



### LEGEND

ANCHOR TRENCH  
TOE OF SLOPE  
LINER FIELD SEAM  
EXTRUSION WELD  
PATCH  
PANEL NUMBER  
REPAIR NUMBER  
PIPE PENETRATION

### NOTES

• PANEL 74 IS  
EXTRUDED  
OVER PANEL 19

• 1H IS APPROX  
22'X8'



LAYFIELD  
ENVIRONMENTAL SYSTEMS LTD.

WATER STORAGE RES.  
80MIL HDPE  
AS-BUILT DRAWING  
GOVERNMENT OF NUNAVUT  
QIKITARJUAQ, NUNAVUT

Quote No.

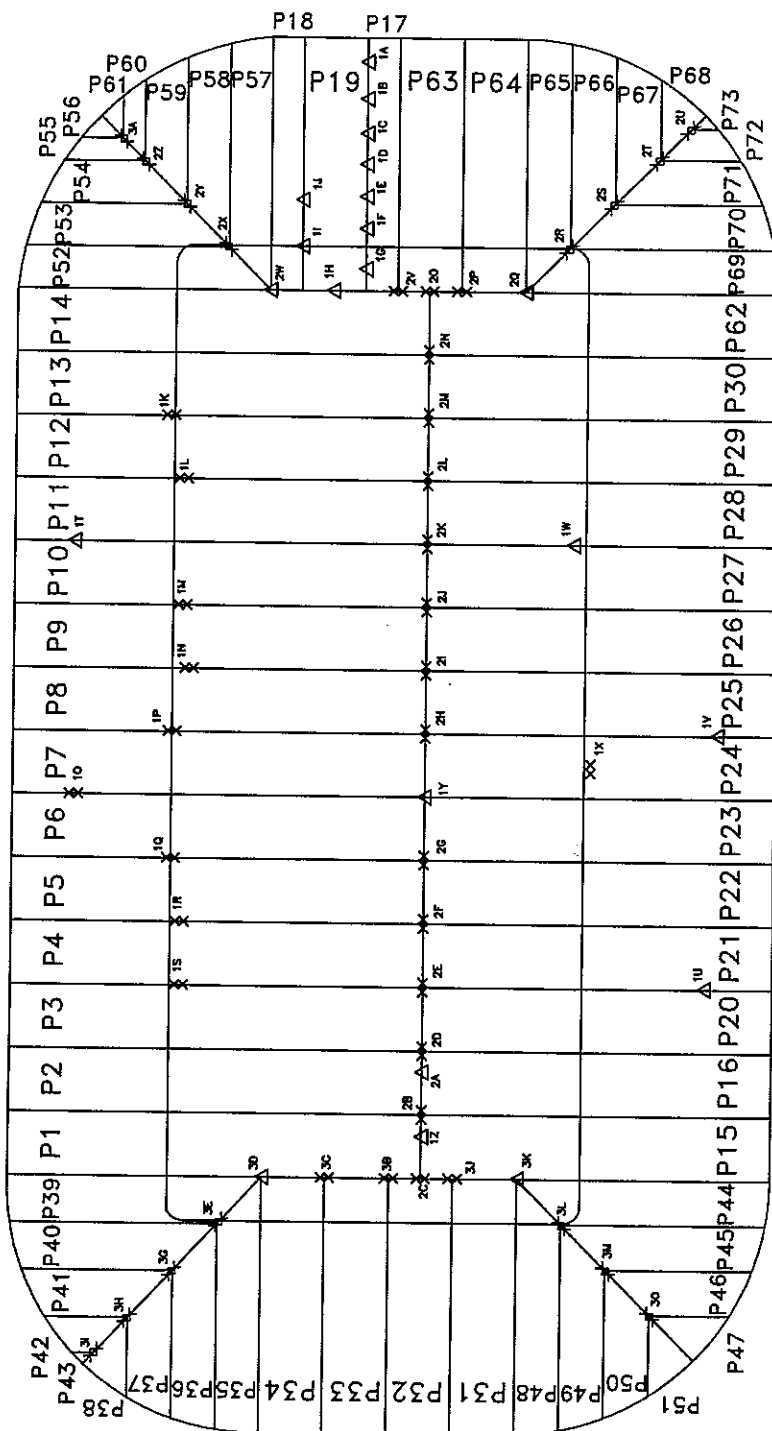
Project No.

