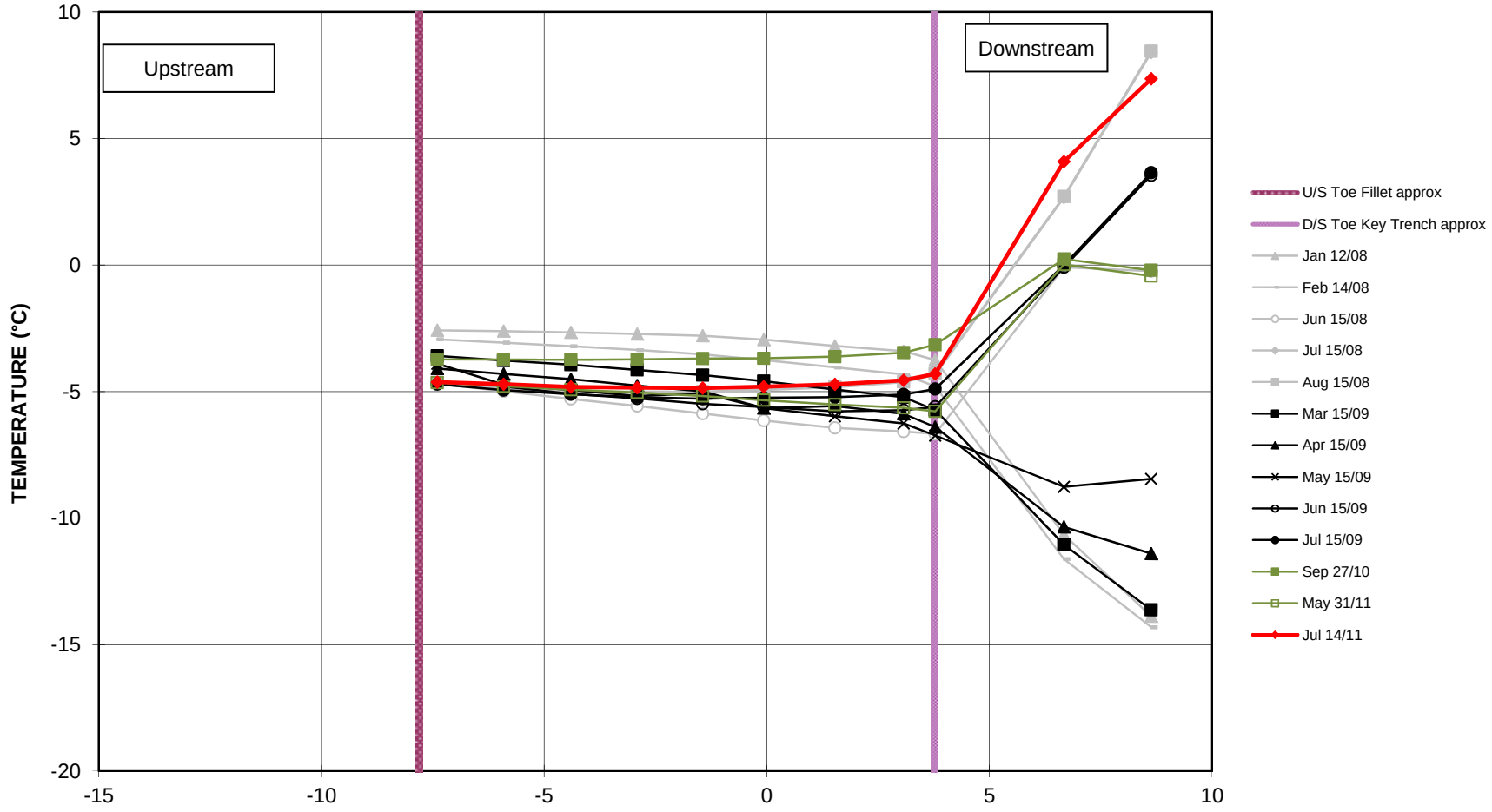
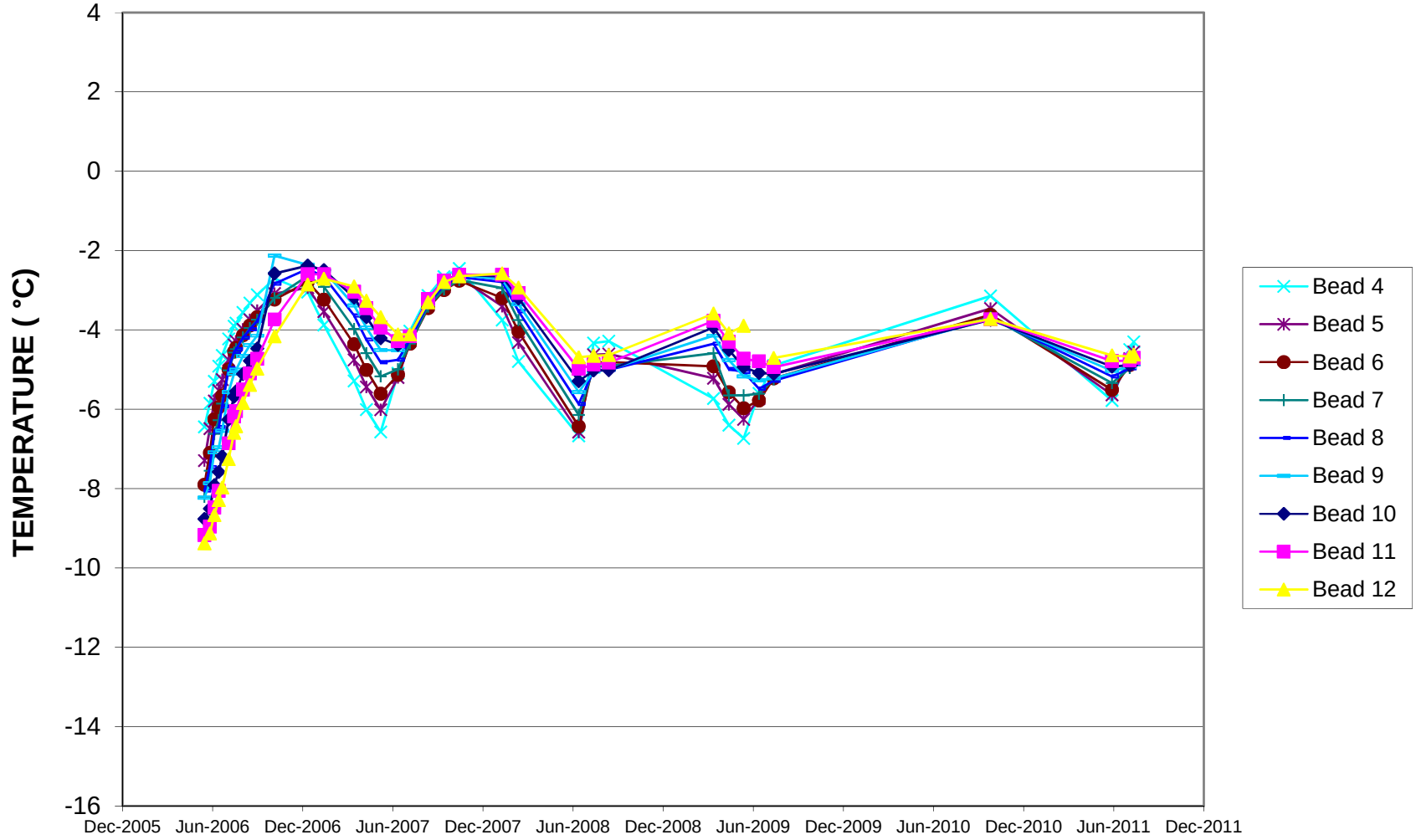


