.XLS

Received: 08/04/98 11:42:20 From:

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-18186
 Seam No.: 430A/147A
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (pool) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)		
1	.041	38.37	AD-BRK	60%	ADHESION FAILURE
2		39.93	AD-BRK	80%	ADHESION FAILURE
3		46.87	AD-BRK	40%	ADHESION FAILURE
4		39.47	AD-BRK	50%	ADHESION FAILURE
5		44.50	AD-BRK	30%	ADHESION FAILURE

Average Load (Weld A Inside Peel) 41.83 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.041	73.95	BREAK AT SEAM EDGE
2		75.47	BREAK AT SEAM EDGE
3		73.32	BREAK AT SEAM EDGE
4		69.45	BREAK AT SEAM EDGE
5		72.30	BREAK AT SEAM EDGE

Average Load (Shear) 72.90 pounds

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-11-98

Sample No.: DS-181S-E9
 Seam No.: 147/147A
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.041	37.67	AD-BRK 10% ADHESION FAILURE
2		47.43	AD-BRK 10% ADHESION FAILURE
3		43.17	AD-BRK 10% ADHESION FAILURE
4		42.18	AD-BRK 30% ADHESION FAILURE
5		46.56	AD-BRK 20% ADHESION FAILURE

Average Load (Weld A Inside Peel) 43.40 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.041	81.12	BREAK AT SEAM EDGE
2		77.87	BREAK AT SEAM EDGE
3		80.43	BREAK AT SEAM EDGE
4		78.88	BREAK AT SEAM EDGE
5		77.50	BREAK AT SEAM EDGE

Average Load (Shear) 79.16 pounds

EMCON-GLINERS.P+S\CLRK1819.XLS

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-181N5
 Seam No.: 430A/147A
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.041	44.37	SE
2		31.40	AD-BRK 20% ADHESION FAILURE
3		31.68	AD-BRK 60% ADHESION FAILURE
4		39.68	AD-BRK 30% ADHESION FAILURE
5		41.87	AD-BRK 30% ADHESION FAILURE

Average Load (Weld A Inside Peel) 37.82 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.041	71.27	BREAK AT SEAM EDGE
2		73.27	BREAK AT SEAM EDGE
3		66.82	BREAK AT SEAM EDGE
4		72.20	BREAK AT SEAM EDGE
5		66.15	BREAK AT SEAM EDGE

Average Load (Shear) 69.94 pounds

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-11-98

Sample No.: DS-181N8
 Seam No.: 430/147
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.039	33.77	AD-BRK 60% ADHESION FAILURE
2		33.06	AD-BRK 90% ADHESION FAILURE
3		45.16	SE
4		33.87	AD-BRK 30% ADHESION FAILURE
5		31.56	AD

Average Load (Weld A Inside Peel) 35.48 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.039	80.98	BREAK AT SEAM EDGE
2		85.06	BREAK AT SEAM EDGE
3		87.38	BREAK AT SEAM EDGE
4		82.93	BREAK AT SEAM EDGE
5		84.30	BREAK AT SEAM EDGE

Average Load (Shear) 84.13 pounds

EMNY-OLILINERS7+SCLRK1818.XLS

ID:

AUG 12 '98

9:09 No.003 P.03

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-12-98

Sample No.: DS-181 S-E9 CAP
 Seam No.: 147/CAP
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: SOLVENT
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	25.25	AD
2		24.87	AD
3		26.27	AD
4		25.06	AD
5		26.73	AD

Average Load (Weld A Inside Peel) 25.64 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	89.68	BREAK AT SEAM EDGE
2		91.87	BREAK AT SEAM EDGE
3		89.68	BREAK AT SEAM EDGE
4		85.93	BREAK AT SEAM EDGE
5		92.60	BREAK AT SEAM EDGE

Average Load (Shear) 89.95 pounds

EMNY-GLLINERSP+S\CRK181E9.XLS

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-12-98

Sample No.: DS-181 CAP
 Seam No.: 147/430 CAP
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: SOLVENT
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	26.82	AD
2		28.50	AD
3		28.40	AD
4		28.55	AD
5		29.06	AD

Average Load (Weld A Inside Peel) 28.27 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	90.50	BREAK AT SEAM EDGE
2		83.42	BREAK AT SEAM EDGE
3		93.87	BREAK AT SEAM EDGE
4		92.50	BREAK AT SEAM EDGE
5		92.13	BREAK AT SEAM EDGE

Average Load (Shear) 90.48 pounds

EMNV-GLLINERSP+SCKK181CP.XLS

ID:

AUG 04 '98 11:14 No.008 P.04

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-182
 Seam No.: 144/144A
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	33.76	AD-BRK 30% ADHESION FAILURE
2		42.52	AD-BRK 50% ADHESION FAILURE
3		24.16	AD
4		20.50	AD
5		36.36	AD-BRK 60% ADHESION FAILURE

Average Load (Weld A Inside Peel) 31.46 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	85.06	BREAK AT SEAM EDGE
2		85.87	BREAK AT SEAM EDGE
3		84.50	BREAK AT SEAM EDGE
4		89.00	BREAK AT SEAM EDGE
5		85.43	BREAK AT SEAM EDGE

Average Load (Shear) 85.97 pounds

EMVNY-OLULINERSP-S-CLRK-182.XLS

ID:

AUG 04'98 11:15 No.008 P.05

EMCON
GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT
LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86733.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-183
 Seam No.: 144/314
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.040	22.88	AD
2		14.97	AD
3		11.58	AD
4		17.83	AD
5		31.91	AD

Average Load (Weld A Inside Peel) 19.83 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	84.18	BREAK AT SEAM EDGE
2		80.93	BREAK AT SEAM EDGE
3		78.87	BREAK AT SEAM EDGE
4		81.87	BREAK AT SEAM EDGE
5		84.55	BREAK AT SEAM EDGE

Average Load (Shear) 82.08 pounds

EMNY-OLINERSVP+SCLRK-183.XLS

ID:

AUG 04'98 11:15 No.008 P.06

EMCON **GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT** **LABORATORY TEST RESULTS**

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-3-98

Sample No.: DS-184
 Seam No.: 144A/430B
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)		
1	0.040	46.03	AD-BRK	10%	ADHESION FAILURE
2		51.71	AD-BRK	10%	ADHESION FAILURE
3		42.95	AD-BRK	10%	ADHESION FAILURE
4		47.72	AD-BRK	10%	ADHESION FAILURE
5		40.65	AD-BRK	20%	ADHESION FAILURE

Average Load (Weld A Inside Peel) 45.81 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.040	70.93	BREAK AT SEAM EDGE
2		79.37	BREAK AT SEAM EDGE
3		75.62	BREAK AT SEAM EDGE
4		79.12	BREAK AT SEAM EDGE
5		73.18	BREAK AT SEAM EDGE

Average Load (Shear) 75.64 pounds

EMNY-OUTLINERS/P+S/CLRK-184.XLS

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-18453
 Seam No.: 144A/143B
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	.040	44.31	SE
2		44.75	SE
3		40.60	SE
4		42.93	SE
5		46.47	SE

Average Load (Weld A Inside Peel) 43.81 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	78.00	BREAK AT SEAM EDGE
2		78.62	BREAK AT SEAM EDGE
3		71.62	BREAK AT SEAM EDGE
4		79.37	BREAK AT SEAM EDGE
5		81.81	BREAK AT SEAM EDGE

Average Load (Shear) 77.88 pounds

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LP CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-184N2
 Seam No.: 144A/143B
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)		
1	.040	35.25	AD-BRK	20%	ADHESION FAILURE
2		36.81	AD-BRK	20%	ADHESION FAILURE
3		42.07	AD-BRK	10%	ADHESION FAILURE
4		44.50	AD-BRK	10%	ADHESION FAILURE
5		32.22	AD-BRK	90%	ADHESION FAILURE

Average Load (Weld A Inside Peel) 38.17 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	.040	76.06	BREAK AT SEAM EDGE
2		70.25	BREAK AT SEAM EDGE
3		74.12	BREAK AT SEAM EDGE
4		75.12	BREAK AT SEAM EDGE
5		74.37	BREAK AT SEAM EDGE

Average Load (Shear) 73.98 pounds

EMCON

GEOMEMBRANE SEAM PEEL AND SHEAR TEST REPORT

LABORATORY TEST RESULTS

Project: TOWN OF CLARKSTOWN LF CAPPING
 Client: ROY F. WESTON
 Project No.: 86738.001

Assigned by: N.N.
 Tested by: K.H.
 Checked by: R.S.A.
 Date Tested: 8-7-98

Sample No.: DS-184 CAP
 Seam No.:
 Seamed by:
 Date Seamed:

Sample Size: 1" x 6" (peel) 1" x 8" (shear)
 Material: PVC
 Weld Type: HEAT BOND
 Strain Rate: PEEL 2 in./min.
 SHEAR 20 in./min.

PEEL TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks (Weld A Inside)
1	0.041	23.37	AD
2		22.22	AD
3		24.75	AD
4		24.65	AD
5		22.50	AD

Average Load (Weld A Inside Peel) 23.50 pounds

SHEAR TEST RESULTS

Specimen No.	Thickness (inches)	Maximum Load (pounds)	Remarks
1	0.041	80.06	BREAK AT SEAM EDGE
2		74.43	BREAK AT SEAM EDGE
3		83.68	BREAK AT SEAM EDGE
4		69.75	BREAK AT SEAM EDGE
5		79.43	BREAK AT SEAM EDGE

Average Load (Shear) 77.47 pounds

NTH Consultants, Ltd.

Geosynthetic Materials Test Results

Destructive Seam Testing

Clarkstown Landfill Cap
Rockland County, New York

Prepared For:

M&T/NAMOW/TCL, J.V.

47 Hudson Street
Ossining, NY 10562

Project No. 54-8205-03

December 2, 1998

NTH Consultants, Ltd.

Professional Engineering and
Environmental Services



860 Springdale Drive
Exton, PA 19341
(610) 524-2300
(610) 524-2317 Fax

M & T/NAMOW/TCL, J.V.
47 Hudson Street
Ossining, NY 10562

December 2, 1998
Project No. 54-8205-03

Attn: Mr. V. R. Kancharla, Vice President

Re: **GEOSYNTHETIC MATERIALS TEST RESULTS**
Clarkstown Landfill Cap
PVC Geomembrane Destructive Seam Testing

Dear Mr. Kancharla:

NTH Consultants, Ltd. (NTH) is pleased to present our test results from the destructive seam samples submitted by Roy F. Weston from the Clarkstown Landfill Cap project. Samples submitted for testing included one hundred thirty-six (136) PVC geomembrane destructive seams, which were received in two batches on 11/24/98 and 11/25/98. Upon receipt each batch was verified by comparison to the custody documents which accompanied each delivery.

The results for the **40-mil PVC geomembrane destructive seam** testing are presented in **Appendix A** of this report. Testing was performed under the laboratory conditions of 30% to 50% relative humidity and the temperature ranged between 70°F and 74°F. This material was tested in accordance with the following standards stipulated in the contract documents:

- | | |
|------------------------|------------|
| • Peel Adhesion | ASTM D 413 |
| • Bonded Seam Strength | ASTM D3083 |

As requested, all test replicates and archive samples were retained and forwarded to Roy F. Weston, Inc. If you have any questions regarding this report, please do not hesitate to contact us at (610) 524-2300. We appreciate the opportunity to provide geosynthetic laboratory testing services for M&T/NAMOW/TCL, J.V. and look forward to working with you on future projects.

Sincerely,
NTH Consultants, Ltd.

Robert M. Sabanas, P.E.
Geosynthetics Laboratory Manager

Philip E. Gauffreau, P.E.
Project Manager
Geotechnical Services

RMS:PEG:dlk

cc: Neil Nowak - Roy F. Weston, Inc.

S:\PROJ\98\54\8205\1202-005.RPT.DOC





PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/24/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-2R	1	41	41	35.1		100%		AD	NFTB	P		40	40	94.8		>100%	SE	P
		41	41	36.6		100%		AD	NFTB	P		41	41	88.1		>100%	SE	P
DS-2R	3	42	40	35.2		30%		AD	BRK	P		41	42	79.9		>100%	SE	P
		41	42	35.9		100%		AD	NFTB	P		41	41	83.4		>100%	SE	P
DS-2R	5	41	41	34.4		100%		AD	NFTB	P		41	43	82.4		>100%	SE	P
		41.2	41.0	35.4						P		40.8	41.4	85.7				P
STDEV		0.45	0.71	0.84								0.45	1.14	5.88				

Required Peel Strength =	10 ppi	I = Inside Seam for Dual Peel	O = Outside Seam for Dual Peel
Required Shear Strength =	74 ppi	T = Top Geomembrane Sheet	B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98

GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength			
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail	
		T	B	I	O	I	O	I	O	I	O
DS-5R	1	40	40	43.4		50%		AD		P	
DS-5R	2	41	40	39.1		50%		AD		P	
DS-5R	3	41	40	37.7		80%		AD		P	
DS-5R	4	41	40	39.4		100%		AD		P	
DS-5R	5	41	40	38.2		100%		AD		P	
	AVG	40.8	40.0	39.6						P	
	STDEV	0.45	0.00	2.25							

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: ES
CHECKED BY: DLK/RMS
PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/24/98

Required Peel Strength =	10 ppi	I = Inside Seam for Dual Peel	O = Outside Seam for Dual Peel
Required Shear Strength =	74 ppi	T = Top Geomembrane Sheet	B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES

CHECKED BY:

10.1 K/RMS

PROJECT MANAGER



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-9	1	41	41	32.2		100%		AD NFTB		P		40	42	75.2		>100%	SE FTB	P
DS-9	2	41	40	38.9		100%		AD NFTB		P		43	43	76.6		>100%	SE FTB	P
DS-9	3	40	41	35.9		100%		AD NFTB		P		41	40	79.0		>100%	SE FTB	P
DS-9	4	40	41	42.1		100%		AD NFTB		P		41	39	86.5		>100%	SE FTB	P
DS-9	5	40	41	35.4		100%		AD NFTB		P		39	41	78.4		>100%	SE FTB	P
AVG	STDEV	40.4	40.8	36.9						P		40.8	41.0	79.1				P
		0.55	0.45	3.75								1.48	1.58	4.38				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	Yield	Break			
DS-10R	1	41	40	32.6		100%		AD		P		41	40	88.1	SE	P
								NFTB								FTB
DS-10R	2	41	41	30.5		100%		AD		P		42	41	77.4	SE	P
								NFTB								FTB
DS-10R	3	41	41	33.4		100%		AD		P		41	41	92.4	SE	P
								NFTB								FTB
DS-10R	4	41	40	32.0		100%		AD		P		41	42	89.7	SE	P
								NFTB								FTB
DS-10R	5	41	41	34.1		100%		AD		P		42	41	93.9	SE	P
								NFTB								FTB
	AVG	41.0	40.6	32.5						P		41.4	41.0	88.3		
		0.00	0.55	1.38								0.55	0.71	6.50		



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-11R	1	41	41	33.4		100%		AD	NFTB	P		43	41	85.8		>100%	SE	FTB	P
DS-11R	2	41	41	24.8		100%		AD	NFTB	P		46	40	89.3		>100%	SE	FTB	P
DS-11R	3	41	41	29.6		100%		AD	NFTB	P		42	40	86.7		>100%	SE	FTB	P
DS-11R	4	41	41	25.2		100%		AD	NFTB	P		41	41	84.2		>100%	SE	FTB	P
DS-11R	5	41	41	25.8		100%		AD	NFTB	P		42	41	79.6		>100%	BRK	FTB	P
	AVG	41.0	41.0	27.8						P		42.8	40.6	85.1					P
	STDEV	0.00	0.00	3.69								1.92	0.55	3.60					