08C-019

DWG: 1 OF 1 SCALE: N.T.S.

DWG: BL QRD: FC APPD:

DWG: 08/25/09 REVISION: A

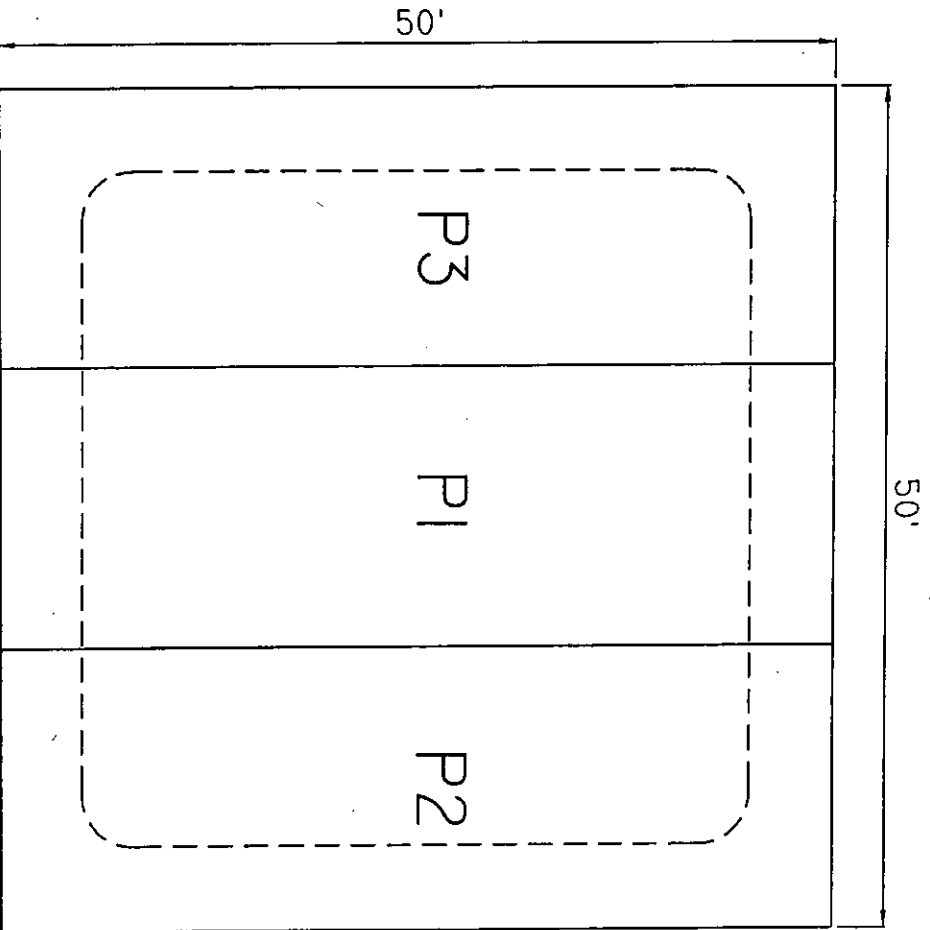


NO.

REVISIONS

DATE (MM/DD/YY)

BY



50'

50'

P3

P1

P2

**LEGEND**

- LOT OF SLOPE
- - - - - LOT OF LINER
- LINER FIELD SEAM
- xxx LINER FIELD WELD
- Δ PATCH
- P2 PANEL NUMBER
- 1A PIPELIP NUMBER

**NOTES**

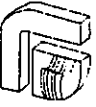


HAZARDOUS STORAGE  
HDPE 80MIL  
LINER APPLICATIONS  
GOVERNMENT OF NUNAVUT  
QIKTARJUAQ, NUNAVUT

Order No.

Project No.