Serial No.: 1831
Date Installed: 2005.11.29
EBA File No: 1100060.010

Figure D-4
Horizontal Ground Temperature Distribution
East Dam
Station 0+150, Trench Elevation 515 m



Serial No.: 1831
Date Installed: 2005.11.29
EBA File No: 1100060.010

Figure D-5
Horizontal Ground Temperature Distribution
East Dam
Station 0+100, Trench Elevation 517 m

Photo D1: East dam facing southeast; dam crest is in good condition

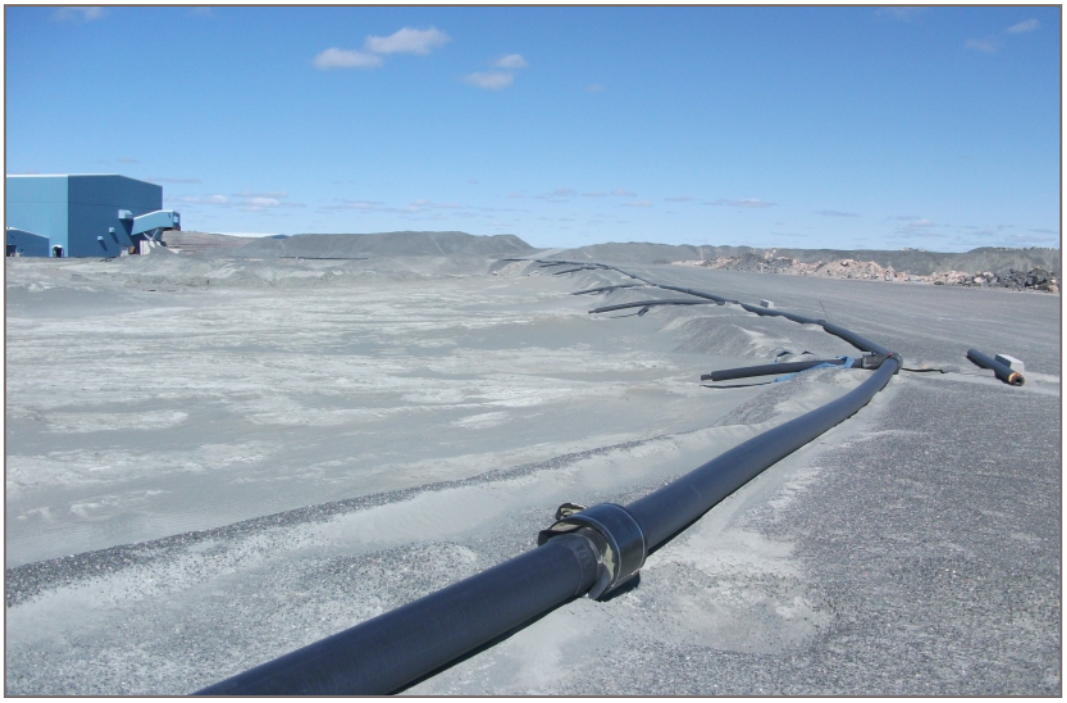


Photo D2: Processed kimberlite deposited on upstream face of dam

Photo D3: Downstream face of dam is in good condition

Photo D4: Standing water at downstream toe of dam; water is pooling is a topgographic low and not seeping through dam