Required Peel Strength =

10 ppi

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCI, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-15	1	40	41	31.2		100%		AD	NFTB		P	41	43	85.9		>100%	SE	P
DS-15	2	40	40	34.4		100%		AD	NFTB		P	41	41	78.4		>100%	SE	P
DS-15	3	40	41	33.3		100%		AD	NFTB		P	40	42	84.2		>100%	SE	P
DS-15	4	40	40	30.2		100%		AD	NFTB		P	40	42	71.3		>100%	SE	F
DS-15	5	41	41	31.1		100%		AD	NFTB		P	40	41	81.0		>100%	SE	P
	AVG	40.2	40.6	32.0							P	40.4	41.8	80.2				
	STDEV	0.45	0.55	1.74							0.55	0.84	5.74					

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, I.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B	Yield	Break
DS-28	1	41	41	40.1		100%		AD		P		42	41		>100%
DS-28	2	41	41	37.6		100%		AD		P		41	42		>100%
DS-28	3	41	41	39.4		100%		AD		P		42	42		>100%
DS-28	4	41	41	44.5		100%		AD		P		41	42		>100%
DS-28	5	41	41	43.7		70%		AD		P		41	42		>100%
	AVG	41.0	41.0	41.1						P		41.4	41.8		
	STDEV	0.00	0.00	2.93								0.55	0.45		

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: ES CHECKED BY: DI K/RMS PROJECT MANAGER

1125-000...and.xls



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength										
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-33	1	41	41	12.2		100%		AD	NFTB	P		41	42	86.7		>100%	AD	P
		41	41	16.2		100%		AD	NFTB	P		42	41	80.3		>100%	AD	P
DS-33	3	41	41	20.0		100%		AD	NFTB	P		41	42	83.4		>100%	SE	P
		41	41	20.1		100%		AD	NFTB	P		42	41	86.9		>100%	SE	P
DS-33	5	41	41	18.8		100%		AD	NFTB	P		42	42	84.7		>100%	SE	P
		41.0	41.0	17.5						P		41.6	41.6	84.4				P
	AVG	0.00	0.00	3.33								0.55	0.55	2.71				
	STDEV																	



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Locus of Break
		T	B	I	O	I	O	I	O	I	O	
DS-33R	1	41	43	33.7		100%		AD		P		SE
DS-33R	2	41	42	40.7		100%		AD		P		FTB
DS-33R	3	41	41	36.1		100%		AD		P		SE
DS-33R	4	41	42	28.5		100%		AD		P		FTB
DS-33R	5	41	41	26.4		100%		AD		P		SE
	AVG	41.0	41.8	33.1				AD		P		FTB
	STDEV	0.00	0.84	5.77								

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98

GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength										
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O			T	B			Yield
DS-34	1	41	41	34.3		100%		AD	NFTB		P	42	41		>100%	SE	FTB	P
		41	40	22.2		100%		AD	NFTB		P	41	41		>100%	SE	FTB	P
DS-34	3	41	41	24.6		100%		AD	NFTB		P	42	41		>100%	SE	FTB	P
		40	41	33.1		100%		AD	NFTB		P	41	41		>100%	SE	FTB	P
DS-34	5	41	41	35.0		100%		AD	NFTB		P	41	42		>100%	SE	FTB	P
		40.8	40.8	29.8							P	41.4	41.2					P
	STDEV	0.45	0.45	5.98								0.55	0.45					2.67



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-35	1	41	41	28.4		100%		AD	NFTB	P		41	42	81.6		>100%	SE	P
DS-35	2	41	41	31.8		100%		AD	NFTB	P		41	42	79.7		>100%	SE	P
DS-35	3	41	41	29.3		100%		AD	NFTB	P		41	42	77.0		>100%	SE	P
DS-35	4	41	41	32.1		100%		AD	NFTB	P		41	42	74.0		>100%	SE	P
DS-35	5	41	41	35.2		100%		AD	NFTB	P		41	42	83.2		>100%	SE	P
	AVG	41.0	41.0	31.4						P		41.0	42.0	79.1				P
	STDEV	0.00	0.00	2.67								0.00	0.00	3.67				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength										
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-36	1	41	41	36.9		100%		AD NFTB		P		40	41	81.7		>100%	SE FTB	P
DS-36	2	41	40	34.4		100%		AD NFTB		P		40	41	75.0		>100%	SE FTB	P
DS-36	3	41	41	35.8		100%		AD NFTB		P		40	41	77.9		>100%	SE FTB	P
DS-36	4	40	41	33.1		100%		AD NFTB		P		40	41	77.9		>100%	SE FTB	P
DS-36	5	40	41	30.4		100%		AD NFTB		P		40	40	73.2		>100%	SE FTB	F
	AVG	40.6	40.8	34.1						P		40.0	40.8	77.1				P
	STDEV	0.55	0.45	2.53								0.00	0.45	3.24				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %	Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O			
DS-37	1	41	41	35.6		100%		AD NFTB		P			SE FTB	P
DS-37	2	41	41	26.6		100%		AD NFTB		P			SE FTB	P
DS-37	3	41	41	32.9		100%		AD NFTB		P			SE FTB	P
DS-37	4	41	41	34.2		100%		AD NFTB		P			SE FTB	P
DS-37	5	41	41	33.5		100%		AD NFTB		P			SE FTB	P
	AVG	41.0	41.0	32.6						P				P
	STDEV	0.00	0.00	3.48										



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98

GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-38	1	41	40	30.2		100%		AD	NFTB		P	40	40	76.9		>100%	SE	P
DS-38	2	41	41	34.8		100%		AD	NFTB		P	40	41	81.8		>100%	SE	P
DS-38	3	41	40	33.9		100%		AD	NFTB		P	41	41	72.7		>100%	SE	F
DS-38	4	41	41	35.3		100%		AD	NFTB		P	40	40	79.9		>100%	BRK	P
DS-38	5	40	40	37.7		100%		AD	NFTB		P	40	41	83.8		>100%	SE	P
	AVG	40.8	40.4	34.4							P	40.2	40.6	79.0				P
	STDEV	0.45	0.55	2.73								0.45	0.55	4.35				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-39	1	40	40	37.4		70%		AD BRK FTB		P		41	41	80.1		>100%	SE FTB	P
DS-39	2	40	41	33.0		40%		AD BRK FTB		P		41	41	73.1		>100%	SE FTB	F
DS-39	3	41	40	37.1		50%		AD BRK FTB		P		41	41	84.1		>100%	SE FTB	P
DS-39	4	41	41	37.9		100%		AD NFTB		P		41	41	79.6		>100%	SE FTB	P
DS-39	5	41	41	34.1		100%		AD NFTB		P		41	41	87.1		>100%	BRK FTB	P
	AVG	40.6	40.6	35.9						P		41.0	41.0	80.8				P
	STDEV	0.55	0.55	2.20								0.00	0.00	5.29				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-40	1	41	41	41.5		65%		AD BRK FTB		P		41	41	78.5		>100%	SE FTB	P
DS-40	2	41	41	39.0		25%		AD BRK FTB		P		40	41	79.4		>100%	SE FTB	P
DS-40	3	41	40	36.6		100%		AD NFTB		P		41	41	84.5		>100%	SE FTB	P
DS-40	4	41	41	38.8		80%		AD BRK FTB		P		41	41	78.8		>100%	SE FTB	P
DS-40	5	41	40	40.7		50%		AD BRK FTB		P		41	41	83.2		>100%	SE FTB	P
	AVG	41.0	40.6	39.3						P		40.8	41.0	80.9				P
	STDEV	0.00	0.55	1.90								0.45	0.00	2.77				

Required Peel Strength = 10 ppi

Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel

T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel

B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-41	1	40	40	37.2		40%		AD BRK FTB		P		40	40	72.7		≥100%	SE FTB	F
DS-41	2	41	40	34.9		80%		AD BRK FTB		P		41	40	67.4		>100%	SE FTB	F
DS-41	3	41	40	42.8		40%		AD BRK FTB		P		40	40	73.3		>100%	SE FTB	F
DS-41	4	41	41	35.4		80%		AD BRK FTB		P		41	40	71.6		>100%	SE FTB	F
DS-41	5	11	40	37.3		25%		AD BRK FTB		P		41	40	67.3		>100%	SE FTB	F
	AVG	40.8	40.2	37.5						P		40.6	40.0	70.5				F
	STDEV	0.45	0.45	3.14								0.55	0.00	2.90				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: ES/JMR
CHECKED BY: DLK
PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/24/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-42	1	41	41	20.9		100%		AD		P		41	41	86.2		>100%	SE FTB	P
DS-42	2	41	41	20.5		100%		AD		P		41	41	86.8		>100%	SE FTB	P
DS-42	3	41	41	23.0		100%		AD		P		41	42	81.7		>100%	SE FTB	P
DS-42	4	41	41	28.7		100%		AD		P		41	41	78.8		>100%	SE FTB	P
DS-42	5	41	41	22.4		100%		AD		P		41	41	82.9		>100%	SE FTB	P
	AVG	41.0	41.0	23.1						P		41.0	41.2	83.3				P
	STDDEV	0.00	0.00	3.30								0.00	0.45	3.30				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail			
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break	
DS-43	1	41	40	30.5		100%		AD	NFTB		P	40	41	79.2	>100%	SE	FTB	P
DS-43	2	41	41	23.0		100%		AD	NFTB		P	41	41	86.9	>100%	SE	FTB	P
DS-43	3	41	40	23.7		100%		AD	NFTB		P	41	43	74.4	>100%	SE	FTB	P
DS-43	4	41	41	24.5		100%		AD	NFTB		P	41	41	80.0	>100%	SE	FTB	P
DS-43	5	40	40	26.0		100%		AD	NFTB		P	41	41	81.9	>100%	SE	FTB	P
	AVG	40.8	40.4	25.5							P	40.8	41.4	80.5				P
	STDEV	0.45	0.55	2.99							0.45	0.89	4.53					

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	Yield	Break			
DS-44	1	41	41	32.6		100%		AD	NFTB	P		41	41	86.2	SE FTB	P
DS-44	2	41	41	31.2		100%		AD	NFTB	P		41	41	84.2	SE FTB	P
DS-44	3	41	41	32.3		100%		AD	NFTB	P		41	41	78.6	SE FTB	P
DS-44	4	41	41	34.4		100%		AD	NFTB	P		41	41	75.6	SE FTB	P
DS-44	5	41	41	35.6		100%		AD	NFTB	P		41	41	86.7	SE FTB	P
AVG		41.0	41.0	33.2						P		41.0	41.0	82.3	P	
STDEV		0.00	0.00	1.76								0.00	0.00	4.92		

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break
DS-45	1	41	41	28.9		100%		AD	NFTB		P	41	41	75.9	SE	FTB	P
DS-45	2	41	41	28.7		100%		AD	NFTB		P	41	41	80.8	SE	FTB	P
DS-45	3	41	41	29.4		100%		AD	NFTB		P	41	40	85.6	SE	FTB	P
DS-45	4	41	41	29.2		100%		AD	NFTB		P	41	41	84.5	SE	FTB	P
DS-45	5	41	41	29.3		100%		AD	NFTB		P	41	41	82.3	SE	FTB	P
	AVG	41.0	41.0	29.1							P	41.0	40.8	81.8			P
	STDEV	0.00	0.00	0.29							0.00	0.45	3.80				



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-46	1	41	41	46.0		100%		AD	NFTB	P		41	42	84.1		>100%	SE	P
DS-46	2	41	41	40.2		100%		AD	NFTB	P		41	42	75.5		>100%	SE	P
DS-46	3	41	41	37.4		100%		AD	NFTB	P		41	42	75.5		>100%	SE	P
DS-46	4	41	41	37.8		100%		AD	NFTB	P		41	42	84.9		>100%	SE	P
DS-46	5	41	41	33.8		100%		AD	NFTB	P		41	42	83.7		>100%	SE	P
	AVG	41.0	41.0	39.0						P		41.0	42.0	80.7				P
	STDEV	0.00	0.00	4.51								0.00	0.00	4.80				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, L.T.D.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-47	1	41	41	33.6		100%		AD	NFTB		P	41	41	86.2		>100%	SE	P
DS-47	2	41	41	31.7		100%		AD	NFTB		P	41	41	76.1		>100%	SE	P
DS-47	3	41	41	35.6		100%		AD	NFTB		P	41	41	87.0		>100%	SE	P
DS-47	4	41	41	33.3		100%		AD	NFTB		P	41	41	89.0		>100%	BRK	P
DS-47	5	41	41	33.2		100%		AD	NFTB		P	41	40	88.1		>100%	SE	P
	AVG	41.0	41.0	33.5							P	41.0	40.8	85.3				P
	STDEV	0.00	0.00	1.40							0.00	0.45	5.24					



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/24/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	T	B	Yield	Break			
DS-48	1	41	41	37.1		100%		AD		P		43	42	90.8	SE	P
DS-48	2	41	41	36.2		100%		AD		P		43	42	94.5	BRK	P
DS-48	3	41	41	43.5		100%		AD		P		43	42	102.6	SE	P
DS-48	4	41	41	45.4		85%		AD		P		42	42	103.7	BRK	P
DS-48	5	41	41	42.9		30%		AD		P		42	42	93.8	SE	P
	AVG	41.0	41.0	41.0						P		42.6	42.0	97.1		P
	STDEV	0.00	0.00	4.11								0.55	0.00	5.73		

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/24/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength			
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail	
		T	B	I	O	I	O	I	O	I	O
DS-49	1	41	41	31.6		100%		AD NFTB		P	
DS-49	2	42	41	31.6		100%		AD NFTB		P	
DS-49	3	42	41	26.7		100%		AD NFTB		P	
DS-49	4	42	41	29.5		100%		AD NFTB		P	
DS-49	5	42	41	31.9		100%		AD NFTB		P	
	AVG	41.8	41.0	30.3						P	
	STDEV	0.45	0.00	2.21							
		Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail	
		T	B	I	O	I	O	I	O	I	O
		42	41	89.4				SE FTB			
		42	41	89.6				SE FTB			
		41	41	87.1				SE FTB			
		42	42	84.6				SE FTB			
		41.8	41.4	88.9							
		0.45	0.55	3.34							

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

WR/JMR

CHECKED BY:

RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-50	1	40	41	24.4		100%		AD	NFTB	P		41	41	85.4		>100%	SE	P
DS-50	2	40	41	20.7		100%		AD	NFTB	P		41	41	87.6		>100%	SE	P
DS-50	3	40	41	22.8		100%		AD	NFTB	P		41	41	68.3		>100%	BRK	F
DS-50	4	40	41	17.7		100%		AD	NFTB	P		41	41	75.2		>100%	BRK	P
DS-50	5	40	41	17.3		100%		AD	NFTB	P		41	42	84.9		>100%	SE	P
	AVG	40.0	41.0	20.6						P		41.0	41.2	80.3				P
	STDEV	0.00	0.00	3.11								0.00	0.45	8.22				

Required Peel Strength =

10 ppi

Required Shear Strength =

74 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/JMR

CHECKED BY:

RMS

PROJECT MANAGER



SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

54-8205-03

SEAM TYPE:

Solvent Weld

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

11/24/98

DATE TESTED:

