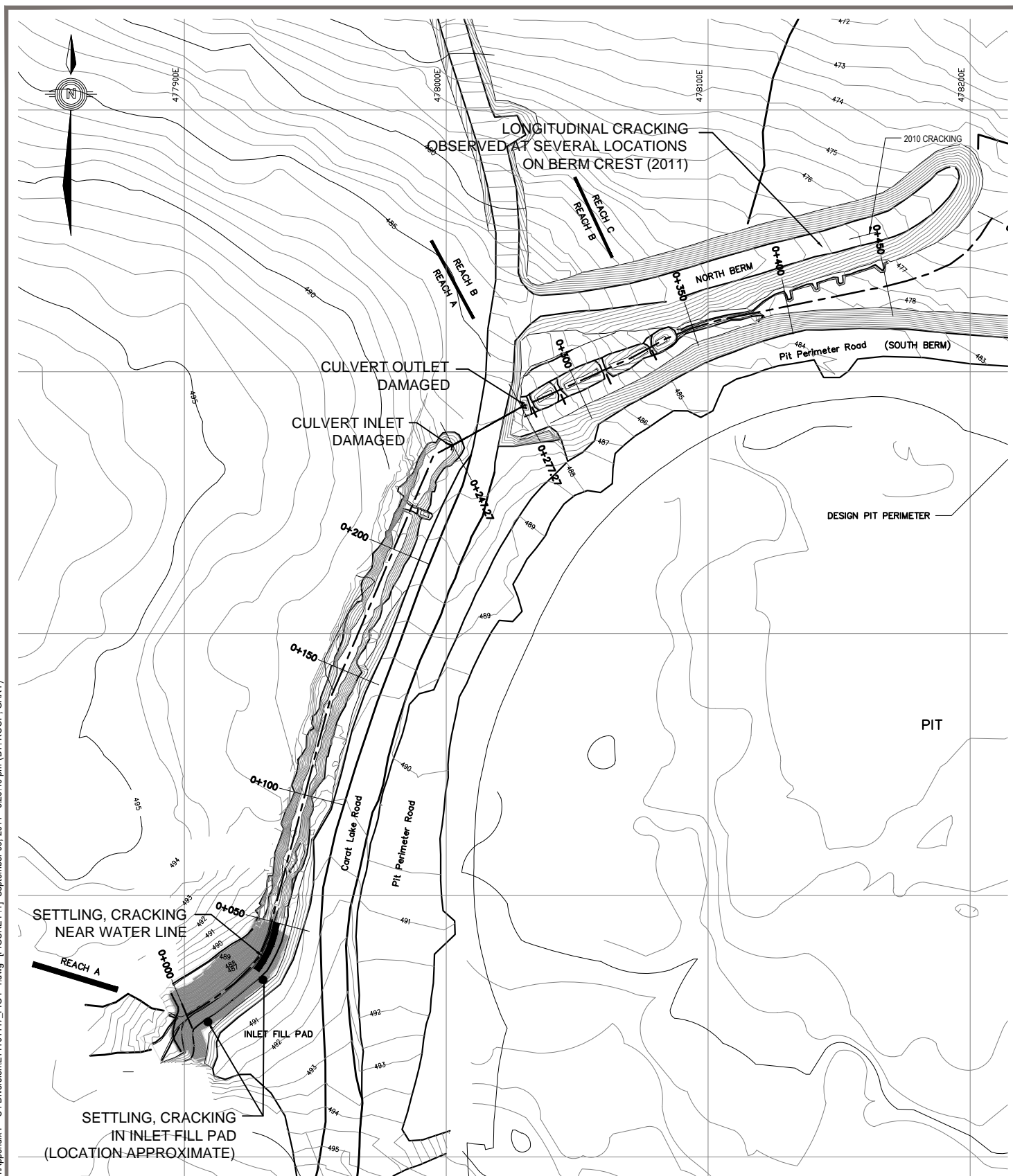
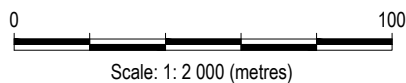


