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Jay Cherian, Environmental Coordinator
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**2011 GEOTECHNICAL DATA REVIEW
FARO MINE COMPLEX, FARO, YUKON**

Dear Ms. Cherian,

Keyeh NejeH Golder Corp. (KNG) is pleased to submit our final report on our 2011 review of geotechnical data at the Faro Mine Complex. The attached technical report provides the results of our data review, and a series of geotechnical comments and recommendations.

We trust the information contained in this report is adequate for your needs. Should you have any questions concerning the technical proposal, please contact Bill Purdy at 604-296-4262 or wpurdy@golder.com. For project management questions, please contact Jeff Bailey at 250-881-7372 or jbailey@golder.com.

We look forward to working with DES in the future.

Yours very truly,

KEYEH NEJEH GOLDER CORPORATION

Jeff Bailey
Managing Director, Keyeh NejeH Golder Corp.

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Attachments: Technical Report

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**GEOTECHNICAL 2011 DATA REVIEW
FARO MINE COMPLEX, FARO, YUKON**

Dear Ms. Cherian,

As requested by Denison Environmental Services (DES) as the Faro Mine Care and Maintenance Operator on behalf of the Yukon Government, Energy, Mines, and Resources (YGEMR), Golder Associates Ltd. (Golder) is pleased to submit the results of our 2011 data review for the above project. The work was carried out by Golder on behalf of Keyeh Nejehe Golder Corp. (KNG) in general accordance with our proposal dated April 12, 2011. Authorization to proceed with the work was received from DES on May 9, 2011.

1.0 SITE DATA RESULTS

As a follow-up to Golder's last data review and reporting in February 2011 as summarized in Golder (2011b), DES submitted new site data for April/May 2011 on May 18 and 21, 2011, for June/July 2011 on August 8 and 17, 2011, and is provided in Appendix A.

Observation results, client discussions, geotechnical comments and recommendations from Golder's 2011 spring dam inspection of the Faro Mine Complex are summarized in Golder (2011a) and provided for information in Appendix B.

This section provides an updated summary of the historical (pre-2011) and current (2011) site data as gathered and tabulated by DES from sixty-nine of seventy-two (69 of 72) survey, instrumentation and/or monitoring locations, as follows:

- Five (5) water levels, including one (1) Faro pit water level, two (2) tailings pond water levels and two (2) rock drain water levels were measured;
- Six (6) staff gauge water levels and three (3) in-stream flow monitoring locations;
- Four (4) weir water level and estimated flow conditions;



- Twenty- three (23) standpipe piezometers;
- Sixteen (16) pneumatic piezometers;
- Three (3) slope inclinometers; and
- Eleven (11) thermistors.

A summary of each type of survey or instrument measurement and current results relative to historic results, where available, is provided below. The site data reviewed by Golder for this current reporting is summarized by DES and reported in Appendix A.

1.1 Water Levels

Water level readings obtained at the North Fork Rock Drain, Faro Pit, Intermediate Pond and Polishing Pond are summarized on Table 1-1.

Table 1-1: Water Level Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Max	Min	Max	Min	
NF-1	North Fork Rock Drain, Upstream	1092.88	1088.97	1094.35	1091.19	Based on 2005 to 2011 data, current spring flow conditions exceeds historic maximum flow conditions
NF-2	North Fork Rock Drain, Downstream	1086.94	1085.02	1089.11	1085.79	
FP	Faro Pit	1143.06	1140.68	1142.06	1141.45	Based on 2004 to 2011 data
IP	Intermediate Pond Level	1047.58	1043.55	1045.75	1044.82	Pump down target 1043 m
PP	Polishing Pond Level	1030.33	1026.31	1029.22	1027.48	Pump down target 1027 m

Note: all units in metres.

Based on water level readings upstream and downstream of the North Fork Rock Drain (NFRD) since 2005, the current (2011) spring water levels exceed the historic (2005) results, indicative of greater flow through the structure in 2011. The current maximum and minimum flow conditions through the NFRD has water level differences (upstream to downstream) that range between about 5.2 m and 5.4 m, which is within the range of the historic flow conditions of about 5.9 m and 4.0 m. Based on our May 2011 inspection, the structure performance during high flow conditions appeared satisfactory.