08C-019



HAZARDOUS STORAGE (HDPE 80mil)  
LAYFIELD ENVIRONMENTAL SYSTEMS

|       |          |          |    |       |        |
|-------|----------|----------|----|-------|--------|
| DWG   | 1        | OF       | 1  | SCALE | N.T.S. |
| DRAWN | MC       | CHKD     | FC | APP'D |        |
| DATE  | 09/23/08 | REVISION |    |       |        |



Lining Technology, Inc

# Roll Test Data Report

Sales Order No. Project Number Customer Name Project Location Product Name Report Date

17539 520721 Nillex Canada HDE080A000 7/18/2009



| Roll No.  | ASTM D 5199             |                         |                           |                           | ASTM D 1433, Type 1 (7.0mm) |                           |                           |                           |                           |                            |                            |                             |                |               | ASTM D 1804              |                        | ASTM D 4833 | ASTM D 1385 | ASTM D 4242/1601 |  | ASTM D 5199 |
|-----------|-------------------------|-------------------------|---------------------------|---------------------------|-----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|-----------------------------|----------------|---------------|--------------------------|------------------------|-------------|-------------|------------------|--|-------------|
|           | Average Thickness (mil) | Minimum Thickness (mil) | TD Strength @ Yield (psi) | TD Strength @ Break (psi) | TD Strength @ Break (psi)   | TD Elongation @ Yield (%) | TD Elongation @ Break (%) | TD Elongation @ Break (%) | TD Elongation @ Break (%) | TD Tear Resistance (lb/in) | TD Tear Resistance (lb/in) | Puncture Resistance (lb/in) | Impact (ft-lb) | Exhaust (psi) | Carbon Black Content (%) | Carbon Black Pulpiness |             |             |                  |  |             |
|           | every roll              | every roll              | every 50'                 | every 50'                 | every 50'                   | every 50'                 | every 50'                 | every 50'                 | every 50'                 | every 50'                  | every 50'                  | every 50'                   | every 50'      | every 50'     | every 50'                | every 50'              |             |             |                  |  |             |
| 101119380 | 81                      | 75                      | 215                       | 198                       | 422                         | 419                       | 18                        | 20                        | 904                       | 885                        | 64                         | 63                          | 171            | 0.946         | 2.61                     | 10                     |             |             |                  |  |             |
| 101119381 | 81                      | 77                      | 217                       | 211                       | 416                         | 430                       | 17                        | 19                        | 902                       | 868                        | 65                         | 68                          | 177            | 0.945         | 2.50                     | 10                     |             |             |                  |  |             |
| 101119382 | 81                      | 76                      | 217                       | 211                       | 416                         | 430                       | 17                        | 19                        | 902                       | 868                        | 65                         | 68                          | 177            | 0.945         | 2.50                     | 10                     |             |             |                  |  |             |
| 101119383 | 81                      | 77                      | 217                       | 211                       | 416                         | 430                       | 17                        | 19                        | 902                       | 868                        | 65                         | 68                          | 177            | 0.945         | 2.50                     | 10                     |             |             |                  |  |             |
| 101119384 | 81                      | 77                      | 217                       | 211                       | 416                         | 430                       | 17                        | 19                        | 902                       | 868                        | 65                         | 68                          | 177            | 0.945         | 2.50                     | 10                     |             |             |                  |  |             |
| 101119385 | 81                      | 78                      | 217                       | 211                       | 416                         | 430                       | 17                        | 19                        | 902                       | 868                        | 65                         | 68                          | 177            | 0.945         | 2.50                     | 10                     |             |             |                  |  |             |
| 101119386 | 81                      | 77                      | 219                       | 209                       | 421                         | 404                       | 17                        | 19                        | 887                       | 819                        | 64                         | 67                          | 179            | 0.944         | 2.71                     | 10                     |             |             |                  |  |             |
| 101119387 | 81                      | 76                      | 219                       | 209                       | 421                         | 404                       | 17                        | 19                        | 887                       | 819                        | 64                         | 67                          | 179            | 0.944         | 2.71                     | 10                     |             |             |                  |  |             |
| 101119388 | 81                      | 80                      | 219                       | 209                       | 421                         | 404                       | 17                        | 19                        | 887                       | 819                        | 64                         | 67                          | 179            | 0.944         | 2.71                     | 10                     |             |             |                  |  |             |