APPENDIX E

APPENDIX E SOUTHEAST DAM

Geotechnical Inspection Summary

Location: Jericho Diamond Mine
Facility: Southeast Dam
Observation Date: July 15, 2011
Inspected by: Gary Koop, P.Eng.
EBA, A Tetra Tech Company

Table E.1: Operating Condition

Minimum Crest Elevation (m)	527 (approx.)
Top of Core or Liner (m)	523.3
Water Levels – Upstream	Processed kimberlite discharged on upstream face of dam
Water Levels - Downstream	N/A
Discharge	No discharge

Table E.2: Observed Condition

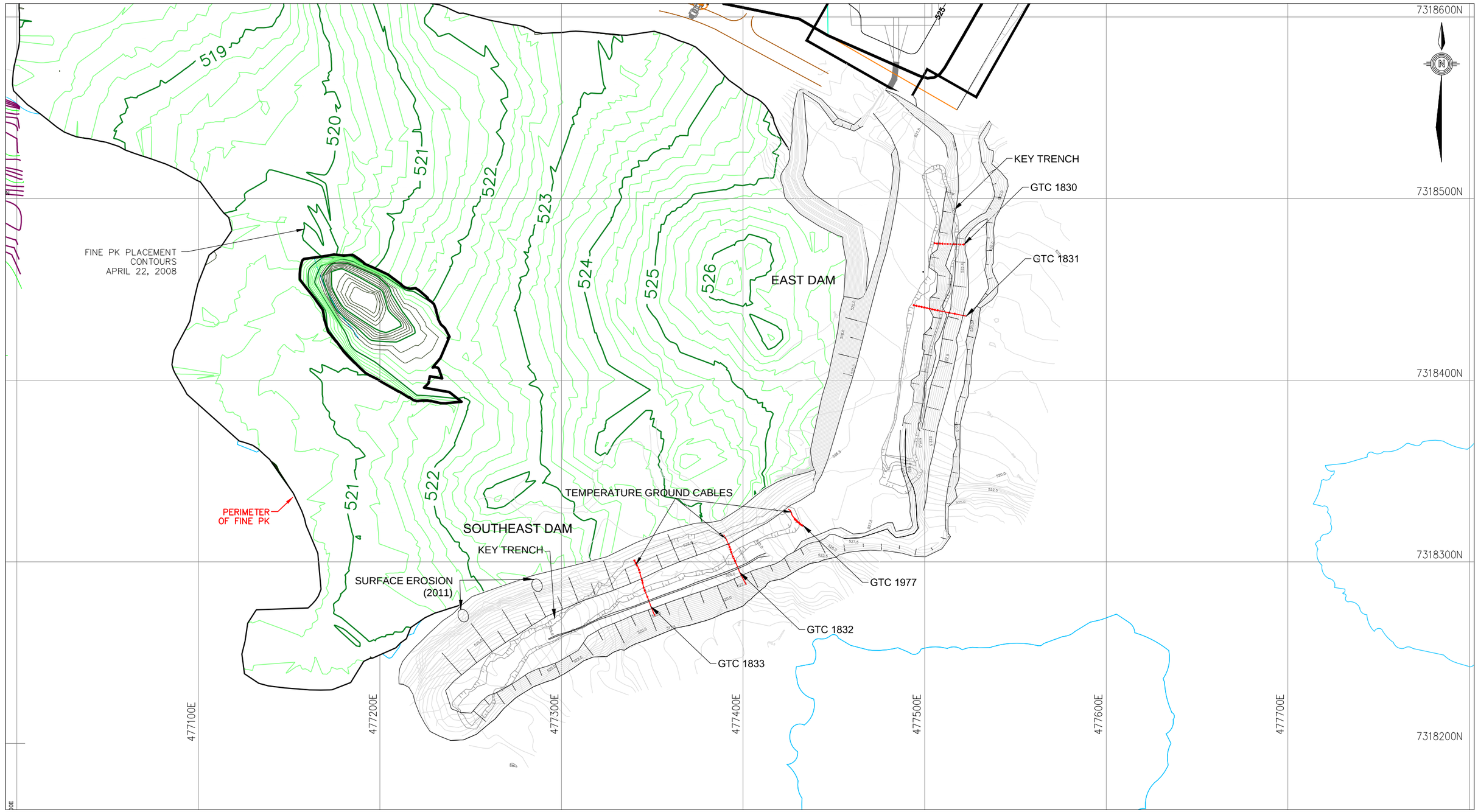
Features	Present (yes/no)	Dimensions	Extent	Description	Photographic Records
Erosion	None noted				
Cracking	None noted				
Settlement	None noted				
Seepage	None noted				
Other Features					

Table E.3: Thermal Summary

Ground temperature measurements in attached Figures E.2 to E.7. Temperatures in base of key trench range from -4.9 to -6.5 °C. This is 1 to 3°C cooler than measurements made at the same time in 2009.

Table E.4: Recommendations and Conclusions

Dam performance is satisfactory. No remedial action required.