The current water level in the Intermediate Pond is at about El. 1044.8 m, which is about 1.8 m above the target pond level of 1043 m. The current water level in the Polishing Pond is at about El. 1027.5 m, which is about 0.5 m above the target pond level of 1027 m. DES should monitor the upstream slopes of each dam structure for potential soil erosion and rip rap movement once the pond levels are drawn down below the rip rap surfaces.

1.2 Staff Gauges and In-Stream Flow Monitoring

Historic flow conditions as summarized from six (6) staff gauge and one of three (3) in-stream flow monitoring locations including four (4) locations along the Faro Creek Diversion Channel (FCDC), three (3) locations along the North Fork of Rose Creek (NFRC) and two (2) other channel locations, including Rose Creek Diversion Channel (RCDC) and North Wall Interceptor Ditch (NWID), are summarized on Table 1-2.

Table 1-2: Staff Gauge and Flow Monitoring Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Max	Min	Max	Min	
Staff Gauge Locations						
FCD-1	Faro Creek Diversion Channel	2213	69	17379	398	Maximum staff gauge reading beyond rating curve
FCD-2	Faro Creek Diversion Channel	6178	7	n/a	447	Staff gauge replaced by July 4, 2011
FCD-3	Faro Creek Diversion Channel	1366	47	1231	353	Maximum staff gauge reading beyond rating curve
FCD-4	Faro Creek Diversion Channel	6018	47	2993	296	Maximum staff gauge reading beyond rating curve, staff gauge replaced by July 4, 2011
NFRC-23	North Fork of Rose Creek	8x10 ³	0	n/a	n/a	No current flow data
RCSG4	Rose Creek Diversion Channel	38x10 ³	1858	n/a	n/a	No current flow data
In-stream Flow Monitor Locations						
NF2	North Fork of Rose Creek	2713	613	3042	240	
X2	North Fork of Rose Creek	1538	207	n/a	n/a	No current flow data
NWID	North Wall Interceptor Ditch	32	1	n/a	n/a	No current flow data

Notes: All units in litres/second.

In general, the flow conditions observed by Golder during the May 2011 inspection were considered high. None of the water control structures were flooded or breached at the time of the inspection.

DES conducted staff gauge readings at the above locations in April to July 2011. Spring conditions exceeded the estimated range in flow limits as defined by the rating curves for the staff gauge locations for the Faro Creek Diversion Channel. Based on limited inflow measurements, the results for select staff gauge locations were consistent with the estimated flow conditions as determined by the rating curves. Future consideration should be given by YGEMR to determine the estimated flow conditions during peak flow conditions at all FCDC staff gauge locations.

1.3 Weirs

Historic and current flow conditions as summarized from weir readings obtained at four (4) locations downstream of the Cross Valley Dam (and tailings facility) are summarized on Table 1-3.

All current weir flow measurements are plotting within the current range of historic flow conditions.

Table 1-3: Weir Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Max	Min	Max	Min	
X11	Downstream of Cross Valley Dam	20.9	3.8	7.7	4.9	Plotting within current range, level trend
X12	Downstream of Cross Valley Dam	1.0	0.1	0.7	0.1	Plotting within current range, level trend
Weir 3	Downstream of Cross Valley Dam	7.1	1.7	3.3	1.6	Plotting within current range, level trend
X13	Downstream of Cross Valley Dam	43.9	10.1	34.5	11.0	Plotting within current range, level trend

Note: all units in litres/second.

1.4 Standpipe Piezometers

Water levels obtained at a total of twenty-three (23) standpipe piezometer locations, including eight (8) Cross Valley Dam (CVD) locations, nine (9) Intermediate Dam (ID) locations and six (6) Secondary Dam (SD) locations are summarized on Table 1-4.

The CVD standpipe piezometers include four (4) dam crest and four (4) dam toe locations, of which there are four shallow and deep tip nested standpipe piezometers. The ID standpipe piezometers include five (5) dam crest and four (4) dam toe locations, of which there are three multi-tip nested standpipe piezometers. The SD standpipe piezometers include three (3) dam crest and three (3) located within the secondary tailings pond.

In general, the current standpipe piezometer water levels are plotting within the historical range of water levels with constant to downward trending water level conditions, with a slight trend increase at SD P03-01. There are six (6) dry CVD, ID and SD standpipe piezometers.