Y:\E14101140\_Jericho\Annual Geotechnical Inspection\Appendix F - C1 Diversion\E14101117\_FIG F-1.dwg [FIGURE F.1] September 09, 2011 - 6:20:46 pm (BY: KOOP, GARY)



NOTES  
DRAWING BASED ON 2006 AS BUILT

STATUS  
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JERICHO DIAMOND MINE, NU

C1 DIVERSION

PROJECT NO.  
E14101140

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Figure F.1



**Photo F1:** Inlet area (Reach A) of C1 Diversion



**Photo F2:** Settlement and tension cracking in inlet fill pad; area appears to have self healed from 2009 inspection





**Photo F3:** Sloughing of erosion protection at north end of Reach A



**Photo F4:** Reach A rock cut; no problems noted





**Photo F5:** Carat Lake Road culvert inlet damaged; inlet appears to have been trimmed since 2009 to better facilitate culvert flow



**Photo F6:** Reach B looking northeast from Carat Lake Road





**Photo F7:** Culvert outlet; condition unchanged from 2009 inspection



**Photo F8:** Reach C well vegetated





**Photo F9:** Reach C - spur with insufficient cover visible in background of photo; condition similar to 2009 inspection



**Photo F10:** Longitudinal cracking in north berm (typical)



# APPENDIX G

## APPENDIX G TANKFARM

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## Geotechnical Inspection Summary

**Location:** Jericho Diamond Mine  
**Facility:** Tankfarm  
**Observation Date:** July 16, 2011  
**Inspected by:** Gary Koop, P.Eng.  
EBA, A Tetra Tech Company

**Table G.1: Operating Condition (tank measurements made June 15, 2011)**

|  |  |
|--|--|
| Phase 1 (southern portion)<br>Eight 500,000 litre tanks  | Tanks 1, 2, 3, 4 5, 6, 7, 8 reported to be nearly empty except for residual product (<20,000 L per tank) |
| Phase 2 (northern portion)<br>Four 1,500,000 litre tanks | Tank 9 267,500 litres<br>Tanks10 141,500 litres<br>Tank 11 295,500 litres<br>Tank 12 301,500 litres      |

**Table G.2: Observed Condition**

| Features   | Present (yes/no)                                     | Dimensions  | Extent                            | Description  | Photographic Records |
|------------|--|---|-----------------------------------|--|----------------------|
| Erosion    | None noted   |   |                                   |  |                      |
| Cracking   | None noted   |   |                                   |  |                      |
| Settlement | Settlement within Phase 1 Tankfarm<br><br>Tanks List | Uneven surface throughout tank farm Gaps up to 50 mm high under several of the tanks. Tanks in Phase 1 tilting up to 1.5°. Previous monitoring indicated settlement during the first year, settlement appeared to slow down. Has not been monitored recently. Presently | Throughout the tankfarm and berm. | Settlement apparent under tanks. New flexible pipe connections were installed in 2007 to accommodate the settlement. | G.4                  |

|                |                                  |  |                                   |   |     |
|----------------|----------------------------------|--|-----------------------------------|---|-----|
|                | East Berm                        | no fuel in Phase 1 except for residual amount. |                                   | Settlement in east berm appears to be greater than 0.3 m.   | G.3 |
| Settlement     | Settlement with Phase 2 Tankfarm | Gap under edge of Tank 9 - up to 35 mm.        | Only noted on Tank 9              | Settlement has resulted in gap under edge of the tank.      | G.6 |
| Other Features | None noted                       |  |                                   |   |     |
|                | Stained Soil                     | Numerous large stain areas                     | Sporadic, most at valve locations | Hydrocarbon stained soil on inside surface of tankfarm base | G.2 |
|                | Ponded/Frozen Water              |  | Sporadic                          | Sections throughout Phase 1                                 | G.3 |