Y:\E14101140_Jericho\Annual Geotechnical Inspection\Appendix E - Southeast Dam\E14101117_FIG E-1.dwg [FIGURE E.1] September 09, 2011 - 5:58:39 pm (BY: KOOP, GARY)

0 100

Scale: 1: 2 000 (metres)

NOTES
GROUND TEMPERATURE CABLES (APPROXIMATE LOCATION).
CABLES AT BASE OF LINER IN KEY TRENCH.
FIGURE BASED ON 2007 RECORD DRAWINGS.

STATUS
ISSUED FOR REVIEW

CLIENT
shear diamonds

2011 ANNUAL GEOTECHNICAL INSPECTION
JERICHO DIAMOND MINE, NU

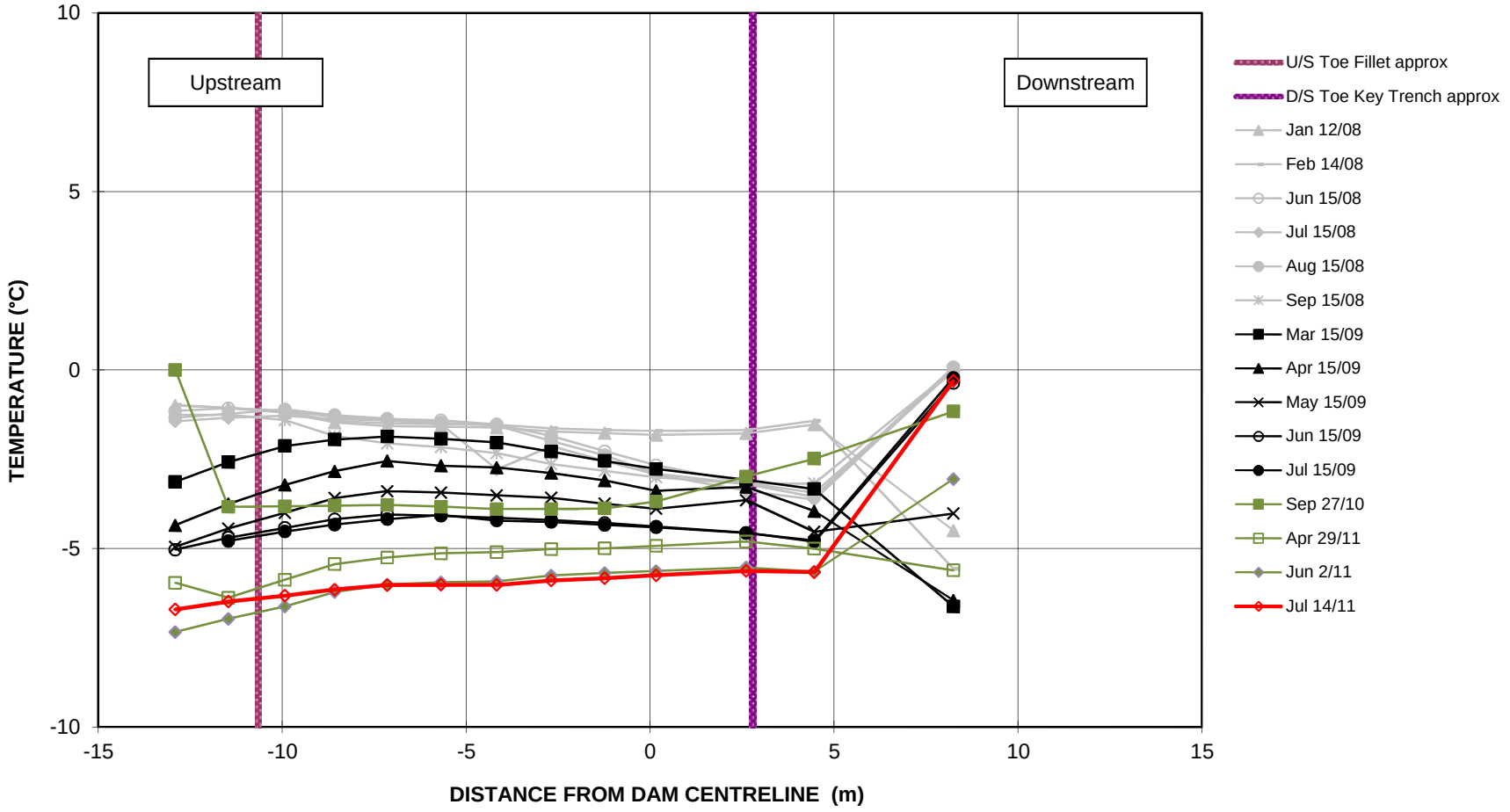
SOUTHEAST DAM

PROJECT NO.	DWN	CKD	REV
E14101140	EP	GDK	0

OFFICE: EBA-EDM
DATE: September, 2011

A TETRA TECH COMPANY

Figure E.1



Serial No.: 1832
Date Installed: April 5, 2007

Figure E-2
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+150, Trench Elevation 516 m