| 101119389 | 81                      | 77                      | 219                       | 209                       | 421                         | 404                       | 17                        | 19                        | 887                       | 819                        | 64                         | 67                          | 179            | 0.944         | 2.71                     | 10                     |             |             |                  |  |             |
| 101119390 | 81                      | 80                      | 219                       | 209                       | 421                         | 404                       | 17                        | 19                        | 887                       | 819                        | 64                         | 67                          | 179            | 0.944         | 2.71                     | 10                     |             |             |                  |  |             |
| 101119391 | 82                      | 81                      | 211                       | 203                       | 415                         | 390                       | 21                        | 19                        | 897                       | 819                        | 62                         | 64                          | 177            | 0.945         | 2.58                     | 10                     |             |             |                  |  |             |
| 101119392 | 81                      | 79                      | 211                       | 203                       | 415                         | 390                       | 21                        | 19                        | 897                       | 819                        | 62                         | 64                          | 177            | 0.945         | 2.58                     | 10                     |             |             |                  |  |             |
| 101119393 | 81                      | 79                      | 211                       | 203                       | 415                         | 390                       | 21                        | 19                        | 897                       | 819                        | 62                         | 64                          | 177            | 0.945         | 2.58                     | 10                     |             |             |                  |  |             |
| 101119394 | 81                      | 81                      | 211                       | 203                       | 415                         | 390                       | 21                        | 19                        | 897                       | 819                        | 62                         | 64                          | 177            | 0.945         | 2.58                     | 10                     |             |             |                  |  |             |
| 101119395 | 82                      | 79                      | 211                       | 203                       | 415                         | 390                       | 21                        | 19                        | 897                       | 819                        | 62                         | 64                          | 177            | 0.945         | 2.58                     | 10                     |             |             |                  |  |             |
| 101119396 | 81                      | 78                      | 220                       | 206                       | 414                         | 421                       | 17                        | 20                        | 855                       | 848                        | 64                         | 68                          | 173            | 0.945         | 2.66                     | 10                     |             |             |                  |  |             |
| 101119397 | 82                      | 77                      | 220                       | 206                       | 414                         | 421                       | 17                        | 20                        | 855                       | 848                        | 64                         | 68                          | 173            | 0.945         | 2.66                     | 10                     |             |             |                  |  |             |
| 101119398 | 82                      | 79                      | 220                       | 206                       | 414                         | 421                       | 17                        | 20                        | 855                       | 848                        | 64                         | 68                          | 173            | 0.945         | 2.66                     | 10                     |             |             |                  |  |             |
| 101119399 | 82                      | 80                      | 220                       | 206                       | 414                         | 421                       | 17                        | 20                        | 855                       | 848                        | 64                         | 68                          | 173            | 0.945         | 2.66                     | 10                     |             |             |                  |  |             |
| 101119400 | 81                      | 79                      | 220                       | 206                       | 414                         | 421                       | 17                        | 20                        | 855                       | 848                        | 64                         | 68                          | 173            | 0.945         | 2.66                     | 10                     |             |             |                  |  |             |
| 101119401 | 81                      | 79                      | 209                       | 194                       | 397                         | 394                       | 18                        | 21                        | 857                       | 813                        | 64                         | 68                          | 177            | 0.944         | 2.40                     | 10                     |             |             |                  |  |             |