**Table G.3: Thermal Summary**

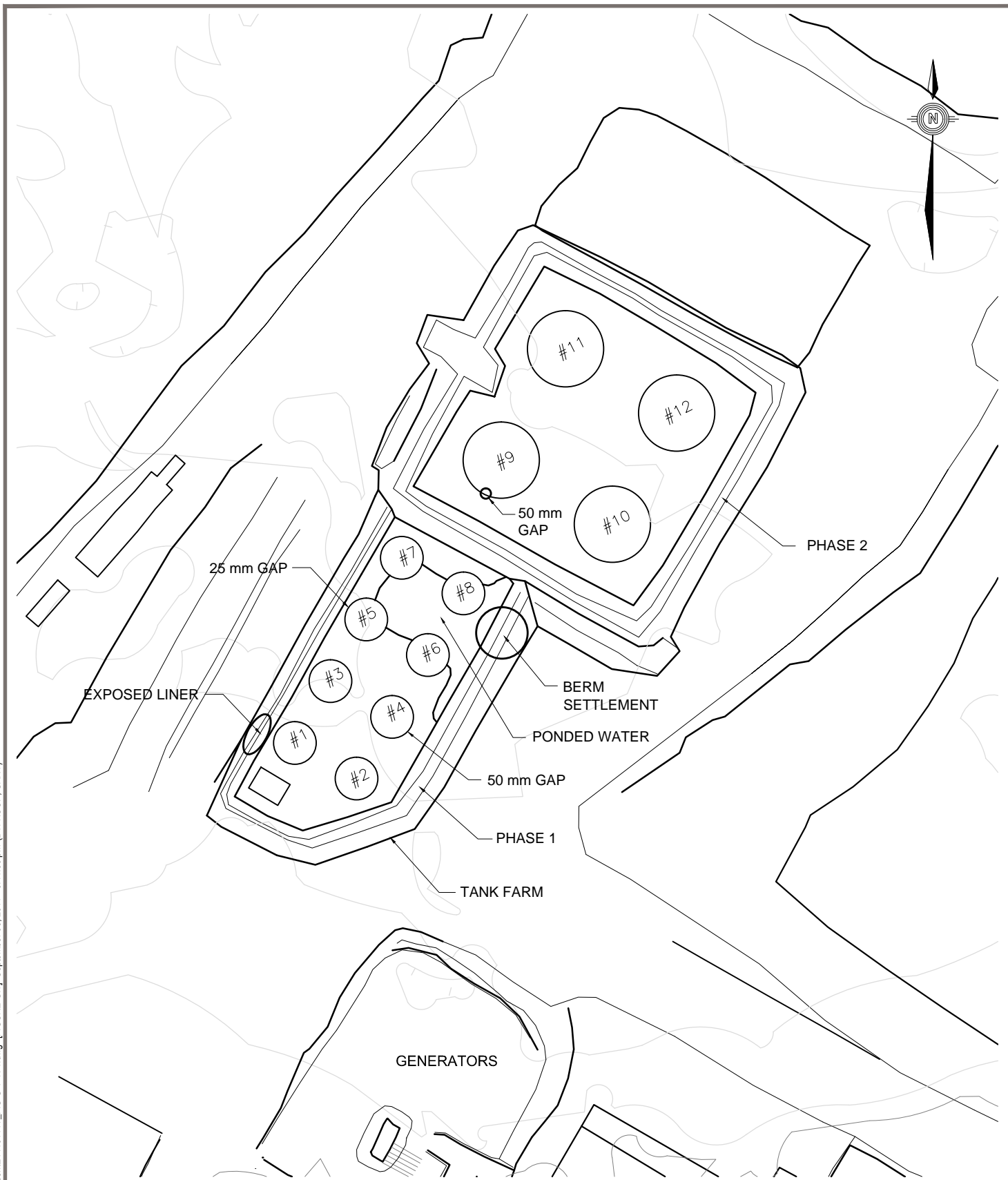
No ground temperature cables installed.