Table 1-4: Standpipe Piezometer Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Max	Min	Max	Min	
CVDC-4	Cross Valley Dam, dam crest, shallow tip	1018.44	1016.68	dry	dry	Plotting within current range, level trend
	Cross Valley Dam, dam crest, deep tip	1019.05	1016.72	1018.68	1018.58	
CVDC-7	Cross Valley Dam, dam crest, shallow tip	1017.74	1015.14	1015.36	1015.34	Plotting within current range, level trend
	Cross Valley Dam, dam crest, deep tip	1019.21	1015.27	1017.47	1017.33	
94CVDC-1	Cross Valley Dam, dam crest	1024.58	1022.73	1023.18	1022.87	Plotting within current range, level trend
CVDT-1	Cross Valley Dam, dam toe	1018.57	1017.13	1017.83	1017.72	Plotting within current range, level trend
CVDT-2	Cross Valley Dam, dam toe	1019.50	1015.43	1015.66	1015.49	Plotting within current range, level trend
CVDC-9	Cross Valley Dam, dam crest, shallow tip	1024.74	1019.91	1020.52	1020.35	Plotting within current range, trending down
	Cross Valley Dam, dam crest, deep tip	1025.61	1021.18	1023.25	1023.11	
P01-02	Cross Valley Dam, dam toe, shallow tip	1018.30	1017.42	1017.21	1016.98	Plotting within current range, level trend
	Cross Valley Dam, dam toe, deep tip	1019.73	1017.86	1019.73	1018.86	
P01-11	Cross Valley Dam, dam toe	1017.83	1016.65	1016.77	1016.63	Plotting within current range, level trend
P01-3A	Intermediate Dam, dam toe	1030.63	1027.74	1029.64	1028.35	Plotting within current range, level trend
P01-4A P01-4B	Intermediate Dam, dam toe, shallow tip	1032.24	1029.27	1031.42	1030.50	Plotting within current range, level trend
	Intermediate Dam, dam toe, deep tip	1032.17	1029.06	1030.68	1029.93	
BH96-1	Intermediate Dam, dam crest	1031.65	1027.63	1028.67	1027.92	Plotting within current range, level trend, near bottom of instrument
BH96-2	Intermediate Dam, dam crest	1031.94	1028.44	1029.13	1028.88	Plotting within current range, trending down, bottom of instrument
BH96-3A BH96-3B	Intermediate Dam, dam toe, shallow tip	1031.38	1026.62	1028.67	1027.78	Plotting within current range, level trend
	Intermediate Dam, dam toe, deep tip	1031.45	1027.48	1028.70	1027.86	
BH96-4A BH96-4B BH96-4C BH96-4D	Intermediate Dam, dam toe, shallow tip	1032.04	1027.61	n/a	n/a	Upper three tips last reported September 2009, bottom tip plotting within current range, level trend
	Intermediate Dam, dam toe, mid-hi tip	1032.28	1028.39	n/a	n/a	
	Intermediate Dam, dam toe, mid-low tip	1031.64	1027.74	n/a	n/a	
	Intermediate Dam, dam toe, deep tip	1031.75	1027.73	1028.87	1028.05	
BH94-IDC-1	Intermediate Dam, dam crest	dry	dry	dry	dry	Dry at bottom of hole
BKSO4-06	Intermediate Dam, dam crest	dry	dry	dry	dry	Dry at bottom of hole
BKSO4-07	Intermediate Dam, dam crest	dry	dry	1045.45	1045.27	Plotting within current range, level trend
P81-06	Secondary Dam, dam crest	dry	dry	dry	dry	Dry at bottom of hole
P81-07	Secondary Dam, dam crest	dry	dry	dry	dry	Dry at bottom of hole
P81-08	Secondary Dam, dam crest	dry	dry	dry	dry	Dry at bottom of hole
P03-01	Secondary Dam, within tailings pond	1059.30	1054.54	1055.60	1055.20	Plotting within current range, slight increase
P03-02	Secondary Dam, within tailings pond	1058.35	1053.72	1054.53	1054.48	Plotting within current range, level trend
P03-03	Secondary Dam, within tailings pond	1060.27	1054.48	1060.36	1054.41	Plotting within current range, blockage

Note: all units in metres.