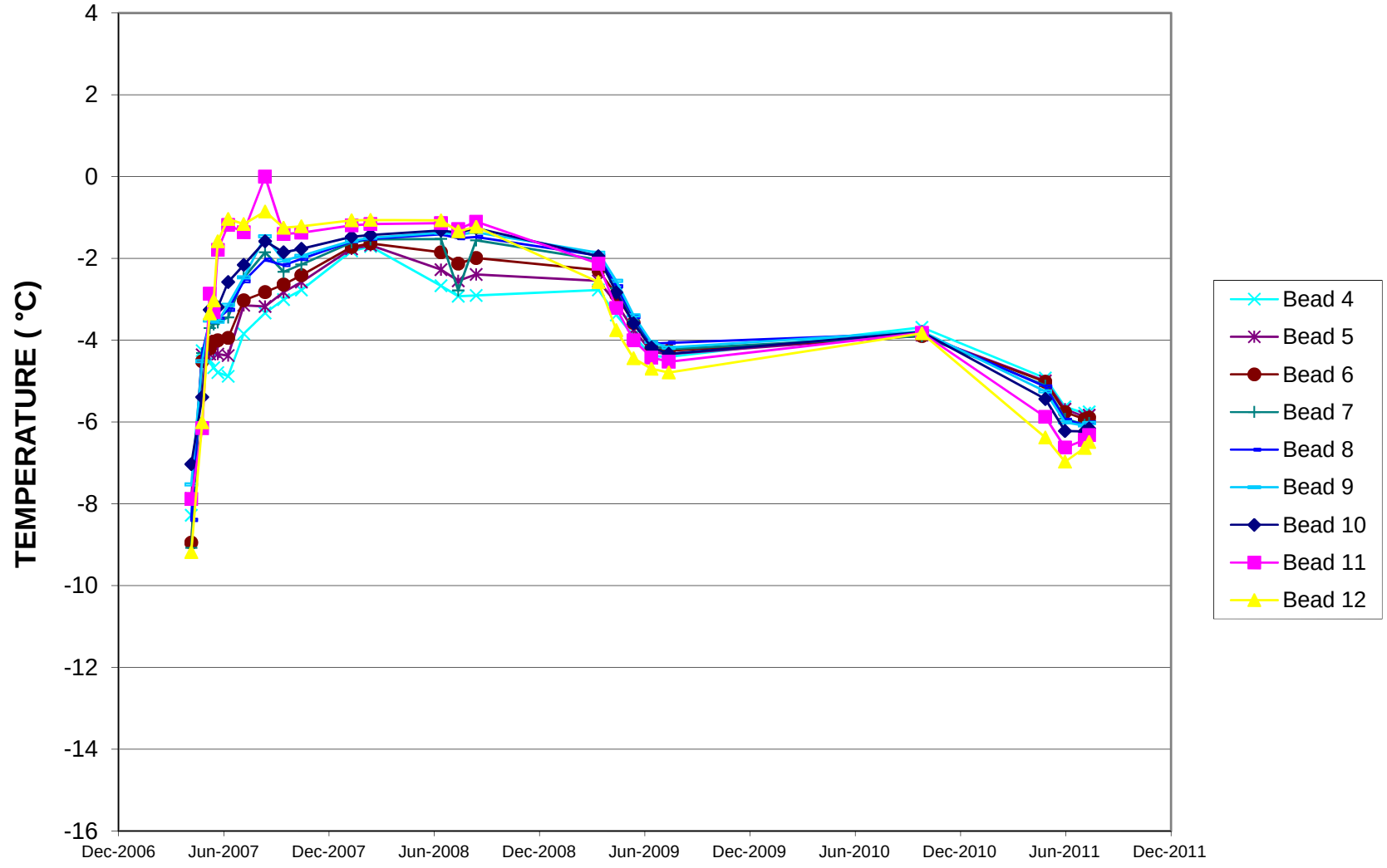
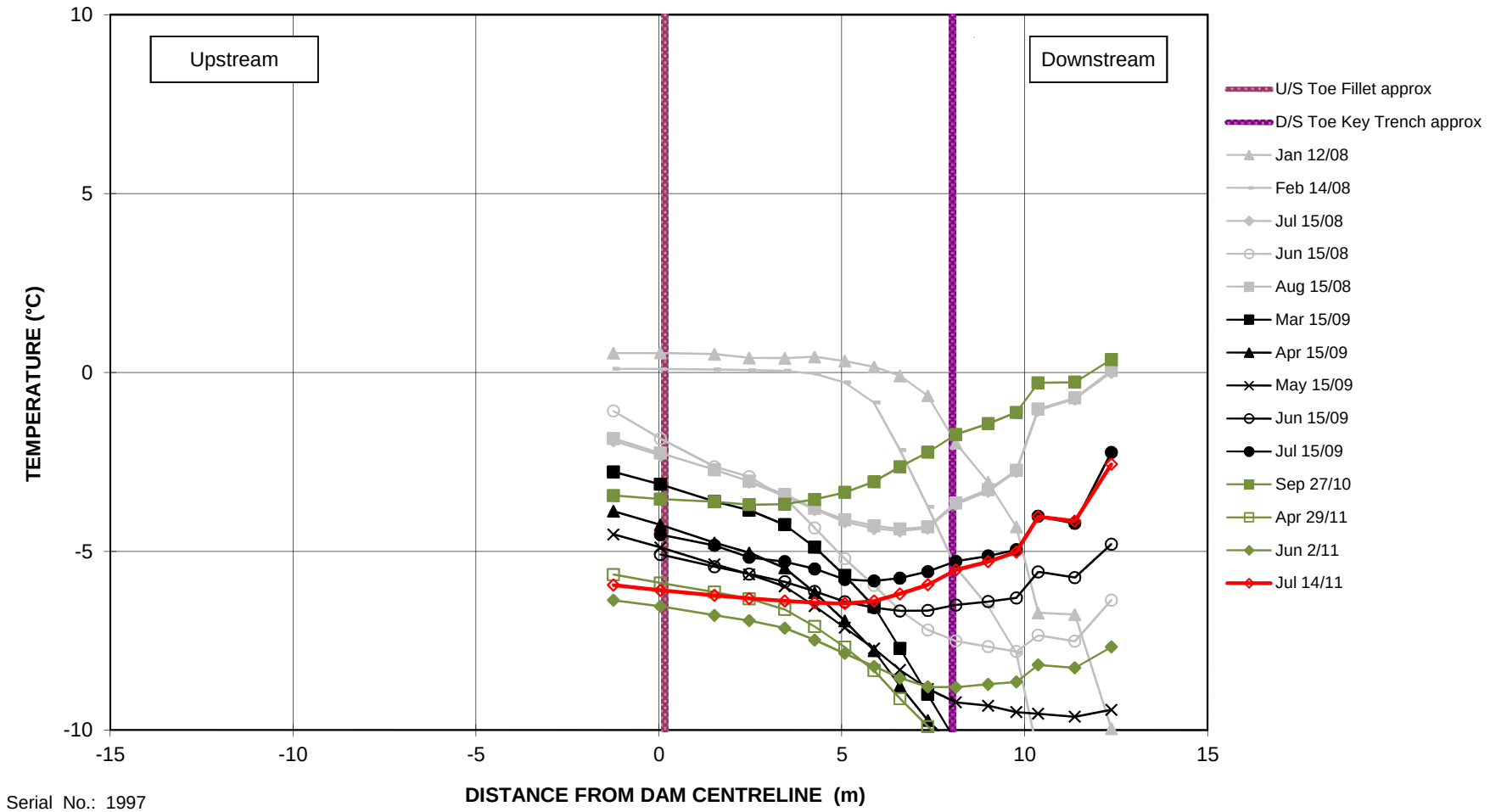