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-51	1	41	41	28.0		100%		AD		P		40	42	99.1		>100%	BRK FTB	P
DS-51	2	41	41	22.8		100%		AD		P		41	41	96.9		>100%	SE FTB	P
DS-51	3	41	41	22.8		100%		AD		P		40	42	100.7		>100%	SE FTB	P
DS-51	4	41	41	31.1		100%		AD		P		40	42	99.2		>100%	SE FTB	P
DS-51	5	41	41	30.7		100%		AD		P		40	42	101.0		>100%	SE FTB	P
	AVG	41.0	41.0	27.1						P		40.2	41.8	99.4				P
	STDDEV	0.00	0.00	4.08								0.45	0.45	1.63				

$$\frac{10 \text{ ppi}}{74 \text{ ppi}}$$

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

DI.K/JMR

CHECKED BY:

RMS

PROJECT MANAGER

1125-02a. -1 x1s



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-52	1	41	41	30.6		100%		AD NFTB		P		42	39	95.1		>100%	SE FTB	P
DS-52	2	41	40	34.1		100%		AD NFTB		P		41	40	94.0		>100%	SE FTB	P
DS-52	3	41	41	36.4		100%		AD NFTB		P		41	39	84.1		>100%	SE FTB	P
DS-52	4	41	40	36.2		100%		AD NFTB		P		41	40	92.8		>100%	SE FTB	P
DS-52	5	40	40	31.9		70%		AD BRK FTB		P		41	40	83.1		>100%	SE FTB	P
	AVG	40.8	40.4	33.8						P		41.2	39.6	89.8				P
	STDEV	0.45	0.55	2.57								0.45	0.55	5.75				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/ICL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-53	1	41	41	31.1		100%		AD	NFTB		P	40	42	83.5		>100%	SE	P
DS-53	2	41	40	31.2		100%		AD	NFTB		P	40	41	83.0		>100%	SE	P
DS-53	3	40	40	34.8		100%		AD	NFTB		P	39	41	81.8		>100%	SE	P
DS-53	4	41	40	39.3		100%		AD	NFTB		P	40	41	86.9		>100%	SE	P
DS-53	5	41	41	30.3		100%		AD	NFTB		P	40	41	86.1		>100%	SE	P
	AVG	40.8	40.4	33.3							P	39.8	41.2	84.3				P
	STDDEV	0.45	0.55	3.76								0.45	0.45	2.15				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-54	1	41	40	41.3		75%		AD BRK FTB		P		40	39	96.1		>100%	SE FTB	P
DS-54	2	40	40	46.5		70%		AD BRK FTB		P		40	40	94.2		>100%	SE FTB	P
DS-54	3	41	40	46.4		85%		AD BRK FTB		P		41	39	93.2		>100%	SE FTB	P
DS-54	4	41	41	38.5		75%		AD BRK FTB		P		40	40	92.0		>100%	SE FTB	P
DS-54	5	41	40	43.2		90%		AD BRK FTB		P		40	40	89.4		>100%	SE FTB	P
	AVG	40.8	40.2	43.2						P		40.2	39.6	93.0				P
	STDEV	0.45	0.45	3.42								0.45	0.55	2.50				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ ES/IMR _____ CHECKED BY: _____ RMS _____ PROJECT MANAGER _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break
DS-55	1	41	40	43.0		90%		AD BRK FTB		P		40	41	83.4	>100%	SE FTB	P
DS-55	2	41	41	43.1		40%		AD BRK FTB		P		40	41	81.8	>100%	SE FTB	P
DS-55	3	41	40	46.7		40%		AD BRK FTB		P		39	41	79.2	>100%	SE FTB	P
DS-55	4	41	40	45.4		40%		AD BRK FTB		P		40	42	82.6	>100%	SE FTB	P
DS-55	5	40	41	42.7		40%		AD BRK FTB		P		40	42	80.7	>100%	SE FTB	P
	AVG	40.8	40.4	44.2						P		39.8	41.4	81.5			P
	STDEV	0.45	0.55	1.77								0.45	0.55	1.65			

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-56	1	41	41	34.6		100%		AD	NFTB	P		41	41	87.6		>100%	SE	P
DS-56	2	41	41	34.8		100%		AD	NFTB	P		41	41	93.5		>100%	SE	P
DS-56	3	41	41	32.1		100%		AD	NFTB	P		41	41	87.0		>100%	SE	P
DS-56	4	41	41	35.0		100%		AD	NFTB	P		41	40	92.8		>100%	SE	P
DS-56	5	41	41	25.3		100%		AD	NFTB	P		41	41	91.0		>100%	SE	P
	AVG	41.0	41.0	32.4						P		41.0	40.8	90.4				P
	STDEV	0.00	0.00	4.12								0.00	0.45	2.96				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-57	1	41	41	45.1		70%		AD BRK FTB		P		41	40	77.5		>100%	SE FTB	P
DS-57	2	41	41	44.9		70%		AD BRK FTB		P		41	40	75.8		>100%	SE FTB	P
DS-57	3	41	41	30.0		75%		AD BRK FTB		P		42	40	80.6		>100%	SE FTB	P
DS-57	4	41	41	44.3		75%		AD BRK FTB		P		41	40	84.9		>100%	SE FTB	P
DS-57	5	41	41	31.2		60%		AD BRK FTB		P		41	41	78.6		>100%	SE FTB	P
	AVG	41.0	41.0	39.1						P		41.2	40.2	79.5				P
	STDEV	0.00	0.00	7.78								0.45	0.45	3.50				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils,		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail			
		T	B	I	O	I	O	I	O	I	O	Yield	Break					
DS-58	1	41	41	31.7		100%		AD	NFTB	P		41	40	70.4	>100%	SE	FTB	F
DS-58	2	40	41	29.2		100%		AD	NFTB	P		39	42	78.4	>100%	SE	FTB	P
DS-58	3	40	41	24.6		100%		AD	NFTB	P		39	41	73.5	>100%	SE	FTB	F
DS-58	4	40	41	30.1		100%		AD	NFTB	P		40	42	79.6	>100%	SE	FTB	P
DS-58	5	40	41	31.4		100%		AD	NFTB	P		39	42	76.1	>100%	SE	FTB	P
	AVG	40.2	41.0	29.4						P		39.6	41.4	75.6				F
	STDEV	0.45	0.00	2.87								0.89	0.89	3.73				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel
LABORATORY TECHNICIAN: _____
CHECKED BY: _____
PROJECT MANAGER: _____



NTI CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/ICL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-59	1	41	41	41.8		95%		AD BRK FTB		P		41	40	70.2		>100%	SE FTB	F
DS-59	2	41	41	42.4		65%		AD BRK FTB		P		41	40	75.3		>100%	SE FTB	P
DS-59	3	41	41	26.0		100%		AD NFTB		P		41	41	73.5		>100%	SE FTB	F
DS-59	4	41	41	40.6		80%		AD BRK FTB		P		41	40	71.0		>100%	SE FTB	F
DS-59	5	41	41	36.4		100%		AD NFTB		P		41	40	75.2		>100%	SE FTB	P
	AVG	41.0	41.0	37.4						P		41.0	40.2	73.0				F
	STDEV	0.00	0.00	6.81								0.00	0.45	2.36				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O			T	B		
DS-60	1	41	40	30.2		100%		AD NFTB		P		41	42	84.0	>100%	SE FTB	P
DS-60	2	41	40	40.0		40%		AD BRK FTB		P		41	40	87.5	>100%	SE FTB	P
DS-60	3	40	40	42.6		100%		AD NFTB		P		41	40	78.8	>100%	SE FTB	P
DS-60	4	41	41	41.4		100%		AD NFTB		P		41	41	96.1	>100%	SE FTB	P
DS-60	5	40	41	32.2		100%		AD NFTB		P		41	41	89.6	>100%	SE FTB	P
	AVG	40.6	40.4	37.3						P		41.0	40.8	87.2			P
	STDEV	0.55	0.55	5.67								0.00	0.84	6.44			



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B			Yield
DS-61	1	40	41	49.8		15%		AD BRK FTB		P		40	40	>100%	SE FTB	P
DS-61	2	41	41	41.7		100%		AD NFTB		P		41	40	>100%	SE FTB	P
DS-61	3	40	41	39.3		40%		AD BRK FTB		P		41	41	>100%	SE FTB	P
DS-61	4	41	41	36.9		100%		AD NFTB		P		41	41	>100%	SE FTB	P
DS-61	5	41	41	36.0		100%		AD NFTB		P		41	40	>100%	SE FTB	P
	AVG	40.6	41.0	40.7						P		40.8	40.4			P
	STDEV	0.55	0.00	5.53								0.45	0.55			

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____

ES/JMR

CHECKED BY: _____

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Thermal Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-62	1	40	41	13.5		100%		AD		P		41	41	84.4		>100%	SE FTB	P
DS-62	2	41	41	13.5		100%		AD		P		40	41	75.5		>100%	SE FTB	P
DS-62	3	41	41	12.5		100%		AD		P		41	41	72.2		>100%	SE FTB	F
DS-62	4	41	41	12.7		100%		AD		P		40	40	76.3		>100%	SE FTB	P
DS-62	5	41	41	10.1		100%		AD		P		41	41	76.4		>100%	SE FTB	P
	AVG	40.8	41.0	12.5						P		40.6	40.8	77.0				P
	STDEV	0.45	0.00	1.40								0.55	0.45	4.50				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Thermal Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

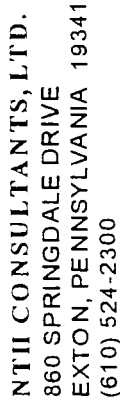
DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O		T	B			Yield
DS-63	1	41	40	47.6		75%		AD BRK FTB		P		41	41		>100%	SE FTB	P
DS-63	2	41	41	42.3		45%		AD BRK FTB		P		42	41		>100%	SE FTB	P
DS-63	3	41	40	42.3		90%		AD BRK FTB		P		41	41		>100%	SE FTB	P
DS-63	4	41	40	43.5		60%		AD BRK FTB		P		41	40		>100%	SE FTB	P
DS-63	5	41	41	43.4		70%		AD BRK FTB		P		41	41		>100%	SE FTB	P
	AVG	41.0	40.4	43.8						P		41.2	40.8				P
	STDEV	0.00	0.55	2.19								0.45	0.45				



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/ICL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Required Peel Strength = $\frac{10 \text{ ppi}}{74 \text{ ppi}}$ O = Outside Seam for Dual Peel
 Required Shear Strength = T = Top Geomembrane Sheet B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O			T	B			Yield	Break
DS-65	1	41	40	31.7		100%		AD	NFTB		P	41	40	80.1		>100%	SE FTB	P	
DS-65	2	41	40	33.2		100%		AD	NFTB		P	42	40	77.7		>100%	SE FTB	P	
DS-65	3	41	40	35.6		100%		AD	NFTB		P	42	39	79.9		>100%	SE FTB	P	
DS-65	4	41	40	38.8		100%		AD	NFTB		P	40	41	77.0		>100%	SE FTB	P	
DS-65	5	41	40	41.0		20%		AD	BRK FTB		P	42	39	72.4		>100%	SE FTB	F	
	AVG	41.0	40.0	36.1							P		41.4	39.8	77.4				P
	STDEV	0.00	0.00	3.85							0.89	0.84	3.11						



NTI CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-66	1	41	41	37.9		100%		AD		P		41	41	75.3		>100%	SE	P
								NFTB									FTB	
DS-66	2	41	41	39.6		30%		AD		P		41	41	81.6		>100%	SE	P
								BRK									FTB	
DS-66	3	40	41	38.8		55%		AD		P		41	41	81.6		>100%	SE	P
								BRK									FTB	
DS-66	4	41	41	37.6		80%		AD		P		40	41	85.0		>100%	SE	P
								BRK									FTB	
DS-66	5	40	40	36.8		95%		AD		P		41	41	78.2		>100%	SE	P
								BRK									FTB	
	AVG	40.6	40.8	38.1						P		40.8	41.0	80.3				P
	STDEV	0.55	0.45	1.09								0.45	0.00	3.70				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/DLK

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cup
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B	(ppi)	Yield	Break			
DS-67	1	41	41	31.8		100%		AD	NFTB		P	41	41	90.9		>100%	BRK	FTB	P
DS-67	2	40	40	34.2		100%		AD	NFTB		P	41	41	89.0		>100%	SE	FTB	P
DS-67	3	40	41	33.0		100%		AD	NFTB		P	40	41	83.3		>100%	SE	FTB	P
DS-67	4	41	40	37.4		100%		AD	NFTB		P	41	41	93.3		>100%	SE	FTB	P
DS-67	5	41	41	40.0		30%		AD	BRK	FTB	P	41	41	89.1		>100%	SE	FTB	P
	AVG	40.6	40.6	35.3							P	40.8	41.0	89.1					P
	STDEV	0.55	0.55	3.36								0.45	0.00	3.69					



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locusts of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B			Yield
DS-68	1	41	40	33.1		100%		AD NFTB		P		41	41	>100%	SE FTB	P
DS-68	2	40	40	34.2		100%		AD NFTB		P		40	41	>100%	SE FTB	P
DS-68	3	40	41	35.7		100%		AD NFTB		P		40	41	>100%	SE FTB	P
DS-68	4	41	40	33.2		100%		AD NFTB		P		41	40	>100%	BRK FTB	F
DS-68	5	41	41	32.5		100%		AD NFTB		P		41	41	>100%	SE FTB	P
	AVG	40.6	40.4	33.7						P		40.6	40.8			P
	STDEV	0.55	0.55	1.25								0.55	0.45			



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break
DS-69	1	41	41	39.5		20%		AD BRK FTB		P		41	41		>100%	SE FTB	P
DS-69	2	41	40	38.8		35%		AD BRK FTB		P		41	40		>100%	SE FTB	P
DS-69	3	41	41	44.4		45%		AD BRK FTB		P		41	41		>100%	SE FTB	P
DS-69	4	40	41	38.0		75%		AD BRK FTB		P		40	41		>100%	SE FTB	P
DS-69	5	40	41	38.4		100%		AD NFTB		P		40	41		>100%	SE FTB	P
	AVG	40.6	40.8	39.8						P		40.6	40.8				P
	STDEV	0.55	0.45	2.62								0.55	0.45				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break
DS-70	1	41	41	37.7		100%		AD	NFTB		P	41	41	74.6	SE	FTB	P
DS-70	2	41	41	33.0		100%		AD	NFTB		P	41	41	77.2	SE	FTB	P
DS-70	3	41	41	32.5		100%		AD	NFTB		P	41	41	74.1	SE	FTB	P
DS-70	4	41	41	32.4		100%		AD	NFTB		P	41	41	85.6	SE	FTB	P
DS-70	5	41	41	30.8		100%		AD	NFTB		P	41	41	77.9	SE	FTB	P
	AVG	41.0	41.0	33.3							P	41.0	41.0	77.9			P
	STDEV	0.00	0.00	2.61								0.00	0.00	4.61			

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/DLK

CHECKED BY:

DLK/RMS

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-71	1	41	41	35.3		100%		AD	NFTB	P		41	41	76.3		>100%	SE	FTB	P
		40	40	33.9		100%		AD	NFTB	P		41	41	76.0		>100%	SE	FTB	P
DS-71	3	41	41	33.8		100%		AD	NFTB	P		40	41	68.5		>100%	SE	FTB	F
		40	41	34.3		85%		AD	BRK FTB	P		41	41	81.2		>100%	SE	FTB	P
DS-71	5	40	40	37.0		60%		AD	BRK FTB	P		41	41	81.8		>100%	SE	FTB	P
		40.4	40.6	34.9						P		40.8	41.0	76.8					P
	AVG	0.55	0.55	1.34								0.45	0.00	5.34					
	STDEV																		