laboratory Manager: *Paul Allen*

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Lining Technology, Inc

# Roll Test Data Report

Sales Order No.

Project Number

Customer Name

Project Location

Product Name

Report Date

18519

521208

Layfield Environmental Systems

NT, Canada

HST040GW00

7/8/2009



| Roll No. | ASTM D 3944     |                 |               |               | ASTM D443, Type IV (D443) |               |               |               | ASTM D 1044   |               |                    |                    | ASTM D 4433        |            | ASTM D 1585 |              | ASTM D 4218/443 |               | ASTM D 5594   |  | GAI GA 12 |  |
|----------|-----------------|-----------------|---------------|---------------|---------------------------|---------------|---------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|------------|-------------|--------------|-----------------|---------------|---------------|--|-----------|--|
|          | Average         | Minimum         | TD Strength   | MD Strength   | TD Strength               | MD Strength   | TD Elongation | MD Elongation | TD Elongation | MD Elongation | TD Tear            | MD Tear            | Puncture           | Resistance | Density     | Carbon Black | Carbon Black    | Aggery Height | Aggery Height |  |           |  |
|          | Thickness (mil) | Thickness (mil) | @ Yield (psi) | @ Yield (psi) | @ Break (psi)             | @ Break (psi) | %             | %             | @ Yield (psi) | @ Break (psi) | Resistance (lb/in) | Resistance (lb/in) | Resistance (lb/in) | (lb/in)    | (g/cc)      | %            | Dispersion      | Side A (mil)  | Side B (mil)  |  |           |  |
| 10817558 | 40              | 36              | 113           | 108           | 114                       | 134           | 14            | 18            | 435           | 540           | 35                 | 38                 | 117                | 0.948      | 2.59        | 10           | 19              |               |               |  |           |  |

Laboratory Manager: *Paul Allen*

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19103 Gundle Road - Houston, Texas 77073

GSE-8.2.4-029 Rev - 03/05

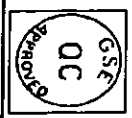


Lining Technology, Inc

# Roll Test Data Report

Sales Order No. **Project Number** **Customer Name** **Project Location** **Product Name** **Report Date**

18519 521208 Layfield Environmental Systems NT, Canada HDE080A000 7/8/2009



| Roll No.  | ASTM D 3177     |                 |                |                | ASTM D 4813 Type IV D4433 |                |               |               | ASTM D 1044   |               | ASTM D 4831     |                 | ASTM D 1595     |                 | ASTM D 4101/402 |              | ASTM D 5176          |            |
|-----------|-----------------|-----------------|----------------|----------------|---------------------------|----------------|---------------|---------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|----------------------|------------|
|           | Average         | Minimum         | TI Strength    | MI Strength    | TD Strength               | MI Strength    | TD Elongation | MI Elongation | TI Elongation | MI Elongation | TI Tear         | MI Tear         | Tensile         | Impact          | Carbon Black    | Carbon Black | Carbon Black         | Deposition |
|           | Thickness (mil) | Thickness (mil) | lb Yield (psi) | lb Yield (psi) | lb Break (psi)            | lb Break (psi) | % Yield       | % Yield       | % Break       | % Break       | Resistance (lb) | Resistance (lb) | Resistance (lb) | Resistance (lb) | Content (%)     | Content (%)  | Yield in Coll - Cui? |            |
|           | every roll      |                 |                |                | every 4th                 |                |               |               | every 4th     |               | every 4th       |                 | every 4th       |                 | every 4th       |              | every 4th            |            |
| 101120157 | 83              | 78              | 208            | 194            | 404                       | 366            | 17            | 18            | 866           | 764           | 65              | 71              | 173             | 0.945           | 2.78            |              | 10                   |            |
| 101120159 | 82              | 78              | 208            | 194            | 404                       | 366            | 17            | 18            | 866           | 764           | 65              | 71              | 173             | 0.945           | 2.41            |              | 10                   |            |

Laboratory Manager: *Paul Allen*

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19103 Gundle Road - Houston, Texas 77073

# Roll Test Data Report

Sales Order No.

Project Number

Customer Name

Project Location

Product Name

Report Date

16429

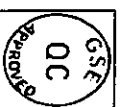
520174

Newmont

Battle Mountain, NV

LLD080A000

7/8/2009



| Roll No.  | ASTM D 3199 |           | ASTM D 4813 Type IV/D4813 |             | ASTM D 1044   |               | ASTM D 4813 |            | ASTM D 1591 |            | ASTM D 4218/1483 |              | ASTM D 5594  |                       |
|-----------|-------------|-----------|---------------------------|-------------|---------------|---------------|-------------|------------|-------------|------------|------------------|--------------|--------------|-----------------------|
|           | Average     | Minimum   | T1 Strength               | M1 Strength | T2 Elongation | M1 Elongation | T1 Tear     | M1 Tear    | Puncture    | Resistance | Deformation      | Carbon Black | Carbon Black | Impregnation          |
|           | Thickness   | Thickness | @ Break                   | @ Break     | @ Break       | @ Break       | Resistance  | Resistance | Resistance  | (lbs)      | (lbs)            | (lbs)        | (lbs)        | Views on Carf - (302) |
|           | (mil)       | (mil)     | (psi)                     | (psi)       | (psi)         | (psi)         | (lbs)       | (lbs)      | (lbs)       | (lbs)      | (lbs)            | (lbs)        | (lbs)        |                       |
|           | every mil   |           | every 5lb                 |             | every 5lb     |               | every 5lb   |            | every 5lb   |            | every 5lb        |              | every 5lb    |                       |
| 101119368 | 81          | 77        | 460                       | 425         | 1100          | 1125          | 50          | 48         | 145         | 0.93       | 2.55             | 10           |              |                       |