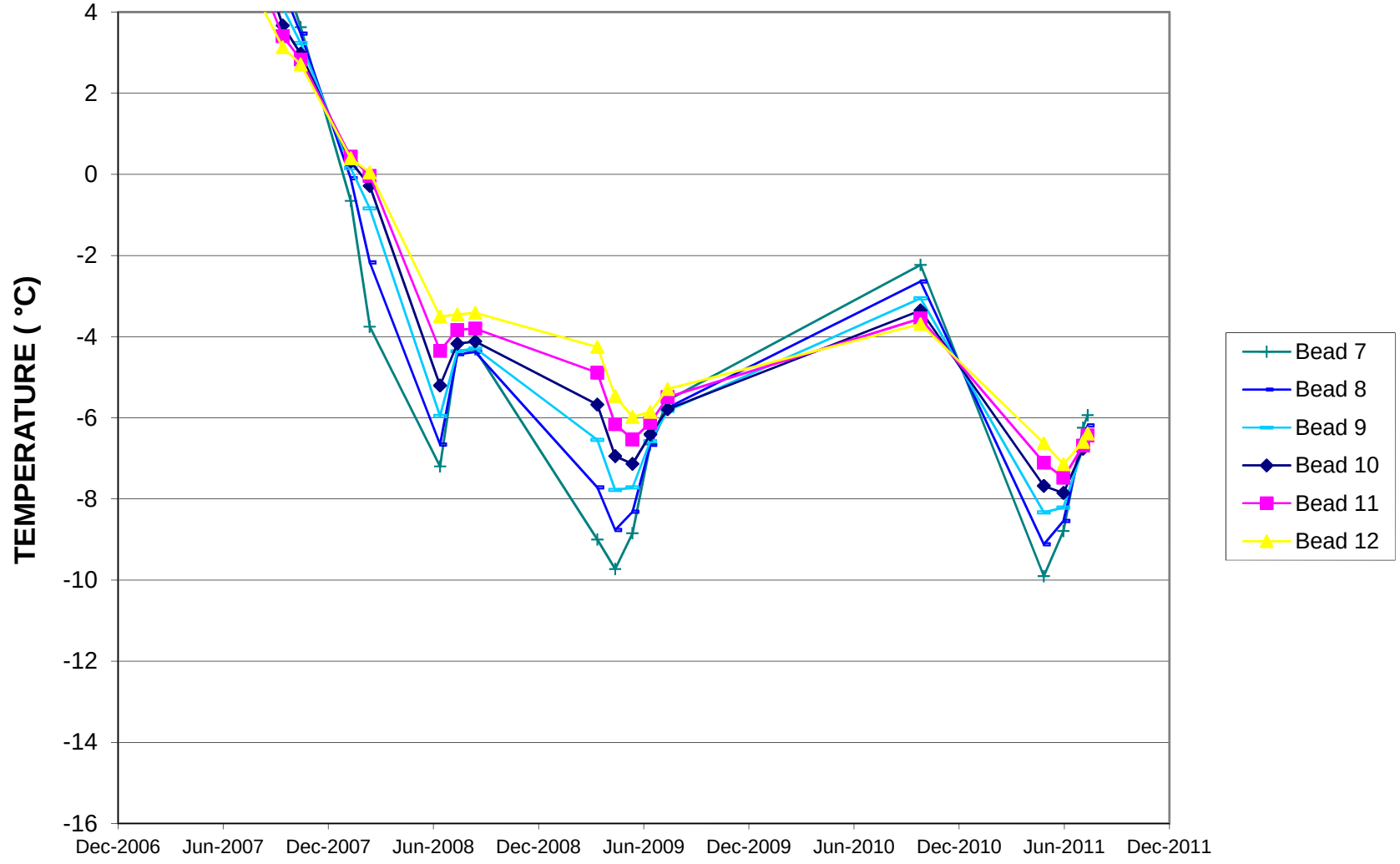