Required Peel Strength =	10 ppi	I = Inside Seam for Dual Peel	O = Outside Seam for Dual Peel
Required Shear Strength =	74 ppi	T = Top Geomembrane Sheet	B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

ES/DLK

CHECKED BY:

DLK/RMS

PROJECT MANAGER

1125-048.ud.xls



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-72	1	41	41	27.3		100%		AD	NFTB	P		41	41	77.5		>100%	SE	P
DS-72	2	41	41	25.8		100%		AD	NFTB	P		41	41	76.2		>100%	SE	P
DS-72	3	41	41	17.5		100%		AD	NFTB	P		41	41	78.3		>100%	SE	P
DS-72	4	41	41	28.0		100%		AD	NFTB	P		41	41	82.6		>100%	SE	P
DS-72	5	41	41	16.8		100%		AD	NFTB	P		41	41	73.1		>100%	SE	F
	AVG	41.0	41.0	23.1						P		41.0	41.0	77.5				P
	STDEV	0.00	0.00	5.48						0.00	0.00			3.45				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B			Yield
DS-73	1	41	42	28.9		100%		AD NFTB		P		41	42	81.1	SE FTB	P
DS-73	2	41	41	23.7		100%		AD NFTB		P		41	41	75.9	SE FTB	P
DS-73	3	41	41	29.0		100%		AD NFTB		P		41	42	71.5	SE FTB	F
DS-73	4	41	41	26.2		100%		AD NFTB		P		41	41	77.2	SE FTB	P
DS-73	5	41	41	25.0		100%		AD NFTB		P		41	41	77.0	SE FTB	P
	AVG	41.0	41.2	26.6						P		41.0	41.4	76.5		P
	STDEV	0.00	0.45	2.35								0.00	0.55	3.44		



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O		T	B			Yield
DS-74	1	40	41	40.4		60%		AD BRK FTB		P		40	41		>100%	SE FTB	P
		40	41	36.0		100%		AD NFTB		P		40	41		>100%	SE FTB	P
DS-74	3	40	41	35.0		100%		AD NFTB		P		41	41		>100%	SE FTB	P
		40	41	35.2		100%		AD NFTB		P		41	41		>100%	SE FTB	F
DS-74	5	41	41	31.9		100%		AD NFTB		P		40	41		>100%	SE FTB	P
		40.2	41.0	35.7						P		40.4	41.0				P
	AVG	0.45	0.00	3.06								0.55	0.00				
	STDEV																



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength			
		Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail	
Sample Number	Test Number	T	B	I	O	I	O	I	O	I	O
DS-75	1	42	40	37.3		100%		AD NFTB		P	
DS-75	2	42	40	42.1		100%		AD NFTB		P	
DS-75	3	41	40	41.6		100%		AD NFTB		P	
DS-75	4	42	41	51.0		40%		AD BRK FTB		P	
DS-75	5	41	40	44.1		100%		AD NFTB		P	
	AVG	41.6	40.2	43.2						P	
	STDEV	0.55	0.45	5.01							

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: DLK CHECKED BY: RMS PROJECT MANAGER



PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

SEAM TYPE:

SEAM TYPE:

SUPPLIER/INST

Solvent Weld

Solvent V

Solvent V

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-76	1	42	41	33.9		100%		AD NFTB		P		41	40	82.8		>100%	SE FTB	P
DS-76	2	42	41	32.4		100%		AD NFTB		P		41	43	82.0		>100%	SE FTB	P
DS-76	3	42	41	34.9		90%		AD BRK FTB		P		41	43	89.5		>100%	SE FTB	P
DS-76	4	41	41	35.3		100%		AD NFTB		P		41	43	85.3		>100%	SE FTB	P
DS-76	5	42	41	37.0		100%		AD NFTB		P		41	42	79.8		>100%	SE FTB	P
	AVG	41.8	41.0	34.7						P		41.0	42.2	83.9				P
	STDEV	0.45	0.00	1.70								0.00	1.30	3.71				

10 ppi

$$\frac{10 \text{ ppi}}{74 \text{ ppi}}$$

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

FTB Classification not required in peel

DLK/JMR

CHECKED BY:

DK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-77	1	40	40	35.4		100%		AD NFTB		P		40	39	90.1		>100%	SE FTB	P
DS-77	2	40	40	39.0		40%		AD BRK FTB		P		40	39	82.0		>100%	SE FTB	P
DS-77	3	40	40	38.9		30%		AD BRK FTB		P		40	39	88.4		>100%	SE FTB	P
DS-77	4	40	40	34.7		30%		AD BRK FTB		P		40	40	86.2		>100%	SE FTB	P
DS-77	5	40	40	35.3		100%		AD NFTB		P		40	39	85.9		>100%	SE FTB	P
	AVG	40.0	40.0	36.7						P		40.0	39.2	86.5				P
	STDEV	0.00	0.00	2.11								0.00	0.45	3.05				

Required Peel Strength =
Required Shear Strength =

10 ppi
74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/JMR

CHECKED BY:

DLK

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break
DS-79	1	41	41	39.8		70%		AD	BRK	FTB	P	41	41	>100%	SE	FTB	P
DS-79	2	41	41	35.7		100%		AD	NFTB		P	40	42	>100%	SE	FTB	P
DS-79	3	41	42	36.7		100%		AD	NFTB		P	40	42	>100%	SE	FTB	P
DS-79	4	41	41	36.1		100%		AD	NFTB		P	40	42	>100%	SE	FTB	P
DS-79	5	41	41	37.8		100%		AD	NFTB		P	40	42	>100%	SE	FTB	P
	AVG	41.0	41.2	37.2							P	40.2	41.8				P
	STDEV	0.00	0.45	1.65								0.45	0.45				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

40 mil PVC

PROJECT NUMBER:

54-8205-03

GEOMEMBRANE TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SEAM TYPE:

Unknown

DATE RECEIVED:

11/24/98

SUPPLIER/INSTALLER:

11/25/98

DATE TESTED:

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-80	1	41	42	30.9		100%		AD		P		41	42	75.0		>100%	SE	P
DS-80	2	41	42	34.3		100%		AD		P		40	41	89.8		>100%	SE	P
DS-80	3	41	42	33.8		100%		AD		P		41	41	89.7		>100%	SE	P
DS-80	4	42	42	33.7		100%		AD		P		40	42	79.9		>100%	SE	P
DS-80	5	41	41	35.2		100%		AD		P		40	41	85.9		>100%	SE	P
	AVG	41.2	41.8	33.6						P		40.4	41.4	84.1				P
	STDEV	0.45	0.45	1.61								0.55	0.55	6.47				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/JMR

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B	Yield	Break	
DS-81	1	39	39	36.5		50%		AD BRK FTB		P		39	39	80.5	>100% SE FTB	P
DS-81	2	39	39	34.1		100%		AD NFTB		P		39	39	82.8	>100% SE FTB	P
DS-81	3	39	39	34.5		100%		AD NFTB		P		39	40	81.0	>100% SE FTB	P
DS-81	4	39	40	37.4		100%		AD NFTB		P		39	39	81.0	>100% SE FTB	P
DS-81	5	39	40	35.8		100%		AD NFTB		P		39	38	76.3	>100% SE FTB	P
	AVG	39.0	39.4	35.7						P		39.0	39.0	80.3		P
	STDEV	0.00	0.55	1.37								0.00	0.71	2.41		

Required Peel Strength = $\frac{10 \text{ ppi}}{74 \text{ ppi}}$
Required Shear Strength =

REMARKS: FTB Classification not required in peel

I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

LABORATORY TECHNICIAN: _____

DLK/JMR

CHECKED BY: _____

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %	Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	T	B					
DS-82	1	41	40	32.7		100%		AD NFTB		P	41	40	88.4	>100%	SE FTB	P
DS-82	2	41	40	34.8		100%		AD NFTB		P	41	40	85.1	>100%	SE FTB	P
DS-82	3	41	40	36.7		30%		AD BRK FTB		P	41	39	84.9	>100%	SE FTB	P
DS-82	4	41	41	37.3		100%		AD NFTB		P	40	39	82.4	>100%	SE FTB	P
DS-82	5	41	41	30.6		30%		AD BRK FTB		P	40	39	85.0	>100%	SE FTB	P
	AVG	41.0	40.4	34.4						P	40.6	39.4	85.2			P
	STDEV	0.00	0.55	2.79							0.55	0.55	2.13			



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-83	1	40	40	36.7		30%		AD BRK FTB		P		40	39	91.4		>100%	SE FTB	P
DS-83	2	40	40	40.8		90%		AD BRK FTB		P		41	40	87.4		>100%	SE FTB	P
DS-83	3	40	40	39.8		70%		AD BRK FTB		P		40	40	88.9		>100%	SE FTB	P
DS-83	4	40	40	43.2		100%		AD N/FTB		P		40	40	89.4		>100%	SE FTB	P
DS-83	5	40	40	41.5		20%		AD BRK FTB		P		41	39	91.1		>100%	SE FTB	P
	AVG	40.0	40.0	40.4						P		40.4	39.6	89.6				P
	STDEV	0.00	0.00	2.41								0.55	0.55	1.65				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-84	1	40	40	39.6		100%		AD	NFTB	P		39	40	77.6		>100%	SE	P
DS-84	2	40	40	33.7		100%		AD	NFTB	P		40	40	73.3		>100%	SE	F
DS-84	3	40	40	30.4		100%		AD	NFTB	P		39	40	84.2		>100%	SE	P
DS-84	4	40	40	30.2		100%		AD	NFTB	P		40	40	90.0		>100%	SE	P
DS-84	5	40	40	26.5		100%		AD	NFTB	P		39	40	83.3		>100%	SE	P
	AVG	40.0	40.0	32.1						P		39.4	40.0	81.7				P
	STDEV	0.00	0.00	4.92								0.55	0.00	6.42				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/JMR

CHECKED BY:

DLK/RMS

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-85	1	40	40	32.0		100%		AD NFTB		P		40	40	82.0		>100%	SE FTB	P
DS-85	2	40	40	34.6		40%		AD BRK FTB		P		40	40	83.6		>100%	SE FTB	P
DS-85	3	40	40	47.0		30%		AD BRK FTB		P		40	40	85.2		>100%	SE FTB	P
DS-85	4	40	40	25.3		100%		AD NFTB		P		40	40	81.2		>100%	SE FTB	P
DS-85	5	40	40	45.2		60%		AD BRK FTB		P		40	40	81.2		>100%	SE FTB	P
	AVG	40.0	40.0	36.8						P		40.0	40.0	82.6				P
	STDEV	0.00	0.00	9.15								0.00	0.00	1.73				

Required Peel Strength = $\frac{10 \text{ ppi}}{74 \text{ ppi}}$

Required Shear Strength =

I = Inside Seam for Dual Peel
 O = Outside Seam for Dual Peel
 T = Top Geomembrane Sheet
 B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

PROJECT MANAGER

11-99-112-00-315



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B	Yield	Break
DS-86	1	40	41	41.9		20%		AD BRK FTB		P		40	40		>100%
DS-86	2	40	41	44.2		70%		AD BRK FTB		P		40	40		>100%
DS-86	3	40	40	42.8		10%		AD BRK FTB		P		40	40		>100%
DS-86	4	40	41	44.8		50%		AD BRK FTB		P		40	40		>100%
DS-86	5	40	41	47.3		0%		SE FTB		P		40	40		>100%
	AVG	40.0	40.8	44.2						P		40.0	40.0		
	STDEV	0.00	0.45	2.07								0.00	0.00		

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel
LABORATORY TECHNICIAN: _____
CHECKED BY: _____
PROJECT MANAGER: _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-87R	1	39	40	39.0		50%		AD BRK FTB		P		39	39	90.5		>100%	SE FTB	P
DS-87R	2	39	40	37.1		40%		AD BRK FTB		P		39	39	89.5		>100%	SE FTB	P
DS-87R	3	39	40	42.9		100%		AD NFTB		P		39	39	95.2		>100%	SE FTB	P
DS-87R	4	39	40	39.6		100%		AD NFTB		P		39	39	85.6		>100%	SE FTB	P
DS-87R	5	39	40	47.4		20%		AD BRK FTB		P		39	39	85.0		>100%	SE FTB	P
	AVG	39.0	40.0	41.2						P		39.0	39.0	89.2				P
	STDEV	0.00	0.00	4.05								0.00	0.00	4.13				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ CHECKED BY: _____ PROJECT MANAGER: _____
DLK



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-88R	1	39	41	22.2		100%		AD	NFTB	P		39	41	88.0		>100%	SE	FTB	P
DS-88R	2	39	41	26.8		100%		AD	NFTB	P		39	41	96.7		>100%	SE	FTB	P
DS-88R	3	40	41	26.8		100%		AD	NFTB	P		39	41	93.9		>100%	SE	FTB	P
DS-88R	4	39	40	27.0		100%		AD	NFTB	P		39	41	94.7		>100%	SE	FTB	P
DS-88R	5	40	40	23.4		100%		AD	NFTB	P		39	41	91.8		>100%	SE	FTB	P
	AVG	39.4	40.6	25.2						P		39.0	41.0	93.0					P
	STDEV	0.55	0.55	2.27								0.00	0.00	3.31					

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thicknss (mils)	Maximum Tension (ppi)	Elongation % Break		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O			Yield	Break		
DS-89	1	38	40	36.4		20%		AD BRK FTB		P		38	40		>100%	SE FTB	P
DS-89	2	38	40	41.9		20%		AD BRK FTB		P		38	40		>100%	SE FTB	P
DS-89	3	38	40	33.3		10%		AD BRK FTB		P		38	40		>100%	SE FTB	P
DS-89	4	38	40	47.9		20%		AD BRK FTB		P		38	40		>100%	SE FTB	P
DS-89	5	38	40	45.2		10%		AD BRK FTB		P		38	40		>100%	SE FTB	P
	AVG	38.0	40.0	40.9						P		38.0	40.0				P
	STDEV	0.00	0.00	6.05								0.00	0.00				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel
LABORATORY TECHNICIAN: _____
CHECKED BY: _____
PROJECT MANAGER: _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/25/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Locus of Break
		T	B	I	O	I	O	I	O	I	O	
DS-90	1	39	39	37.8		30%		AD BRK FTB		P		SE FTB
DS-90	2	39	39	37.2		100%		AD NFTB		P		SE FTB
DS-90	3	39	39	34.1		100%		AD NFTB		P		SE FTB
DS-90	4	39	39	32.9		100%		AD NFTB		P		SE FTB
DS-90	5	39	40	34.9		90%		AD BRK FTB		P		SE FTB
	AVG	39.0	39.2	35.4						P		
	STDEV	0.00	0.45	2.07								
										0.00	0.00	86.4
												3.01

Required Peel Strength =

10 ppi
74 ppi

Required Shear Strength =

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Required Peel Strength = 10 ppi
 Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
 T = Top Geomembrane Sheet
 O = Outside Seam for Dual Peel
 B = Bottom Geomembrane Sheet

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-92	1	40	40	36.6		100%		AD NFTB		P		40	39	85.5		>100%	SE FTB	P
DS-92	2	40	40	39.7		30%		AD BRK FTB		P		40	39	85.9		>100%	BRK FTB	P
DS-92	3	40	40	36.9		80%		AD BRK FTB		P		40	39	90.3		>100%	SE FTB	P
DS-92	4	40	40	38.8		100%		AD NFTB		P		40	39	85.1		>100%	SE FTB	P
DS-92	5	40	39	32.8		100%		AD NFTB		P		40	39	89.6		>100%	SE FTB	P
	AVG	40.0	39.8	37.0						P		40.0	39.0	87.3				P
	STDEV	0.00	0.45	2.66								0.00	0.00	2.47				