1.5 Pneumatic Piezometers

Hydrostatic conditions obtained at a total of sixteen (16) pneumatic piezometer locations, including two (2) Diversion Canal Backslope (BS) locations, six (6) Diversion Canal Dyke (DCD) locations (all as part of the Rose Creek Diversion Channel), four (4) Intermediate Dam locations and four (4) Cross Valley Dam locations, are summarized on Table 1-5.

Table 1-5: Pneumatic Piezometer Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Max	Min	Max	Min	
BS-5	Diversion Canal Backslope	1057.69	1053.00	1056.50	1056.5	Plotting within current range, level trend
BS-9	Diversion Canal Backslope	1051.65	1047.73	1051.37	1051.37	Plotting within current range, level trend
CD-13	Diversion Canal Dyke, shallow tip Diversion Canal Dyke, deep tip	1051.64 1051.35	1048.98 1047.57	1051.78 1051.00	1051.64 1050.86	Plotting within current range, level trend
CD-15	Diversion Canal Dyke, shallow tip Diversion Canal Dyke, deep tip	1051.25 1050.97	1048.10 1043.31	1049.01 1049.18	1048.38 1044.63	Plotting within current range, level trend
CD-21	Diversion Canal Dyke, shallow tip Diversion Canal Dyke, deep tip	1052.26 1047.51	1047.92 1042.28	1048.27 n/a	1048.27 n/a	Plotting within current range, level trend No deep tip reading since May 2005
CD-26	Diversion Canal Dyke, shallow tip Diversion Canal Dyke, deep tip	1049.81 1043.61	1048.20 1042.00	1048.62 1042.49	1048.48 1042.35	Plotting within current range, level trend
BGC05-02 BGC05-03	Diversion Canal Dyke, shallow tip Diversion Canal Dyke, deep tip	1046.75 1051.62	1044.72 1050.64	1045.28 1050.92	1045.07 1050.92	Plotting within current range, level trend
BGC05-06	Diversion Canal Dyke, shallow tip Diversion Canal Dyke, deep tip	1047.62 1042.20	1046.78 1041.50	1047.06 1041.71	1046.99 1041.64	Plotting within current range, level trend
BH91-ID3	Intermediate Dam, south abutment, shallow tip Intermediate Dam, south abutment, deep tip	1039.23 1038.04	1036.82 1030.79	1037.31 1033.87	1036.82 1030.02	Plotting within current range, trending down
BH91-ID4	Intermediate Dam, dam toe, shallow tip Intermediate Dam, dam toe, deep tip	1035.91 1031.85	1028.28 1026.74	1029.68 1028.35	1028.98 1027.58	Plotting within current range, level trend
BH91-ID6	Intermediate Dam, dam toe, shallow tip Intermediate Dam, dam toe, deep tip	1040.90 1034.96	1026.83 1020.82	1028.09 1029.15	1027.53 1028.45	Plotting within current range, level trend
BH91-ID7	Intermediate Dam, dam toe	1035.20	1028.96	1029.94	1029.45	Plotting within current range, level trend
CVDP-1	Cross Valley Dam, dam toe	1019.83	1017.38	1018.22	1018.08	Plotting within current range, trending down
CVDP-3	Cross Valley Dam, dam toe	1017.65	1016.11	1016.39	1016.11	Plotting within current range, trending down
CVDP-5	Cross Valley Dam, dam toe	1022.05	1018.13	1020.30	1020.16	Plotting within current range, level trend
CVDP-6	Cross Valley Dam, dam toe	1019.55	1016.99	1017.73	1017.59	Plotting within current range, level trend

Note: all units in metres.

Six of eight DCD and three of four ID pneumatic piezometers are dual-tip installations, and all remaining pneumatic piezometers are single tip installations.

All sixteen (16) of the current pneumatic piezometer levels reported by DES are plotting as level or downward trending within the historical range of water level conditions.

1.6 Slope Inclinometers

DES obtained current readings at three (3) inclinometer locations along the Diversion Canal Backslope in July 2011, which are summarized in Table 1-6. However, historical displacement records were not available and current data reduction was not carried out by DES to provide for review. Future consideration should be given by YGEMR to determine displacement estimates by data reduction of all inclinometer readings obtained by DES for geotechnical review.