**Table G.4: Recommendations and Conclusions**

The deficiencies noted in the Tank Farm are similar to the previous inspection indicating that settlement has slowed or stopped at present. List angles of the tanks were measured by EBA but a survey of the tanks should be performed when possible.



Y:\E14101140\_Jericho\Annual Geotechnical Inspection\E14101117\_FIG G-1-K-1.dwg [FIGURE G-1] September 09, 2011 - 6:41:36 pm (BY: KOOP, GARY)



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shear  
diamonds



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TANK FARM

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Figure G.1



Scale: 1: 1000 (metres)



**Photo G1:** Phase 1 tankfarm



**Photo G2:** Significant staining in tankfarm area





**Photo G3:** Water collected in northern portion of Phase 1 Tank Farm; low berm near tie-in with Phase 2 Tank Farm



**Photo G4:** Gap under Tank 4 approximately 50 mm



**Photo G5:** Phase 2 Tankfarm





**Photo G6:** Gap under Tank 9 approximately 50 mm

# APPENDIX H

## APPENDIX H GENERATOR TANK

---



## Geotechnical Inspection Summary

**Location:** Jericho Diamond Mine  
**Facility:** Generator Tank  
**Observation Date:** July 18, 2011  
**Inspected by:** Gary Koop, P.Eng.  
EBA, A Tetra Tech Company

**Table H.1: Observed Condition**

| Features       | Present (yes/no)                     | Dimensions   | Extent            | Description | Photographic Records |
|----------------|--------------------------------------|--|-------------------|-------------|----------------------|
| Erosion        | None noted                           |  |                   |             |                      |
| Cracking       | None noted                           |  |                   |             |                      |
| Settlement     | None noted                           |  |                   |             |                      |
| Seepage        | None noted                           |  |                   |             |                      |
| Other Features | Low area in 20 mm crush on West berm | Berm is approximately 0.4 m low along the north berm | 5% of berm        |             | H.2                  |
|                | Ponded Water                         |  | 100% of berm base |             | H.2                  |

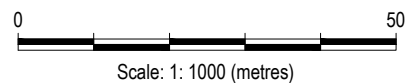
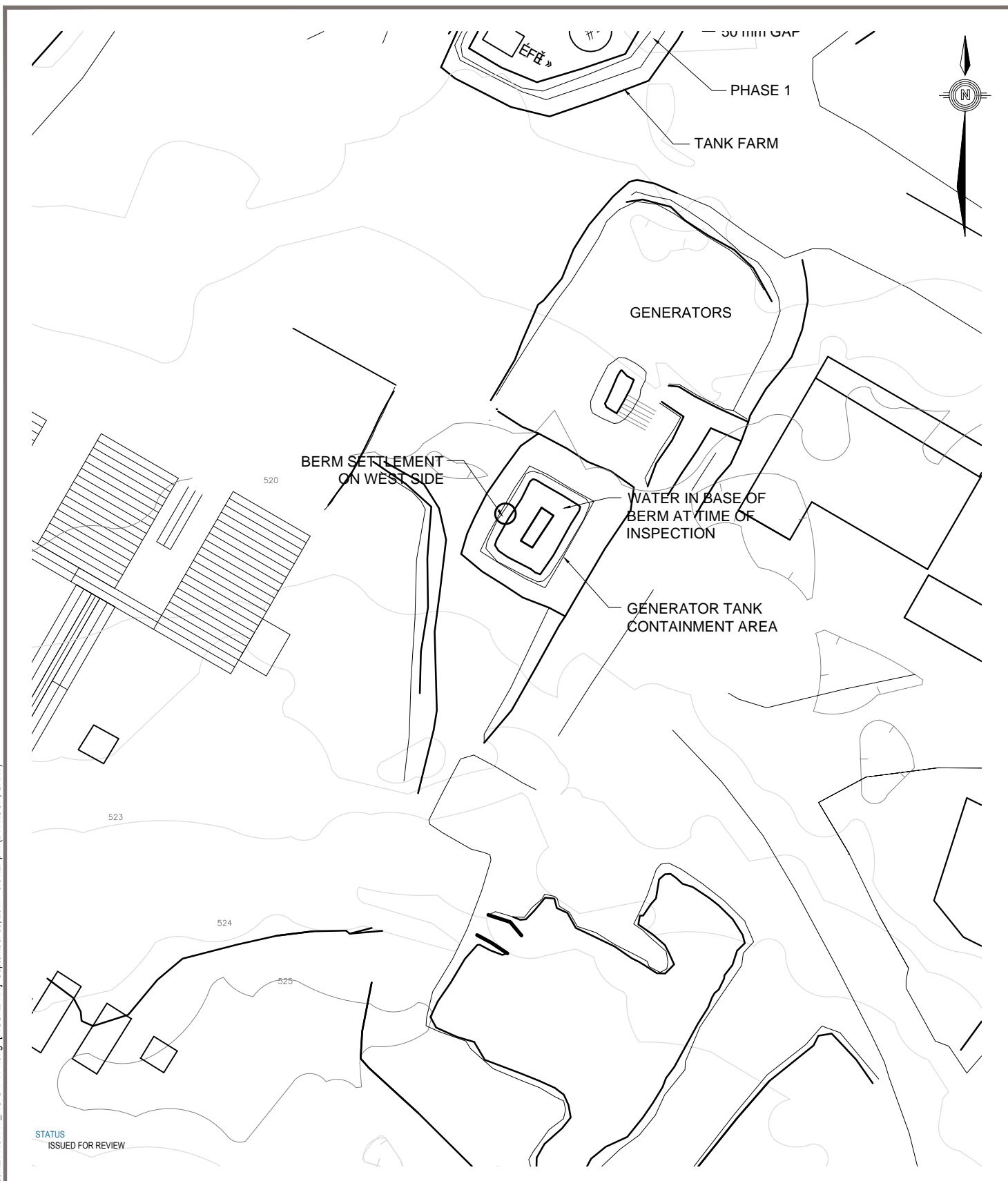
**Table H.2: Thermal Summary**