Required Peel Strength = 10 ppi

Required Shear Strength = 74 ppi

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet
T = Top Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CHECKED BY:

DLK

PROJECT MANAGER

1125-063.m...s



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O		T	B			Yield	Break
DS-93	1	41	39	34.8		100%		AD	NFTB	P		40	39		>100%	SE	P	
DS-93	2	41	39	33.9		100%		AD	NFTB	P		40	39		>100%	SE	P	
DS-93	3	41	39	33.4		100%		AD	NFTB	P		40	39		>100%	SE	P	
DS-93	4	41	39	34.1		100%		AD	NFTB	P		40	39		>100%	SE	P	
DS-93	5	41	39	36.2		100%		AD	NFTB	P		40	39		>100%	SE	P	
	AVG	41.0	39.0	34.5							P		40.0	39.0				P
	STDEV	0.00	0.00	1.08									0.00	0.00				



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-94	1	40	39	35.0		50%		AD BRK FTB		P		40	39	96.1		>100%	SE FTB	P
		40	39	34.8		70%		AD BRK FTB		P		39	39	90.4		>100%	SE FTB	P
DS-94	3	40	39	36.8		50%		AD BRK FTB		P		40	39	94.4		>100%	SE FTB	P
		40	39	41.7		50%		AD BRK FTB		P		39	39	92.7		>100%	SE FTB	P
DS-94	5	40	39	46.3		70%		AD BRK FTB		P		40	38	93.7		>100%	SE FTB	P
		AVG	STDEV	40.0	39.0	38.9				P		39.6	38.8	93.5				P
		0.00	0.00	4.98							0.55	0.45	2.11					

Required Peel Strength = $\frac{10 \text{ pli}}{74 \text{ pli}}$

Required Shear Strength =

I = Inside Seam for Dual Peel
 O = Outside Seam for Dual Peel
 B = Bottom Geomembrane Sheet
 T = Top Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK

PROJECT MANAGER

1125-065



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O			Yield	Break		
DS-95	1	40	40	36.7		100%		AD NFTB		P		40	40		>100%	SE FTB	P
DS-95	2	40	40	32.6		100%		AD NFTB		P		40	40		>100%	SE FTB	P
DS-95	3	40	40	31.7		100%		AD NFTB		P		40	39		>100%	SE FTB	P
DS-95	4	40	40	35.5		100%		AD NFTB		P		40	39		>100%	SE FTB	P
DS-95	5	41	40	36.9		100%		AD NFTB		P		40	39		>100%	SE FTB	P
	AVG	40.2	40.0	34.7						P		40.0	39.4				P
	STDEV	0.45	0.00	2.39								0.00	0.55				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-96	1	40	40	32.1		100%		AD		P		39	39	85.7		>100%	SE	P
								NFTB									FTB	
DS-96	2	40	40	32.2		100%		AD		P		39	39	86.6		>100%	SE	P
								NFTB									FTB	
DS-96	3	40	40	32.8		100%		AD		P		39	39	80.8		>100%	SE	P
								NFTB									FTB	
DS-96	4	40	40	32.2		100%		AD		P		39	40	83.1		>100%	SE	P
								NFTB									FTB	
DS-96	5	40	40	33.3		50%		AD		P		39	39	86.0		>100%	SE	P
								BRK									FTB	
	AVG	40.0	40.0	32.5						P		39.0	39.2	84.4				P
		0.00	0.00	0.52								0.00	0.45	2.44				
	STDEV																	

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

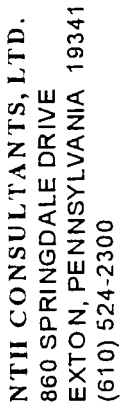
LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/25/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-97	1	40	40	34.7		100%		AD	NFTB		P	39	40	78.4		>100%	SE	FTB	P
DS-97	2	40	40	34.6		100%		AD	NFTB		P	40	39	74.5		>100%	SE	FTB	P
DS-97	3	40	40	37.4		40%		AD	BRK	FTB	P	40	40	71.4		>100%	SE	FTB	F
DS-97	4	40	40	35.9		100%		AD	NFTB		P	40	39	87.6		>100%	SE	FTB	P
DS-97	5	40	40	35.6		100%		AD	FTB		P	40	39	75.6		>100%	SE	FTB	P
	AVG	40.0	40.0	35.6							P	39.8	39.4	77.5					P
	STDEV	0.00	0.00	1.13								0.45	0.55	6.18					

Required Peel Strength = 10 ppi I = Inside Seam for Dual Peel O = Outside Seam for Dual Peel
 Required Shear Strength = 74 ppi T = Top Gcomembrane Sheet B = Bottom Gcomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK

PROJECT MANAGER

1125-068.11d.xls



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/25/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O		T	B			Yield
DS-98	1	40	40	40.6		20%		AD BRK FTB		P		40	39		>100%	SE FTB	P
DS-98	2	40	40	32.2		100%		AD NFTB		P		40	39		>100%	SE FTB	P
DS-98	3	40	39	39.2		90%		AD BRK FTB		P		40	40		>100%	SE FTB	P
DS-98	4	40	40	38.2		100%		AD NFTB		P		40	40		>100%	SE FTB	P
DS-98	5	40	40	39.1		100%		AD NFTB		P		40	40		>100%	SE FTB	P
	AVG	40.0	39.8	37.9						P		40.0	39.6				P
	STDEV	0.00	0.45	3.28								0.00	0.55				



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Required Peel Strength = $\frac{10 \text{ psi}}{74 \text{ psi}}$

Required Shear Strength =

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

PROJECT MANAGER

Required Shear Strength =

FTB Classification not required in peel

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

1125-070 ud.xls



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion							Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-100	1	40	39	37.9		70%		AD BRK FTB		P		39	39	78.6		>100%	SE FTB	P
		40	39	37.6		50%		AD BRK FTB		P		39	39	87.0		>100%	SE FTB	P
DS-100	3	40	39	41.7		50%		AD BRK FTB		P		39	39	87.7		>100%	SE FTB	P
		40	39	40.9		90%		AD BRK FTB		P		40	40	96.6		>100%	SE FTB	P
DS-100	5	40	39	43.8		60%		AD BRK FTB		P		39	40	75.6		>100%	SE FTB	P
		40.0	39.0	40.4						P		39.2	39.4	85.1				P
	STDEV	0.00	0.00	2.63								0.45	0.55	8.29				

Required Peel Strength =
Required Shear Strength =

10 ppi
74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O			Yield	Break			
DS-101	1	41	38	19.5		100%		AD	NFTB	P		40	38	89.0		>100%	SE	P
		41	38	27.5		100%		AD	NFTB	P		41	38	90.3		>100%	SE	P
DS-101	3	41	38	26.7		100%		AD	NFTB	P		40	38	89.7		>100%	SE	P
		41	39	23.4		100%		AD	NFTB	P		41	37	87.0		>100%	SE	P
DS-101	5	41	39	20.5		100%		AD	NFTB	P		41	38	86.4		>100%	SE	P
		41.0	38.4	23.5						P		40.6	37.8	88.5				P
	STDEV	0.00	0.55	3.58								0.55	0.45	1.70				



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion							Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O		Yield	Break		
DS-102	1	41	41	26.4		100%		AD	NFTB	P		41	41	>100%	SE	P
		41	41	29.8		100%		AD	NFTB	P		41	40	>100%	SE	P
DS-102	3	41	41	24.3		100%		AD	NFTB	P		41	41	>100%	SE	P
		41	41	28.4		100%		AD	NFTB	P		40	42	>100%	SE	P
DS-102	5	41	41	21.8		100%		AD	NFTB	P		40	41	>100%	SE	P
		41.0	41.0	26.1						P		40.6	41.0			
	AVG	0.00	0.00	3.19								0.55	0.71			P
	STDEV															



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Required Peel Strength = $\frac{10 \text{ pli}}{74 \text{ pli}}$

Required Shear Strength = $\frac{10 \text{ pli}}{74 \text{ pli}}$

I = Inside Seam for Dual Peel
 T = Top Geomembrane Sheet
 O = Outside Seam for Dual Peel
 B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CHECKED BY:

DLK

PROJECT MANAGER

1125-074.ud.xls



NTI CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-104	1	40	40	28.4		100%		AD NFTB		P		40	38	74.5		>100%	SE FTB	P
DS-104	2	40	41	24.7		40%		AD BRK FTB		P		39	39	71.7		>100%	SE FTB	F
DS-104	3	40	40	27.5		100%		AD NFTB		P		40	37	78.0		>100%	SE FTB	P
DS-104	4	40	40	27.2		100%		AD NFTB		P		39	38	82.8		>100%	SE FTB	P
DS-104	5	40	40	21.1		100%		AD NFTB		P		40	38	78.8		>100%	SE FTB	P
	AVG	40.0	40.2	25.8						P		39.6	38.0	77.2				P
	STDEV	0.00	0.45	2.95								0.55	0.71	4.25				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-105	1	39	39	33.2		100%		AD		P		38	40	74.3		>100%	SE	P
								NFTB									FTB	
DS-105	2	39	39	40.1		40%		AD		P		39	39	73.9		>100%	SE	F
								BRK									FTB	
DS-105	3	39	39	32.8		100%		AD		P		39	39	74.3		>100%	SE	P
								NFTB									FTB	
DS-105	4	39	39	42.0		90%		AD		P		39	39	78.6		>100%	SE	P
								BRK									FTB	
DS-105	5	39	39	40.0		50%		AD		P		39	39	72.6		>100%	SE	F
								BRK									FTB	
	AVG	39.0	39.0	37.6						P		38.8	39.2	74.7				F
		0.00	0.00	4.29								0.45	0.45	2.27				
STDEV																		



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-106	1	39	40	44.8		0%		SE FTB		P		39	39	76.1		>100%	SE FTB	P
DS-106	2	40	40	27.3		100%		AD NFTB		P		39	40	76.8		>100%	SE FTB	P
DS-106	3	39	40	26.3		100%		AD NFTB		P		39	39	73.0		>100%	SE FTB	F
DS-106	4	40	40	41.5		50%		AD BRK FTB		P		40	39	72.4		>100%	SE FTB	F
DS-106	5	40	40	24.9		100%		AD NFTB		P		39	39	73.8		>100%	SE FTB	F
	AVG	39.6	40.0	33.0						P		39.2	39.2	74.4				F
	STDEV	0.55	0.00	9.41								0.45	0.45	1.93				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
REMARKS: FTB Classification not required in peel
LABORATORY TECHNICIAN: CJS/CL
CHECKED BY: DLK
PROJECT MANAGER: [Signature]
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet



11/26/98

1125-078 and xfs



SEAM PEEL ADHESION AND BONDED SEAM STRENGTH

ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J. V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-108	1	41	41	30.9		100%		AD	NFTB	P		40	41	79.3		>100%	SE	P
		41	41	38.5		100%		AD	NFTB	P		41	41	81.4		>100%	SE	P
DS-108	3	41	41	41.4		100%		AD	NFTB	P		40	41	80.4		>100%	SE	P
DS-108	4	40	41	29.7		100%		AD	NFTB	P		40	41	82.4		>100%	SE	P
DS-108	5	40	41	29.0		100%		AD	NFTB	P		40	41	72.2		>100%	SE	F
	AVG	40.6	41.0	33.9						P		40.2	41.0	79.1				P
	STDEV	0.55	0.00	5.66								0.45	0.00	4.05				

Required Peel Strength = $\frac{10 \text{ pli}}{74 \text{ pli}}$

Required Shear Strength = $\frac{10 \text{ pli}}{74 \text{ pli}}$

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DI.K

PROJECT MANAGER

1125-079. (d) (5)



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Solvent Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-109	1	41	40	44.2		40%		AD BRK FTB		P		41	39	85.8		>100%	SE FTB	P
DS-109	2	41	40	56.8		10%		AD BRK FTB		P		41	40	90.9		>100%	SE FTB	P
DS-109	3	41	40	52.8		10%		AD BRK FTB		P		41	39	99.5		>100%	SE FTB	P
DS-109	4	41	40	55.6		100%		AD NFTB		P		41	40	100.7		>100%	SE FTB	P
DS-109	5	41	40	48.4		100%		AD NFTB		P		41	40	80.4		>100%	SE FTB	P
	AVG	41.0	40.0	51.6						P		41.0	39.6	91.5				P
	STDEV	0.00	0.00	5.23								0.00	0.55	8.73				

Required Peel Strength =

10 ppi

I = Inside Seam for Dual Peel

O = Outside Seam for Dual Peel

Required Shear Strength =

74 ppi

T = Top Geomembrane Sheet

B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-110	1	40	41	33.0		100%		AD	NFTB	P		40	40	94.2		>100%	SE	P
DS-110	2	40	41	31.2		100%		AD	NFTB	P		41	40	91.8		>100%	SE	P
DS-110	3	40	41	32.9		100%		AD	NFTB	P		39	41	92.4		>100%	SE	P
DS-110	4	40	41	39.6		100%		AD	NFTB	P		40	41	76.1		>100%	SE	P
DS-110	5	41	41	35.7		100%		AD	NFTB	P		40	41	96.4		>100%	SE	P
	AVG	40.2	41.0	34.5						P		40.0	40.6	90.2				P
	STDDEV	0.45	0.00	3.28								0.71	0.55	8.07				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-111	1	42	41	27.4		100%		AD	NFTB	P		41	40	84.5		>100%	SE	FTB	P
		42	41	24.0		100%		AD	NFTB	P		41	41	77.2		>100%	SE	FTB	P
DS-111	3	42	41	21.5		100%		AD	NFTB	P		41	41	70.1		>100%	SE	FTB	F
		42	42	20.6		100%		AD	NFTB	P		41	40	74.6		>100%	SE	FTB	P
DS-111	5	42	41	20.0		100%		AD	NFTB	P		41	41	73.3		>100%	SE	FTB	F
		42.0	41.2	22.7						P		41.0	40.6	75.9					F
	STDEV	0.00	0.45	3.04								0.00	0.55	5.43					

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK

PROJECT MANAGER



SEAM PEEL ADHESION AND BONDED SEAM STRENGTH

ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCI, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-112	1	41	41	33.9		100%		AD	NFTB	P		41	41	81.8		>100%	SE	FTB	P
DS-112	2	41	41	30.6		100%		AD	NFTB	P		40	41	84.8		>100%	SE	FTB	P
DS-112	3	41	41	26.3		100%		AD	NFTB	P		41	41	88.8		>100%	SE	FTB	P
DS-112	4	41	41	32.2		100%		AD	NFTB	P		40	41	76.0		>100%	SE	FTB	P
DS-112	5	41	41	28.7		100%		AD	NFTB	P		41	41	87.1		>100%	SE	FTB	P
	AVG	41.0	41.0	30.3						P		40.6	41.0	83.7					P
	STDEV	0.00	0.00	2.97								0.55	0.00	5.04					

Required Peel Strength = $\frac{10 \text{ pli}}{74 \text{ pli}}$

Required Shear Strength =

I = Inside Seam for Dual Peel
 O = Outside Seam for Dual Peel
 T = Top Geomembrane Sheet
 B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DI.K/Cl.