Figure E-3
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+150, Trench Elevation 516 m



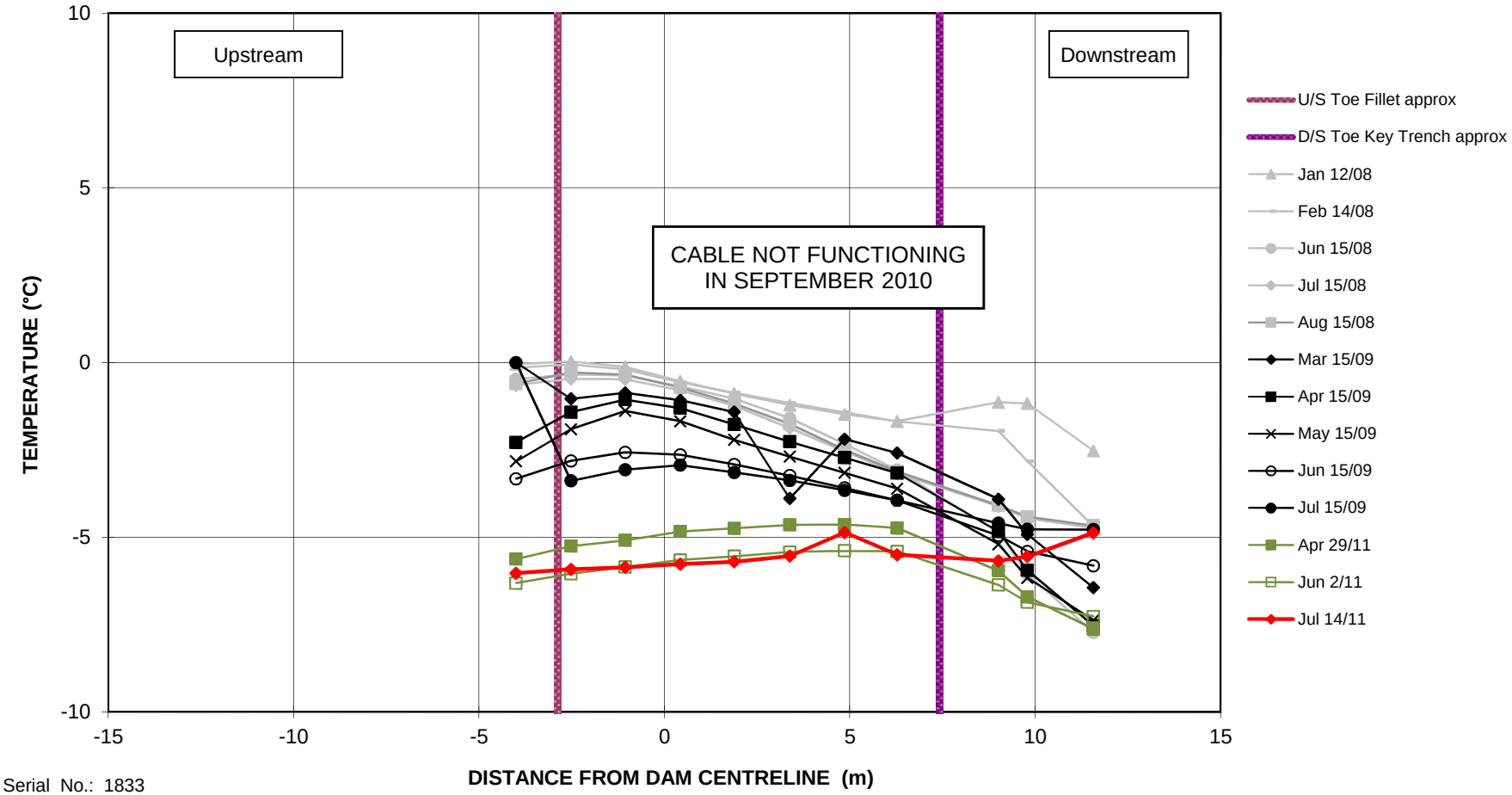
Serial No.: 1997
Date Installed: July 6, 2007

Figure E-4
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+240, Trench Elevation 520 m



Serial No.: 1997
Date Installed: July 6, 2007

Figure E-5
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+150, Trench Elevation 516 m



Serial No.: 1833
Date Installed: April 5, 2007

Figure E-6
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+200, Trench Elevation 516 m