No ground temperature cables installed.

**Table H.3: Recommendations and Conclusions**

Low spot in the 20 mm crush berm – berm supported by 150 mm crush berm. Record drawings should be reviewed to determine where the liner is located to determine if there is a low area in the liner along the north berm. If so, the containment capacity should be reviewed to determine if berm modifications are required.

Y:\E14101140\_Jericho\Annual Geotechnical Inspection\E14101117\_FIG G-1-K-1.dwg [FIGURE H.1] September 09, 2011 - 6:54:27 pm (BY: KOOP, GARY)



CLIENT



shear  
diamonds



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GENERATOR TANK

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September, 2011

Figure H.1





**Photo H1:** Generator tank and berm containment



**Photo H2:** Low spot in generator tank berm

# APPENDIX I

## APPENDIX I AIRSTRIP TANK CONTAINMENT AREA

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## Geotechnical Inspection Summary

**Location:** Jericho Diamond Mine  
**Facility:** Airstrip Tank Containment Area  
**Observation Date:** July 16, 2011  
**Inspected by:** Gary Koop, P.Eng.  
 EBA, A Tetra Tech Company

**Table I.1: Observed Condition**

| Features       | Present (yes/no) | Dimensions           | Extent    | Description  | Photographic Records |
|----------------|------------------|----------------------|-----------|--|----------------------|
| Erosion        | None noted       |                      |           |  |                      |
| Cracking       | None noted       |                      |           |  |                      |
| Settlement     | None noted       |                      |           |  |                      |
| Seepage        | None noted       |                      |           |  |                      |
| Other Features | Stained Soil     | Base of bermed area. | Prevalent | A spill occurred in the tankfarm winter of 2007/2008. It is understood product was collected and disposed of elsewhere. Contaminated soil in tankfarm remains. | I.2, I.3             |

**Table I.2: Thermal Summary**

No ground temperature cables installed.

**Table I.3: Recommendations and Conclusions**

Satisfactory Performance. No remedial action required.