Table 1-6: Slope Inclinometer Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Depth	Displace	Depth	Displace	
BS-5	Diversion Canal Back Slope	n/a	n/a	n/a	n/a	Data set from July 11, 2011 requires data reduction
BS-9	Diversion Canal Back Slope	n/a	n/a	n/a	n/a	
BS-10	Diversion Canal Back Slope	n/a	n/a	n/a	n/a	

Notes: Field data provided by DES was not reduced to depth and displacement formats for geotechnical review.

All depth and displacement units in metres, respectively, where reported.

1.7 Thermistors

Thermal ground conditions have been monitored at a total of eleven (11) thermistor locations, including four (4) Diversion Canal Dyke (DCD) locations, four (4) Diversion Canal Backslope (BS) locations, one (1) Diversion Canal Spoil Pile (SP) locations (all as part of the Rose Creek Diversion Channel) and two (2) Cross Valley Dam locations. Historical estimated ground temperatures as reported in late summer season to determine the season ground thaw conditions, typically referred as the active layer, and thermal conditions to the bottom of each installation are summarized on Table 1-7.

Current readings conducted by DES in June/July 2011 provide an indication of seasonal thermal trends at each instrument location. Although cold (sub-zero) temperatures are recorded at some locations within the depth of measurement (typically less than 10 m below ground surface) during parts of the year, the active layer is best determined in late fall or early winter when the ground has experienced the seasonal warm temperatures and begins to cool from seasonal cold temperatures. Current readings should be measured again in late fall and/or early winter to determine the seasonal active layer and thermal conditions at the bottom of each installation.

Table 1-7: Thermistor Summary

NAME	LOCATION	HISTORICAL		CURRENT		COMMENTS
		Depth	Temp	Depth	Temp	
CD-15	Diversion Canal Dyke, thaw depth Diversion Canal Dyke, bottom of hole	-9.1 -9.1	-0.12 -0.12	-1.1 -9.1	-0.91 -2.89	Last reading June 2011, recommend fall reading
CD-21	Diversion Canal Dyke, thaw depth Diversion Canal Dyke, bottom of hole	-8.0 -13.0	-0.22 1.80	-3.0 -13.0	-0.88 0.79	Last reading June 2011, recommend fall reading
CD-26	Diversion Canal Dyke, thaw depth Diversion Canal Dyke, bottom of hole	-9.6 -9.6	1.37 0.71	-0.6 -9.6	-0.35 1.01	Last reading June 2011, recommend fall reading
BGC05-04	Diversion Canal Dyke, thaw depth Diversion Canal Dyke, bottom of hole	-3.9 -3.9	4.19 4.19	-2.9 -3.9	-0.47 -0.13	Last reading June 2011, recommend fall reading
BS-5	Diversion Canal Backslope, thaw depth Diversion Canal Backslope, bottom of hole	-2.5 -9.5	-1.17 -0.90	-1.5 -9.5	-1.31 -0.98	Last reading July 2011, recommend fall reading
BS-9	Diversion Canal Backslope, thaw depth Diversion Canal Backslope, bottom of hole	-4.5 -9.5	-0.85 -2.49	-4.5 -8.5	-3.57 -5.17	Last reading July 2011, recommend fall reading
BS-10	Diversion Canal Backslope, thaw depth Diversion Canal Backslope, bottom of hole	-6.5 -9.5	-0.10 -2.48	-0.5 -9.5	-0.50 -2.69	Last reading July 2011, recommend fall reading
BS-12	Diversion Canal Backslope, thaw depth Diversion Canal Backslope, bottom of hole	-1.5 -9.5	-0.01 0.00	-1.5 -9.5	-1.18 0.62	Last reading July 2011, recommend fall reading
SP-5	Diversion Canal Spoil Pile, thaw depth Diversion Canal Spoil Pile, bottom of hole	-6.1 -10.1	-1.42 1.19	-3.1 -10.1	-0.10 1.02	Last reading June 2011, recommend fall reading
BH88-4	Cross Valley Dam, thaw depth Cross Valley Dam, bottom of hole	-4.2 -4.2	3.57 3.57	-2.0 -4.2	-4.43 -0.36	Last reading June 2011, recommend fall reading
CVDC-6	Cross Valley Dam, thaw depth Cross Valley Dam, bottom of hole	-15.0 -27.0	0.63 2.52	-15.0 -27.0	3.01 2.49	Last reading June 2011, thawed conditions to bottom of instrument

Note: all depth and ground temperature units in metres and degrees Celsius, respectively.