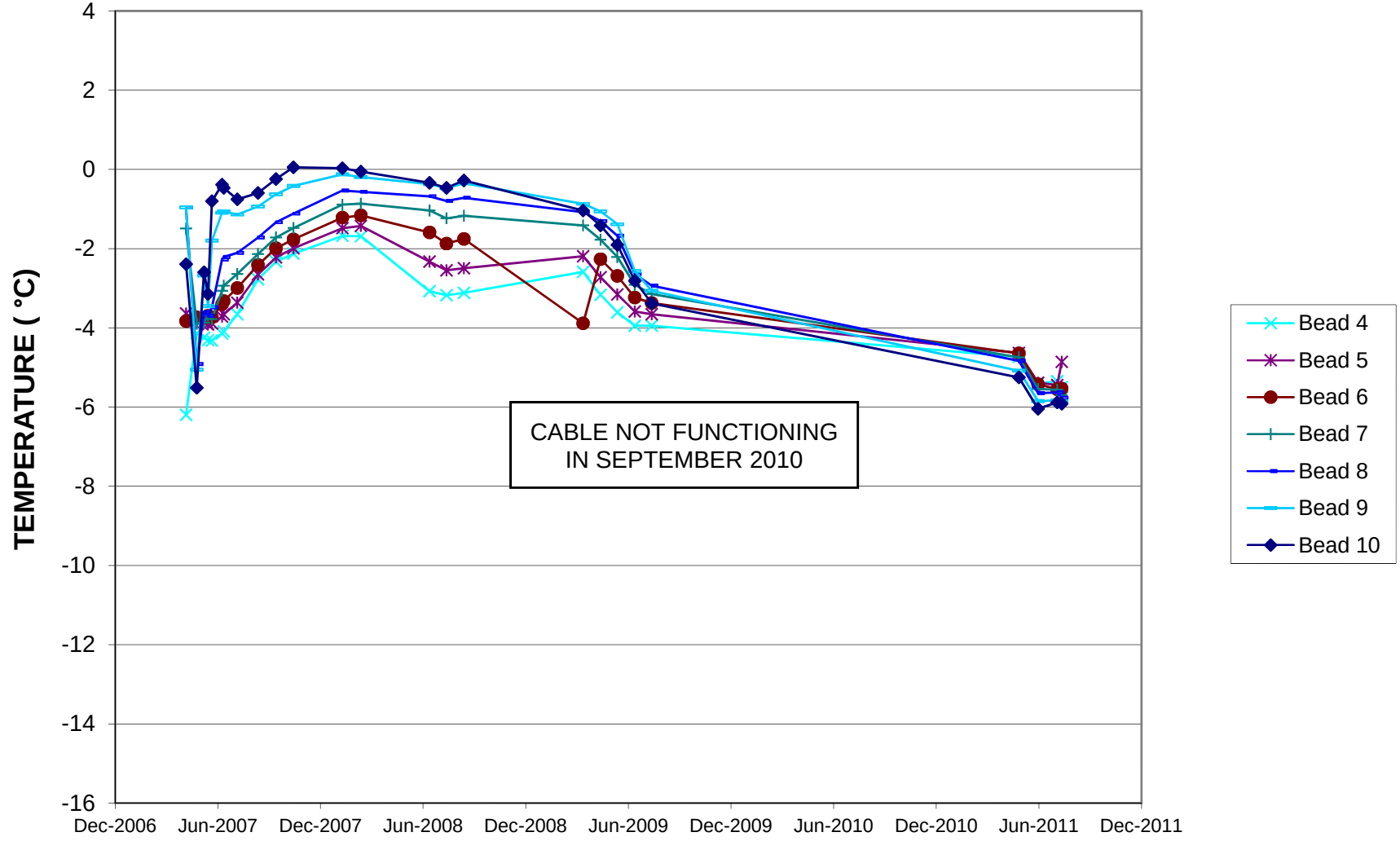


Figure E-7
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+150, Trench Elevation 516 m

Photo E1: Southeast Dam crest facing southwest; crest is in good condition with no problems noted

Photo E2: Processed kimberlite discharged on upstream face of dam

Photo E3: Downstream slope of dam is in good condition

Photo E4: Localized erosion of processed kimberlite cover at discharge location; does not impact dam performance

Photo E5: Localized erosion of processed kimberlite cover at discharge location; does not impact dam performance

Photo E6: Ponded water adjacent to downstream toe; water collected in topographic lows and not seeping through dam

APPENDIX F

APPENDIX F C1 DIVERSION

Geotechnical Inspection Summary

Location: Jericho Diamond Mine
Facility: North Cofferdam
Observation Date: July 15, 2011
Inspected by: Gary Koop, P.Eng.
EBA, A Tetra Tech Company

Table F.1: Operating Condition

Flow	low flow – estimated depth in culvert 25 – 50 mm.

Table F.2: Observed Condition

Features	Present (yes/no)	Dimensions	Extent	Description	Photographic Records
Erosion	Channel scour		Localized at east end of Reach C	Active channel degradation at east end of Reach C. Fish noted in naturally formed channel.	
Cracking	North Berm	125 mm wide, 15 m long 100 mm wide, 6 m long 50 mm wide, 3 m long	North berm	Longitudinal cracking along length of berm. Likely a result of settlement and consolidation of underlying till material	F.10
Settlement	North Berm Inlet Fill Pad Inlet Fill Pad	20 m long - -	Localized Localized Localized	Shifting of crest on inside slope Settlement in inlet fill pad at two locations Sloughing of erosion protection near channel	 F.2 F.3
Seepage	None noted				
Other Features	Bent culvert inlet and outlet			Culvert inlet and outlet damaged	F.5, F.7

Table F.3: Thermal Summary

No ground temperature cables installed.

Table F.4: Recommendations and Conclusions

C1 Diversion structure performance is satisfactory. Minor repairs to culvert inlet and outlet may be required to sustain flow during high flow. Settlement in north berm and inlet fill pad should be monitored in subsequent inspections.