Laboratory Manager: *Joe Allen*

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19103 Gundie Road - Houston, Texas 77073

- d. The warranties hereunder shall not apply to any damage or defects resulting from misuse, mechanical abuse by machinery, equipment or persons, excessive pressures or stresses, exposure of the completed installation of harmful chemicals, unusual weather conditions, casualty catastrophe such as (but not limited to) earthquake, flood, hail, tornado, or any other act of God;
- c. The warranties hereunder extend only to the Customer and are not transferable;
- b. No allowance will be made for repairs, replacements or alterations made by the Customer unless with the prior written consent of LAYFIELD;
- a. LAYFIELD's only obligation shall be to repair or replace any defective workmanship and in no event shall LAYFIELD be liable for any amount in excess of the cost of the installation;

The liability of LAYFIELD under the aforesaid warranties are subject to the following conditions:

- To enable LAYFIELD to investigate and determine the cause of any alleged damage or defect, notice and details of any claim hereunder must be presented in writing to LAYFIELD within thirty (30) days after the alleged damage or defect was first noticed or observed. Failure to provide such notice and details shall invalidate all warranties provided hereunder.
- Should damage or defects within the scope of the aforesaid warranties occur, LAYFIELD shall repair the damage or defects, PROVIDED THAT the area to be repaired must first be made ready by the Customer and be in a clean, dry, unencumbered condition, free from all water, soil, sludge, residuals, and liquids of any kind.
2. Be free of installation defects from the date of the completion of the installation (as identified on the Layfield Certificate of Final Inspection and Acceptance), for a period of 1 year so long as the completed installation is used for the purposes and in the manner for which the installation was designed.
1. Meet the field seam specifications set out in the contract between LAYFIELD and the Customer (as amended by LAYFIELD's quotation), all workmanship to meet the requirements of LAYFIELD's Field Installation Quality Assurance program, and be free of defects at the time of completion of the installation; and

LAYFIELD ENVIRONMENTAL SYSTEMS LTD. (LAYFIELD) hereby warrants to Government of Nunavut, (the Customer) that the work performed by LAYFIELD on the installation described as Qikiqtarjuaq Water Storage Reservoir/ 80 mil HDPE will:

Layfield Reference No. : (Job #) 08C-019

### INSTALLATION WARRANTY

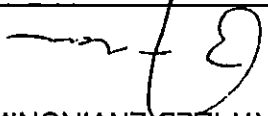
# Phone: (780) 453-6731  
# Fax: (780) 452-9495  
# Toll Free: 1 800 840-2884  
# Web: [www.layfieldgroup.com](http://www.layfieldgroup.com)  
# E-Mail: [edm@layfieldgroup.com](mailto:edm@layfieldgroup.com)

LAYFIELD ENVIRONMENTAL SYSTEMS LTD.  
11603 - 180 Street Edmonton, Alberta T5S 2H6 Canada



- e. Under no circumstances shall LAYFIELD be liable for any special, direct, indirect, or consequential damages including the loss of use of the installation howsoever caused;
- f. The warranties hereunder are given in lieu of all other warranties, express, implied, statutory, or otherwise, and the Customer expressly waives all other warranties and claims whatsoever except those specifically given herein, and the Customer acknowledges that the warranties hereunder are accepted in preference to and to the exclusion of any or all other warranties; and
- g. An Installation Warranty will not be provided for lining projects unless the installation is completed by LAYFIELD personnel or designated LAYFIELD subcontractors.

LAYFIELD ENVIRONMENTAL SYSTEMS LTD.



Brian Fraser, V.P. & General Manager