CHECKED BY:

DLK

PROJECT MANAGER

1125-0835



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength				
		Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Pass/Fail
Sample Number	Test Number	T	B	I	O	I	O	I	O	I	O	
DS-113	1	41	41	50.1		10%		AD BRK FTB		P		P
DS-113	2	41	41	56.0		0%		SE FTB		P		P
DS-113	3	41	41	51.2		30%		AD BRK FTB		P		P
DS-113	4	41	41	47.0		50%		AD BRK FTB		P		P
DS-113	5	41	41	48.1		0%		SE FTB		P		P
	AVG	41.0	41.0	50.5						P		P
	STDEV	0.00	0.00	3.50								

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ CHECKED BY: _____ PROJECT MANAGER: _____



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension		Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B	Yield	Break		
DS-114	1	40	40	40.3		80%		AD BRK FTB		P		39	39		>100%	SE FTB	F
		40	40	29.4		80%		AD BRK FTB		P		39	40		>100%	SE FTB	P
DS-114	3	40	40	40.8		80%		AD BRK FTB		P		38	39		>100%	SE FTB	F
		40	40	41.7		80%		AD BRK FTB		P		39	39		>100%	SE FTB	F
DS-114	5	40	40	35.5		100%		AD NFTB		P		39	40		>100%	SE FTB	F
		40	40														
	AVG	40.0	40.0	37.5						P		38.8	39.4				F
		0.00	0.00	5.15								0.45	0.55				



SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-116	1	42	43	59.8		0%		SE	FTB	P		42	41	90.6		>100%	SE	P
		42	43	51.4		0%		SE	FTB	P		42	42	83.6		>100%	SE	P
DS-116	3	42	43	54.2		0%		SE	FTB	P		42	41	89.7		>100%	SE	P
		42	43	55.3		0%		SE	FTB	P		42	41	87.3		>100%	SE	P
DS-116	5	42	43	55.8		0%		SE	FTB	P		42	41	94.3		>100%	SE	P
		42.0	43.0	55.3						P		42.0	41.2	89.1				P
AVG		0.00	0.00	3.04						P		0.00	0.45	3.97				
STDEV		0.00	0.00	3.04								0.00	0.45	3.97				

Required Peel Strength =	10 ppi	I = Inside Seam for Dual Peel	O = Outside Seam for Dual Peel
Required Shear Strength =	74 ppi	T = Top Geomembrane Sheet	B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

D1.K

PROJECT MANAGER



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-117	1	40	42	49.3		0%		SE FTB		P		40	41	86.3		>100%	SE FTB	P
DS-117	2	40	42	50.8		0%		SE FTB		P		40	41	84.0		>100%	SE FTB	P
DS-117	3	40	42	49.3		0%		SE FTB		P		40	40	87.7		>100%	SE FTB	P
DS-117	4	40	42	55.0		0%		SE FTB		P		40	40	78.4		>100%	SE FTB	P
DS-117	5	40	42	46.2		0%		SE FTB		P		41	40	81.3		>100%	SE FTB	P
	AVG	40.0	42.0	50.1						P		40.2	40.4	83.5				P
	STDEV	0.00	0.00	3.20								0.45	0.55	3.76				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

REMARKS: FTB Classification not required in peel

1 = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

LABORATORY TECHNICIAN: _____

DLK/CL

CHECKED BY: _____

DLK

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-118	1	40	40	34.8		100%		AD		P		39	40	69.9		>100%	SE FTB	F
		40	40	32.8		100%		AD		P		39	39	85.8		>100%	SE FTB	P
DS-118	3	40	40	37.0		100%		AD		P		39	40	75.0		>100%	SE FTB	P
		40	40	36.0		100%		AD		P		39	40	73.2		>100%	SE FTB	F
DS-118	5	40	40	35.4		100%		AD		P		38	39	69.6		>100%	SE FTB	F
		40	40															
	AVG	40.0	40.0	35.2						P		38.8	39.6	74.7				F
	STDEV	0.00	0.00	1.57								0.45	0.55	6.61				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ DLK/CL _____ CHECKED BY: _____ DLK _____ PROJECT MANAGER: _____



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCI, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-119	1	39	39	46.3		50%		AD BRK FTB		P		38	39	86.6		>100%	SE FTB	P
DS-119	2	39	39	40.7		10%		AD BRK FTB		P		39	39	86.8		>100%	SE FTB	P
DS-119	3	40	39	48.6		50%		AD BRK FTB		P		39	39	82.4		>100%	BRK FTB	P
DS-119	4	39	39	51.3		40%		AD BRK FTB		P		39	39	72.8		>100%	SE FTB	F
DS-119	5	39	39	45.1		70%		AD BRK FTB		P		38	39	86.3		>100%	SE FTB	P
	AVG	39.2	39.0	46.4						P		38.6	39.0	83.0				P
	STDEV	0.45	0.00	3.97								0.55	0.00	5.97				

Required Peel Strength = $\frac{10 \text{ ppi}}{74 \text{ ppi}}$

Required Shear Strength =

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

D1.K

PROJECT MANAGER

1175 (81)-5611



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Required Peel Strength = 10 ppi I = Inside Seam for Dual Peel O = Outside Seam for Dual Peel
 Required Shear Strength = 74 ppi T = Top Geomembrane Sheet B = Bottom Geomembrane Sheet

REMARKS: TB Classification not required in peel

LABORATORY TECHNICIAN:

CHECKED BY:

DLK

PROJECT MANAGER

1125-090.ud.xls



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O		T	B		
DS-121	1	42	42	53.6		0%		SE FTB		P		91.1		>100%	SE FTB	P
DS-121	2	42	42	50.6		0%		SE FTB		P		90.1		>100%	SE FTB	P
DS-121	3	42	42	54.3		0%		SE FTB		P		89.3		>100%	SE FTB	P
DS-121	4	42	42	54.0		0%		SE FTB		P		91.3		>100%	SE FTB	P
DS-121	5	42	42	53.9		0%		SE FTB		P		89.7		>100%	SE FTB	P
	AVG	42.0	42.0	53.3						P		90.3				P
	STDEV	0.00	0.00	1.52								0.87				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: DLK/CL

CHECKED BY: DLK

PROJECT MANAGER



SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (psi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (psi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-122	1	40	40	39.6		40%		AD BRK FTB		P		40	39	67.1		>100%	SE FTB	F
DS-122	2	40	40	44.2		0%		SE FTB		P		40	39	66.1		>100%	SE FTB	F
DS-122	3	40	40	43.6		30%		AD BRK FTB		P		39	39	65.0		>100%	SE FTB	F
DS-122	4	40	40	44.1		0%		SE FTB		P		39	39	69.5		>100%	SE FTB	F
DS-122	5	40	40	43.3		10%		AD BRK FTB		P		40	39	61.6		>100%	SE FTB	F
	AVG	40.0	40.0	43.0						P		39.6	39.0	65.9				F
	STDEV	0.00	0.00	1.91								0.55	0.00	2.90				

Required Peel Strength =

Required Peel Strength =
Required Shear Strength =

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER

1130-104 and sds



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

PROJECT NUMBER:

CLIENT:

DATE RECEIVED:

Clarkstown Landfill Cap

54-8205-03

M&T/NAMOW/TCL, J.V.

11/24/98

GEOMEMBRANE TYPE:

40 mil PVC

SEAM TYPE:

Thermal Weld

SUPPLIER/INSTALLER:

Unknown

DATE TESTED:

11/26/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Pass/Fail
		T	B	I	O	I	O	I	O	T	B	
DS-123	1	41	39	37.5		80%		AD BRK FTB		P	40	P
DS-123	2	42	40	42.6		100%		AD NFTB		P	41	P
DS-123	3	41	40	41.1		50%		AD BRK FTB		P	41	P
DS-123	4	41	40	44.8		10%		AD BRK FTB		P	41	P
DS-123	5	41	40	47.6		0%		SE FTB		P	41	P
	AVG	41.2	39.8	42.7						P	40.8	P
	STDDEV	0.45	0.45	3.81						0.45	0.45	

Required Peel Strength =

Required Shear Strength =

REMARKS:

FTB Classification not required in peel

I = Inside Seam for Dual Peel

T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel

B = Bottom Geomembrane Sheet

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Thermal Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	Yield	Break				
DS-124	1	39	39	53.9		0%		SE FTB		P		40	39	73.0	>100%	SE FTB	P
DS-124	2	39	40	45.1		0%		BRK FTB		P		39	39	73.5	>100%	SE FTB	P
DS-124	3	39	39	50.2		0%		SE FTB		P		39	39	70.5	>100%	SE FTB	P
DS-124	4	39	40	49.0		0%		SE FTB		P		39	39	72.1	>100%	SE FTB	P
DS-124	5	39	39	49.9		0%		BRK FTB		P		39	39	69.2	>100%	SE FTB	P
	AVG	39.0	39.4	49.6						P		39.2	39.0	71.7			P
	STDEV	0.00	0.55	3.14								0.45	0.00	1.79			



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

Clarkstown Landfill Cap

GEOMEMBRANE TYPE:

40 mil PVC

PROJECT NUMBER:

54-8205-03

SEAM TYPE:

Thermal Weld

CLIENT:

M&T/NAMOW/TCL, J.V.

SUPPLIER/INSTALLER:

Unknown

DATE RECEIVED:

11/24/98

DATE TESTED:

11/26/98

Sample Identification		✓		Seam Peel Adhesion						Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O		T	B			Yield
DS-125	1	40	40	47.4		0%		SE FTB		P		40	40		>100%	SE FTB	F
		40	40	49.5		0%		SE FTB		P		40	39		>100%	SE FTB	F
DS-125	3	40	40	48.2		0%		BRK FTB		P		40	39		>100%	SE FTB	F
		40	40	51.2		0%		BRK FTB		P		40	39		>100%	SE FTB	P
DS-125	5	40	40	43.3		30%		AD BRK FTB		P		40	39		>100%	SE FTB	F
		40	40	47.9						P		40.0	39.2				F
	AVG	40.0	40.0	47.9						P		40.0	39.2				F
	STDEV	0.00	0.00	2.96								0.00	0.45				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion							Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	T	B	Yield	Break		
DS-126	1	40	39	59.3		0%		SE FTB		P			>100%	SE FTB	P
		40	39	48.3		20%		AD BRK FTB		P			>100%	SE FTB	F
DS-126	3	40	39	40.9		100%		AD NFTB		P			>100%	SE FTB	F
		40	39	40.0		100%		AD NFTB		P			>100%	SE FTB	P
DS-126	5	40	39	29.4		100%		AD NFTB		P			>100%	SE FTB	F
		40.0	39.0	43.6						P					F
	STDEV	0.00	0.00	11.07											

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel
LABORATORY TECHNICIAN: _____
CHECKED BY: _____
PROJECT MANAGER: _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail			
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break	
DS-127	1	40	40	35.4		100%		AD	NFTB		P	40	39	73.9	>100%	SE	FTB	F
DS-127	2	40	40	46.7		0%		SE	FTB		P	40	39	72.1	>100%	SE	FTB	F
DS-127	3	40	40	41.4		20%		AD	BRK	FTB	P	39	39	61.5	>100%	SE	FTB	F
DS-127	4	40	40	45.6		20%		AD	BRK	FTB	P	40	40	66.5	>100%	SE	FTB	F
DS-127	5	40	40	41.4		100%		AD	NFTB		P	40	39	66.1	>100%	SE	FTB	F
	AVG	40.0	40.0	42.1							P	39.8	39.2	68.0				F
	STDEV	0.00	0.00	4.45								0.15	0.45	4.99				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel
LABORATORY TECHNICIAN: _____
CHECKED BY: _____
PROJECT MANAGER: _____
RMS



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-128	1	40	39	47.0		60%		AD BRK FTB		P		39	39	73.3		>100%	SE FTB	F
DS-128	2	39	39	46.8		80%		AD BRK FTB		P		39	40	68.1		>100%	SE FTB	F
DS-128	3	39	39	42.3		50%		AD BRK FTB		P		39	39	72.0		>100%	SE FTB	F
DS-128	4	40	40	41.1		10%		AD BRK FTB		P		39	39	83.1		>100%	SE FTB	P
DS-128	5	40	39	48.7		0%		SE FTB		P		39	39	72.4		100%	SE FTB	F
	AVG	39.6	39.2	45.2						P		39.0	39.2	73.8				F
	STDEV	0.55	0.45	3.29								0.00	0.45	5.58				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B			Yield
DS-129	1	40	39	31.7		100%		AD NFTB		P		38	40	79.8	SE FTB	P
DS-129	2	41	38	37.8		100%		AD NFTB		P		38	40	76.6	SE FTB	P
DS-129	3	41	38	31.3		100%		AD NFTB		P		38	40	76.4	SE FTB	P
DS-129	4	41	38	41.0		100%		AD NFTB		P		38	40	76.8	SE FTB	P
DS-129	5	41	38	32.0		100%		AD NFTB		P		38	40	75.2	SE FTB	P
	AVG	40.8	38.2	34.8						P		38.0	40.0	77.0		P
	STDEV	0.45	0.45	4.39								0.00	0.00	1.71		

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-130	1	40	40	51.8		0%		SE FTB		P		40	40	73.7		>100%	SE FTB	F
		40	41	48.2		10%		AD BRK FTB		P		40	39	77.0		>100%	SE FTB	P
DS-130	3	39	40	44.4		0%		SE FTB		P		40	39	81.2		>100%	SE FTB	P
		40	41	41.6		30%		AD BRK FTB		P		40	39	66.9		>100%	SE FTB	F
DS-130	5	39	40	47.6		10%		AD BRK FTB		P		40	39	75.3		>100%	SE FTB	P
		39.6	40.4	46.7						P		40.0	39.2	74.8				F
	STDEV	0.55	0.55	3.88								0.00	0.45	5.24				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
REMARKS: FTB Classification not required in peel
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

LABORATORY TECHNICIAN: _____
CHECKED BY: _____
PROJECT MANAGER: _____
CJS
DLK/RMS



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-131	1	40	40	42.8		10%		AD BRK FTB		P		40	39	78.8		>100%	SE FTB	P
DS-131	2	40	40	53.1		0%		SE FTB		P		40	40	77.9		>100%	SE FTB	P
DS-131	3	40	40	46.0		10%		AD BRK FTB		P		39	40	76.9		>100%	SE FTB	P
DS-131	4	40	40	45.3		0%		SE FTB		P		40	40	80.1		>100%	SE FTB	P
DS-131	5	40	40	49.0		0%		SE FTB		P		39	40	72.2		>100%	SE FTB	F
	AVG	40.0	40.0	47.2								39.6	39.8	77.2				P
	STDEV	0.00	0.00	3.95								0.55	0.45	3.02				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ CJS/CL _____ DLK/RMS _____ PROJECT MANAGER _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-132	1	40	38	36.1		100%		AD		P		38	39	74.6		>100%	SE	P
								NFTB									FTB	
DS-132	2	40	38	47.7		0%		SE		P		38	39	72.5		>100%	SE	F
								FTB									FTB	
DS-132	3	40	38	39.8		0%		SE		P		38	39	76.1		>100%	SE	P
								FTB									FTB	
DS-132	4	40	38	47.1		0%		SE		P		38	40	74.7		>100%	SE	P
								FTB									FTB	
DS-132	5	39	39	45.2		0%		SE		P		38	40	59.5		>100%	SE	F
								FTB									FTB	
	AVG	39.8	38.2	43.2						P		38.0	39.4	71.5				
	STDEV	0.45	0.45	5.04								0.00	0.55	6.82				F

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength					
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-133	1	40	40	26.2		100%		AD NFTB		P		39	40	72.3		>100%	SE FTB	F
DS-133	2	40	40	50.4		0%		SE FTB		P		40	40	69.2		>100%	SE FTB	F
DS-133	3	40	40	44.5		40%		AD BRK FTB		P		40	40	77.8		>100%	SE FTB	P
DS-133	4	40	39	43.9		40%		AD BRK FTB		P		39	40	74.3		>100%	SE FTB	P
DS-133	5	41	39	47.4		30%		AD BRK FTB		P		39	39	71.2		>100%	SE FTB	F
	AVG	40.2	39.6	42.5						P		39.4	39.8	73.0				F
	STDEV	0.45	0.55	9.46								0.55	0.45	3.27				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT:

PROJECT NUMBER:

CLIENT:

DATE RECEIVED:

Clarkstown Landfill Cap

54-8205-03

M&T/NAMOW/TCL, J.V.

11/24/98

GEOMEMBRANE TYPE:

SEAM TYPE:

SUPPLIER/INSTALLER:

DATE TESTED:

40 mil PVC

Thermal Weld

Unknown

11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-134	1	40	40	41.2		80%		AD BRK FTB		P		39	39	78.0		>100%	SE FTB	P
DS-134	2	40	39	51.4		90%		AD BRK FTB		P		39	40	74.9		>100%	SE FTB	P
DS-134	3	40	39	45.8		100%		AD NFTB		P		39	40	75.6		>100%	SE FTB	P
DS-134	4	40	39	41.2		100%		AD NFTB		P		39	40	74.7		>100%	SE FTB	P
DS-134	5	39	39	45.5		40%		AD BRK FTB		P		39	39	74.3		>100%	SE FTB	P
	AVG	39.8	39.2	45.0						P		39.0	39.6	75.5				P
	STDEV	0.45	0.45	4.20								0.00	0.55	1.47				

Required Peel Strength =

Required Shear Strength =

10 ppi

74 ppi

I = Inside Seam for Dual Peel

T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel

B = Bottom Geomembrane Sheet

REMARKS:

FTB Classification not required in peel

LABORATORY TECHNICIAN:

CIS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Required Peel Strength = $\frac{10 \text{ ppi}}{74 \text{ ppi}}$

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER

i30-1.xls



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8203-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-136	1	41	41	21.9		100%		AD	NFTB	P		41	40	87.8		100%	BRK	P
DS-136	2	41	41	20.7		100%		AD	NFTB	P		40	40	82.9		100%	SE	P
DS-136	3	41	40	22.4		100%		AD	NFTB	P		40	40	81.1		100%	SE	P
DS-136	4	40	40	17.8		100%		AD	NFTB	P		40	40	79.9		100%	SE	P
DS-136	5	41	41	19.1		100%		AD	NFTB	P		40	40	74.5		100%	SE	P
	AVG	40.8	40.6	20.4						P		40.2	40.0	81.2				P
	STDDEV	0.45	0.55	1.92								0.45	0.00	4.82				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: CJ/CL
CHECKED BY: DLK/RMS
PROJECT MANAGER: [Signature]



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O		T	B			Yield	Break
DS-137	1	42	41	47.4		0%		SE	FTB	P		89.0	41		>100%	SE	FTB	
		42	41	44.8		80%		AD	BRK	FTB	P		91.3	41		>100%	SE	FTB
DS-137	3	41	42	38.7		100%		AD	NFTB	P		89.7	41		>100%	SE	FTB	
		41	41	48.8		30%		AD	BRK	FTB	P		87.6	41		>100%	SE	FTB
DS-137	5	42	41	44.2		50%		AD	BRK	FTB	P		78.1	41		>100%	SE	FTB
		41.6	41.2	44.8						P			87.1	41.4				P
	AVG	0.55	0.45	3.88								0.55	0.55					
	STDEV											5.23						

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O		Yield	Break		
DS-138	1	42	39	39.7		0%		SE	FTB	P		79.8		>100%	SE	P
DS-138	2	41	39	40.2		0%		SE	FTB	P		69.9		>100%	SE	F
DS-138	3	41	39	36.4		0%		SE	FTB	P		73.6		>100%	SE	F
DS-138	4	41	39	43.6		0%		SE	FTB	P		70.3		>100%	SE	F
DS-138	5	41	39	40.2		40%		AD	BRK	P		71.3		>100%	SE	F
	AVG	41.2	39.0	40.0						P		73.0				F
	STDEV	0.45	0.00	2.55								4.07				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH ASTM D413/D3083

PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J.V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/26/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O			Yield	Break		
DS-139	1	41	41	30.2		90%		AD BRK FTB		P		40	40		>100%	SE FTB	F
DS-139	2	40	41	33.7		80%		AD BRK FTB		P		41	40		>100%	SE FTB	F
DS-139	3	41	41	41.5		100%		AD NFTB		P		41	41		>100%	SE FTB	F
DS-139	4	41	41	40.1		95%		AD BRK FTB		P		41	42		100%	SE FTB	F
DS-139	5	41	41	36.8		90%		AD BRK FTB		P		41	41		100%	SE FTB	F
	AVG	40.8	41.0	36.5						P		40.8	40.8				F
	STDEV	0.45	0.00	4.63								0.45	0.84				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/26/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-140	1	40	40	38.4		0%		SE	FTB	P		39	39	67.7		>100%	SE	FTB
DS-140	2	40	40	38.6		0%		SE	FTB	P		39	39	63.5		>100%	SE	FTB
DS-140	3	40	40	42.1		0%		SE	FTB	P		39	39	71.8		>100%	SE	FTB
DS-140	4	40	40	46.4		0%		SE	FTB	P		39	39	72.2		>100%	SE	FTB
DS-140	5	40	40	48.2		0%		SE	FTB	P		39	39	66.3		>100%	SE	FTB
	AVG	40.0	40.0	42.7						P		39.0	39.0	68.3				P
	STDEV	0.00	0.00	4.46								0.00	0.00	3.70				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CJS/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %	Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	T	B			
DS-141	1	40	40	46.1		0%		SE FTB		P		>100%	SE FTB	P
DS-141	2	40	40	33.5		30%		AD BRK FTB		P		>100%	SE FTB	P
DS-141	3	40	40	27.9		100%		AD NFTB		P		>100%	SE FTB	P
DS-141	4	40	40	36.9		100%		AD NFTB		P		>100%	SE FTB	P
DS-141	5	39	39	43.9		30%		AD BRK FTB		P		>100%	SE FTB	P
	AVG	39.8	39.8	37.7						P				P
	STDDEV	0.45	0.45	7.47										



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Thermal Weld
CLIENT:	M&T/NAMOW/TCL, J. V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/27/98

Required Peel Strength =	<u>10 ppi</u>	I = Inside Seam for Dual Peel T = Top Gcomembrane Sheet
Required Shear Strength =	<u>74 ppi</u>	O = Outside Seam for Dual Peel B = Bottom Gcomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	T	B		Yield	Break			
DS-143	1	40	40	55.5		0%		SE FTB		P		40	40		>100%	SE FTB	F
		40	40	44.8		0%		SE FTB		P		39	40		>100%	SE FTB	F
DS-143	3	40	40	51.0		0%		SE FTB		P		40	40		>100%	SE FTB	F
		40	40	52.6		10%		AD BRK FTB		P		40	40		>100%	SE FTB	F
DS-143	5	40	40	50.0		0%		SE FTB		P		41	40		>100%	SE FTB	F
		40	40	50.8						P		40.0	40.0				F
	AVG	40.0	40.0	50.8						P		40.0	40.0				F
	STDEV	0.00	0.00	3.94								0.71	0.00				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-144	1	40	40	44.8		40%		AD BRK FTB		P		39	40	67.2		>100%	SE FTB	F
		40	40	46.8		0%		SE FTB		P		40	40	66.6		>100%	SE FTB	F
DS-144	3	40	40	44.3		0%		SE FTB		P		39	40	68.1		>100%	SE FTB	F
		40	40	35.4		60%		AD BRK FTB		P		41	41	66.9		>100%	SE FTB	F
DS-144	5	40	40	44.7		0%		SE FTB		P		40	41	67.9		>100%	SE FTB	F
		40.0	40.0	43.2						P		39.8	40.4	67.3				F
	STDEV	0.00	0.00	4.47								0.84	0.55	0.64				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

DLK

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification			Seam Peel Adhesion										Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O		T	B			Yield
DS-145	1	40	41	47.9		0%		SE FTB		P		78.2		≥100%	SE FTB	P	
DS-145	2	40	41	43.6		0%		SE FTB		P		75.8		~100%	SE FTB	P	
DS-145	3	40	41	37.7		70%		AD BRK FTB		P		75.2		~100%	SE FTB	P	
DS-145	4	40	41	42.2		100%		AD NFTB		P		79.5		~100%	SE FTB	P	
DS-145	5	40	41	37.3		100%		AD NFTB		P		73.0		~100%	SE FTB	F	
	AVG	40.0	41.0	41.7						P		76.3				P	
	STDEV	0.00	0.00	4.41								2.56					

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
I = Inside Seam for Dual Peel
O = Outside Seam for Dual Peel
T = Top Geomembrane Sheet
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ CL _____ CHECKED BY: _____ DLK/RMS _____ PROJECT MANAGER _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O		Yield	Break		
DS-146	1	40	39	41.4		40%		AD BRK FTB		P		40	40	>100%	SE FTB	F
		40	39	43.9		20%		AD BRK FTB		P		40	40	>100%	SE FTB	F
DS-146	3	40	39	36.5		35%		AD BRK FTB		P		39	40	>100%	SE FTB	F
		40	39	27.1		40%		AD BRK FTB		P		39	40	>100%	SE FTB	F
DS-146	5	40	39	40.1		35%		AD BRK FTB		P		39	40	>100%	SE FTB	F
		40.0	39.0	37.8						P		39.4	40.0			
	AVG	0.00	0.00	6.55								0.55	0.00			F
	STDEV															



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98

GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %		Locus of Break	Pass/Fail		
		T	B	I	O	I	O	I	O	I	O	T	B			Yield	Break
DS-147	1	40	39	40.6		20%		AD BRK FTB		P		39	40	66.2	>100%	SE FTB	F
DS-147	2	40	39	37.6		40%		AD BRK FTB		P		39	41	69.4	>100%	SE FTB	F
DS-147	3	40	39	42.2		15%		AD BRK FTB		P		39	41	75.1	>100%	SE FTB	P
DS-147	4	40	39	40.4		25%		AD BRK FTB		P		39	41	74.6	>100%	SE FTB	P
DS-147	5	40	39	29.0		25%		AD BRK FTB		P		40	41	70.5	>100%	SE FTB	F
	AVG	40.0	39.0	38.0						P		39.2	40.8	71.2			F
	STDEV	0.00	0.00	5.28								0.45	0.45	3.72			



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-148	1	39	40	29.4		100%		AD	NFTB	P		40	41	82.3		>100%	SE	P
DS-148	2	39	40	31.3		100%		AD	NFTB	P		40	41	77.5		>100%	SE	P
DS-148	3	39	40	26.9		100%		AD	NFTB	P		39	41	75.1		>100%	SE	P
DS-148	4	39	40	32.9		100%		AD	NFTB	P		39	40	79.4		>100%	SE	P
DS-148	5	39	40	23.8		100%		AD	NFTB	P		39	41	80.6		>100%	SE	P
	AVG	39.0	40.0	28.9						P		39.4	40.8	79.0				P
	STDEV	0.00	0.00	3.61								0.55	0.45	2.79				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

WR/CL

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTI CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-150	1	40	41	45.8		0%		SE FTB		P		41	40	84.0		>100%	SE FTB	P
DS-150	2	40	41	48.3		0%		SE FTB		P		40	41	73.5		>100%	SE FTB	F
DS-150	3	40	41	47.4		30%		AD BRK FTB		P		40	41	81.3		>100%	SE FTB	P
DS-150	4	40	41	41.6		30%		AD BRK FTB		P		40	40	82.3		>100%	SE FTB	P
DS-150	5	40	41	44.6		30%		AD BRK FTB		P		40	40	80.4		>100%	SE FTB	P
	AVG	40.0	41.0	45.5						P		40.2	40.4	80.3				P
	STDEV	0.00	0.00	2.62								0.45	0.55	4.03				



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B	(ppi)	Yield	Break		
DS-151	1	40	40	42.9		40%		AD BRK FTB		P		41	40	75.3		>100%	SE FTB	P
DS-151	2	40	40	43.5		30%		AD BRK FTB		P		41	40	69.3		>100%	SE FTB	F
DS-151	3	40	40	38.2		50%		AD BRK FTB		F		41	40	68.2		>100%	SE FTB	F
DS-151	4	40	40	44.0		30%		AD BRK FTB		P		41	39	67.7		>100%	SE FTB	F
DS-151	5	40	40	46.3		20%		AD BRK FTB		P		41	40	61.9		>100%	SE FTB	F
	AVG	40.0	40.0	43.0						P		41.0	39.8	68.5				F
	STDEV	0.00	0.00	2.97								0.00	0.45	4.77				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
REMARKS: FTB Classification not required in peel
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

LABORATORY TECHNICIAN: DLK/CL CHECKED BY: DLK/RMS PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-152	1	40	39	46.5		50%		AD BRK FTB		P		40	41	81.5		>100%	SE FTB	P
DS-152	2	40	39	33.3		100%		AD NFTB		P		40	40	72.8		>100%	SE FTB	P
DS-152	3	40	39	30.3		100%		AD NFTB		P		40	40	67.7		>100%	SE FTB	P
DS-152	4	40	40	41.6		80%		AD BRK FTB		P		40	40	79.4		>100%	SE FTB	P
DS-152	5	40	40	33.2		100%		AD NFTB		P		39	40	75.8		>100%	SE FTB	P
AVG		40.0	39.4	37.0						P		39.8	40.2	75.4				P
STDEV		0.00	0.55	6.79								0.45	0.45	5.46				

Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: _____ DLK/CL _____ CHECKED BY: _____ DLK/RMS _____ PROJECT MANAGER: _____



PROJECT:	Clarkstown Landfill Cap	GEOMEMBRANE TYPE:	40 mil PVC
PROJECT NUMBER:	54-8205-03	SEAM TYPE:	Solvent Weld
CLIENT:	M&T/NAMOW/TCL, J. V.	SUPPLIER/INSTALLER:	Unknown
DATE RECEIVED:	11/24/98	DATE TESTED:	11/27/98

Required Peel Strength =	<u>10</u> ppi	I = Inside Seam for Dual Peel	O = Outside Seam for Dual Peel
Required Shear Strength =	<u>74</u> ppi	T = Top Geomembrane Sheet	B = Bottom Geomembrane Sheet

REMARKS: I/TB Classification not required in peel

LABORATORY TECHNICIAN: ES _____

CHECKED BY: DLK/RMS _____

PROJECT MANAGER: _____



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength							
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O		Yield	Break			
DS-154	1	42	40	28.3		100%		AD	NFTB	P		41	40		>100%	SE	P
		42	40	27.6		100%		AD	NFTB	P		41	40		>100%	SE	P
DS-154	3	42	40	27.5		100%		AD	NFTB	P		40	40		>100%	SE	P
		42	40	24.6		100%		AD	NFTB	P		41	41		>100%	SE	P
DS-154	5	42	40	25.5		100%		AD	NFTB	P		41	40		>100%	SE	P
		42	40	26.7						P		40.8	40.2				
	AVG	42.0	40.0	1.57								0.45	0.45				P
	STDEV	0.00	0.00														



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification			Seam Peel Adhesion							Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-155	1	41	41	52.1		25%		AD BRK FTB		P		41	41	87.0		-100%	SE FTB	P
DS-155	2	41	41	51.0		25%		AD BRK FTB		P		41	41	86.3		-100%	SE FTB	P
DS-155	3	41	41	51.6		30%		AD BRK FTB		P		41	41	80.0		-100%	SE FTB	P
DS-155	4	41	41	52.6		25%		AD BRK FTB		P		41	40	77.3		-100%	SE FTB	P
DS-155	5	41	41	52.9		20%		AD BRK FTB		P		41	41	71.5		-100%	SE FTB	F
	AVG	41.0	41.0	52.0						P		41.0	40.8	80.4				P
	STDEV	0.00	0.00	0.76								0.00	0.45	6.47				

Required Peel Strength =
Required Shear Strength =

10 ppi
74 ppi

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN:

CL/ES

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion						Bonded Seam Strength										
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-156	1	41	41	35.3		30%		AD BRK FTB		P		41	40	73.2		>100%	SE FTB	F
DS-156	2	41	40	55.1		10%		AD BRK FTB		P		41	41	67.1		>100%	SE FTB	F
DS-156	3	41	40	44.5		15%		AD BRK FTB		P		41	41	72.2		>100%	SE FTB	F
DS-156	4	41	41	46.1		25%		AD BRK FTB		P		41	41	75.1		>100%	SE FTB	P
DS-156	5	40	40	47.4		30%		AD BRK FTB		P		41	40	67.2		>100%	SE FTB	F
	AVG	40.8	40.4	45.7						P		41.0	40.6	71.0				F
	STDEV	0.45	0.55	7.09								0.00	0.55	3.63				

NTH CONSULTANTS, LTD.
 860 SPRINGDALE DRIVE
 EXTON, PENNSYLVANIA 19341
 (610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
 PROJECT NUMBER: 54-8205-03
 CLIENT: M&T/NAMOW/TCL, J.V.
 DATE RECEIVED: 11/24/98

GEOMEMBRANE TYPE: 40 mil PVC
 SEAM TYPE: Thermal Weld
 SUPPLIER/INSTALLER: Unknown
 DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B	(ppi)	Yield	Break		
DS-157	1	40	40	48.4		20%		AD BRK FTB		P		40	40	75.5		>100%	SE FTB	P
DS-157	2	40	40	36.5		40%		AD BRK FTB		P		40	40	72.7		>100%	SE FTB	F
DS-157	3	40	40	42.4		70%		AD BRK FTB		P		40	40	79.4		>100%	SE FTB	P
DS-157	4	40	40	45.6		20%		AD BRK FTB		P		40	40	75.4		>100%	SE FTB	P
DS-157	5	40	40	39.7		70%		AD BRK FTB		P		40	40	74.4		>100%	SE FTB	P
	AVG	40.0	40.0	42.5						P		40.0	40.0	75.5				P
	STDEV	0.00	0.00	4.70								0.00	0.00	2.46				

Required Peel Strength = 10 ppi
 Required Shear Strength = 74 ppi

O = Outside Seam for Dual Peel
 B = Bottom Geomembrane Sheet

REMARKS: FTB Classification not required in peel

LABORATORY TECHNICIAN: ES CHECKED BY: DLK/RMS PROJECT MANAGER: 

—

—

—



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength				
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Elongation %	Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	T	B			
DS-158	1	40	40	33.4		100%		AD		P			SE	P
								NFTB				-100%	FTB	
DS-158	2	40	40	31.1		100%		AD		P			SE	P
								NFTB				-100%	FTB	
DS-158	3	40	40	37.4		80%		AD		P			SE	P
								BRK				-100%	FTB	
DS-158	4	40	40	34.6		100%		AD		P			SE	P
								NFTB				-100%	FTB	
DS-158	5	40	40	35.8		100%		AD		P			SE	P
								NFTB				-100%	FTB	
AVG	STDDEV	40.0	40.0	34.5						P				P
		0.00	0.00	2.39										



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength								
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)	Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O			Yield	Break			
DS-159	1	41	40	49.7		75%		AD BRK FTB		P		40	40	97.1		>100%	SE FTB	P
DS-159	2	40	40	42.7		60%		AD BRK FTB		P		41	41	86.7		>100%	SE FTB	P
DS-159	3	40	41	37.9		55%		AD BRK FTB		P		41	40	87.5		>100%	SE FTB	P
DS-159	4	40	40	41.2		70%		AD BRK FTB		P		41	40	92.5		>100%	SE FTB	P
DS-159	5	41	40	33.9		100%		AD NFTB		P		40	40	92.0		>100%	SE FTB	P
	AVG	40.4	40.2	41.1						P		40.6	40.2	91.2				P
	STDEV	0.55	0.45	5.89								0.55	0.45	4.22				



NTII CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCI, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Thermal Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion										Bonded Seam Strength						
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break		
DS-160	1	41	40	39.7		100%		AD NFTB		P		41	40	90.5		>100%	SE FTB	P
DS-160	2	41	41	31.2		100%		AD NFTB		P		41	41	83.4		>100%	SE FTB	P
DS-160	3	40	40	44.3		80%		AD BRK FTB		P		40	40	92.4		>100%	SE FTB	P
DS-160	4	40	40	41.9		100%		AD NFTB		P		40	41	92.4		>100%	SE FTB	P
DS-160	5	40	41	44.7		90%		AD BRK FTB		P		40	41	95.5		>100%	SE FTB	P
	AVG	40.4	40.4	40.4						P		40.4	40.6	90.8				P
	STDDEV	0.55	0.55	5.50								0.55	0.55	4.53				

Required Peel Strength = $\frac{10 \text{ ppi}}{74 \text{ ppi}}$

Required Shear Strength =

REMARKS: FTB Classification not required in peel

O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet

I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

LABORATORY TECHNICIAN:

ES

CHECKED BY:

DLK/RMS

PROJECT MANAGER



NTH CONSULTANTS, LTD.
860 SPRINGDALE DRIVE
EXTON, PENNSYLVANIA 19341
(610) 524-2300

SEAM PEEL ADHESION AND BONDED SEAM STRENGTH
ASTM D413/D3083

PROJECT: Clarkstown Landfill Cap
PROJECT NUMBER: 54-8205-03
CLIENT: M&T/NAMOW/TCL, J.V.
DATE RECEIVED: 11/24/98
GEOMEMBRANE TYPE: 40 mil PVC
SEAM TYPE: Solvent Weld
SUPPLIER/INSTALLER: Unknown
DATE TESTED: 11/27/98

Sample Identification		Seam Peel Adhesion								Bonded Seam Strength									
Sample Number	Test Number	Thickness (mils)		Maximum Tension (ppi)		Seam Separation (%)		Locus of Break		Pass/Fail		Thickness (mils)		Maximum Tension (ppi)	Elongation %		Locus of Break	Pass/Fail	
		T	B	I	O	I	O	I	O	I	O	T	B		Yield	Break			
DS-161	1	40	40	31.7		100%		AD	NFTB	P		40	40	87.8		>100%	SE	FTB	P
		40	40	30.2		100%		AD	NFTB	P		40	40	91.8		>100%	SE	FTB	P
DS-161	3	40	40	31.0		100%		AD	NFTB	P		40	40	82.3		>100%	SE	FTB	P
		40	40	28.6		100%		AD	NFTB	P		40	40	85.4		>100%	SE	FTB	P
DS-161	5	40	40	29.4		100%		AD	NFTB	P		40	40	91.0		>100%	SE	FTB	P
		40.0	40.0	30.2						P		40.0	40.0	87.7					P
	STDEV	0.00	0.00	1.23								0.00	0.00	3.94					

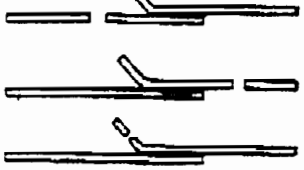
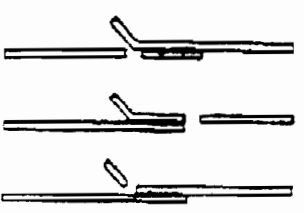
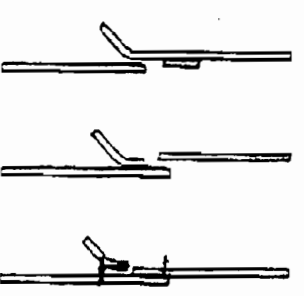
Required Peel Strength = 10 ppi
Required Shear Strength = 74 ppi
REMARKS: FTB Classification not required in peel
O = Outside Seam for Dual Peel
B = Bottom Geomembrane Sheet
I = Inside Seam for Dual Peel
T = Top Geomembrane Sheet

LABORATORY TECHNICIAN: ES
CHECKED BY: DLK/RMS
PROJECT MANAGER
1130-136...xls



ATTACHMENT 2:

COPY OF "FIGURE A-2" EXCERPTED FROM NSF-54

Schematic of Untested Specimen			
			
Types of Breaks	Locus-of-Break Code	Break Description	Classification ^a
	CL	Break in sheeting at clamp edge.	b
	BRK	Break in sheeting.	FTB
	SE	Break at seam edge.	FTB
	AD-BRK	Break in sheeting after some adhesion failure between the sheets.	FTB
	AD	Failure in adhesion between the sheets.	Non-FTB

^a FTB = Film - Tear Bond.

^b Acceptance of CL - type breaks may depend on whether test values meet a minimum specification value. In general, though, a CL - type break should be considered a "no test". If specimens for a particular sample break consistently at the clamp edge, changes in the testing procedure should be considered, e.g. changing the clamp face, using a dumbbell - type specimen.

Locus-of-break codes for dielectric-welded or solvent-welded seams in unreinforced FML's tested for seam strength in shear and peel modes.

FIGURE A-2

APPENDIX F4:

Transmissivity Test Results

**J&L TESTING COMPANY, INC.**

GEOTECHNICAL AND GEOSYNTHETICS MATERIALS TESTING AND RESEARCH

November 19, 1996
96S2111-02OGDEN Remediation Services Co., Inc.
166 Route 303
West Nyack, NY 10994

Attn: Mr. Daniel Batancourt:

**RE: CLARKSTOWN MUNICIPAL SANITARY LANDFILL REMEDIATION
FINAL COVER GEOSYNTHETIC DRAINAGE MATERIAL TRANSMISSIVITY**

Dear Mr. Batancourt:

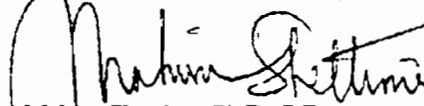
J&L Testing Company, Inc. (JLT) is pleased to submit this report of transmissivity testing performed on one (1) sample each of geocomposite and geonet supplied by TENSAR Corporation for the above referenced project. The materials used in the testing program consisted of:

1. 40 mil PVC (smooth and embossed) supplied by Environmental Liners;
2. Geocomposite drainage material supplied by TENSAR Corporation - described as "DC4205 with TG650 fabric";
3. Geonet drainage material supplied by TENSAR Corporation - described as "NS1305";
4. AMOCO style 4506 Geotextile; and
5. Site soils supplied by OGDEN.

Each test was performed under a normal load of 2000 psf at gradients of 0.1, 0.25, 0.5 and 1.0. Each test setup was configured to reflect the corresponding proposed cap configuration using the materials supplied for the project and tested in accordance with ASTM D-4716. The results of the tests are attached.

Should you have any questions, comments or require additional information, please call. Thank you.

Sincerely,

J&L TESTING COMPANY, INC.
Mahru Shettima, Ph.D., P.E.
DirectorMS:ng
wpm:ngc:11/19/96

TRANSMISSIVITY TEST DATA
ASTM D-4716
FOR
OGDEN REMEDIATION SERVICES

MATERIAL: TENSAR GEONET
PRODUCT ID: NS1305
CLIENT: OGDEN REMEDIATION
PROJECT: CLARKSTOWN SITE

JLT No.: 96S2111-02
DATE: 11/15/96
TESTED BY: D.C.
DIMENSIONS: W=12", L=12"
FLUID: WATER @ 17 DEG. C.
Rt = 1.077

NORMAL LOAD = 2000 psf

READING	TEST GRADIENT	QUANTITY COLLECTED V, (gal)	ELAPSED TIME t, (sec)	FLOW RATE Q = (V/t) x 60 (gal/min)	TRANSMISSIVITY	
					[Q/(i*W*4831)] (m2/sec)	[Q/(i*W)] (gal/min/ft)
1	0.10	0.2505	37.25	0.40	8.995E-04	4.35
2	0.10	0.2551	39.69	0.39	8.598E-04	4.15
3	0.10	0.2497	40.19	0.37	8.310E-04	4.01
AVERAGE					8.634E-04	4.17
1	0.25	0.2534	18.44	0.82	7.354E-04	3.55
2	0.25	0.2527	18.28	0.83	7.397E-04	3.57
3	0.25	0.2501	18.19	0.83	7.357E-04	3.55
AVERAGE					7.369E-04	3.56
1	0.50	0.2573	11.53	1.34	5.971E-04	2.88
2	0.50	0.2579	11.50	1.35	6.000E-04	2.90
3	0.50	0.2562	11.50	1.34	5.961E-04	2.88
AVERAGE					5.977E-04	2.89
1	1.00	0.2497	6.63	2.26	5.038E-04	2.43
2	1.00	0.2450	6.94	2.12	4.723E-04	2.28
3	1.00	0.2591	7.00	2.22	4.951E-04	2.39
AVERAGE					4.904E-04	2.37

TEST CONFIGURATION	
TOP LOAD PLATE	
SOIL	
GEOTEXTILE	
GEONET	
SMOOTH PVC	
GEOTEXTILE ON SOIL	
BOTTOM LOAD PLATE	

CHECKED BY

Ans

TRANSMISSIVITY TEST DATA
ASTM D-4716
FOR
OGDEN REMEDIATION SERVICES

MATERIAL: TENSAR GEOCOMPOSITE
PRODUCT ID: DC4205 WITH 1G650 FABRIC
CLIENT: OGDEN REMEDIATION
PROJECT: CLARKSTOWN SITE

JLT No.: 96S2111 02
DATE: 11/8/96
TESTED BY: D.C.
DIMENSIONS: W=12", L=12"
FLUID: WATER @ 20 DEG. C.
Rt = 1

NORMAL LOAD = 2000 psf

READING	TEST GRADIENT	QUANTITY COLLECTED V. (gal)	ELAPSED TIME t. (sec)	FLOW RATE Q = (V/t) x 60 (gal/min)	TRANSMISSIVITY	
					[Q/(i*W*4831)] (m2/sec)	[Q/(i*W)] (gal/min/ft)
1	0.10	0.2528	54.65	0.28	5.744E-04	2.78
2	0.10	0.2544	53.62	0.28	5.892E-04	2.85
3	0.10	0.2521	53.63	0.28	5.838E-04	2.82
AVERAGE					5.825E-04	2.81
1	0.25	0.2569	29.03	0.53	4.396E-04	2.12
2	0.25	0.2539	28.82	0.53	4.378E-04	2.11
3	0.25	0.2582	29.34	0.53	4.371E-04	2.11
AVERAGE					4.382E-04	2.12
1	0.50	0.2606	18.78	0.83	3.447E-04	1.67
2	0.50	0.2542	18.34	0.83	3.442E-04	1.66
3	0.50	0.2591	18.66	0.83	3.449E-04	1.67
AVERAGE					3.446E-04	1.66
1	1.00	0.2600	11.72	1.33	2.755E-04	1.33
2	1.00	0.2646	12.10	1.31	2.716E-04	1.31
3	1.00	0.2605	11.65	1.34	2.777E-04	1.34
AVERAGE					2.749E-04	1.33

TEST CONFIGURATION
 TOP LOAD PLATE
 SOIL
 GEOCOMPOSITE
 EMBOSSED PVC
 GEOTEXTILE ON SOIL
 BOTTOM LOAD PLATE

CHECKED BY: MS