Based on historical results, seven of eleven (7 of 11) instruments indicate cold temperatures throughout the year and all remaining locations achieve seasonally warm conditions during the year. At historical locations where the thermal ground conditions remain cold throughout the year, the seasonal active layer at this site varies between about 1 m and 9 m or greater below existing ground surface conditions.

The thermistor results at the remaining four (4) locations identify warm ground conditions in late summer and/or year round to the bottom of each installation. Historically, the depth of seasonal thaw has increased with time and most thermistor installations are warm year-round at the bottom of each installation for the periods or times of the monitoring events.

2.0 GEOTECHNICAL COMMENTS AND RECOMMENDATIONS

Based on our geotechnical review of the April to July 2011 site data for the Faro Mine Complex as prepared by DES, our comments and recommendations are summarized as follows:

2.1 General Comments

- In general, the Faro Mine Complex tailings management and water management infrastructure which are covered by this spring inspection effort including tailings dams and diversion channels are considered geotechnically stable and are performing satisfactorily during the seasonally high storage impoundment, creek and diversion channel flow conditions.

2.2 Secondary Dam

- In general, the Secondary Dam and Secondary Tailings Pond standpipe piezometer water levels indicate that the current water level results are plotting within the historic range and the water levels are consistently level or are on a downward trend based on the historical data. Since our last reporting in Golder 2011b, current water level trend conditions experienced a slight increase at P03-01, remain level at P03-02 and three instruments (P81-06, 07 and 08) remain dry.
- It is recommended that DES should continue to monitor the current active list of Secondary Dam piezometers.
- It is recommended that the longitudinal tension cracks observed upstream of the tailings impoundment in May 2011 should be re-graded to minimize surface water infiltration and monitored for future ground movements.

2.3 Intermediate Dam

- After seasonal winter shut down last fall of decant and pumpback water operations, DES has resumed pumping and is proceeding to draw down the Intermediate Pond water level upstream of the Intermediate Dam from a peak water level of about El. 1045.8 m achieved in April 2011. The current IP water level of about 1044.8 m is about 1.8 m above the target water level of 1043 m. The lower operating water level conditions in the Intermediate Pond should improve the long term stability and performance of the Intermediate Dam.
- The current spring operating impoundment water level conditions upstream of the Intermediate Dam and Cross Valley Dam are located within the design operating levels, as defined by the corresponding rip rap surfaces. It is recommended that once the operating water levels are drawn down below the rip rap surfaces, DES should monitor the dam slope conditions on a regular basis for potential soil erosion of the upstream shell material below the rip rap surfaces and rip rap degradation. Any changes to the current slope conditions should be brought to the attention of YGEMR.
- The observed change in soil erosion conditions on the downstream slope of the Intermediate Dam between the September 2010 and May 2011 dam inspections was minimal. It is recommended that DES should continue to monitor the soil erosion conditions observed on the downstream slope of the Intermediate Dam for potential further erosion, slope creep and/or possible slope instability. The work to regrade the observed unstable soil conditions on the downstream slope of the Intermediate Dam should be reviewed by

YGEMR and consideration should be given to addressing the observed instability conditions within the next few years.

- As part of the geotechnical review of the Intermediate Dam conditions, it is recommended that short term and long term dam remediation measures are identified. As input for further geotechnical evaluation of the Intermediate Dam downstream slope conditions, the following items should be considered:
 - The actual cause of the instabilities cannot be determined without further geotechnical testing and analysis.
 - In the short term, consideration should be given to delineate the extent of the existing soil erosion conditions and monitor the downstream slope for any potential future change in slope conditions.
 - DES should continue to monitor the collection of unstable sediment deposition conditions overlying the existing drainage measures on the lower bench of the Intermediate Dam.
- Based on available site data information, the majority of current standpipe and pneumatic piezometer results at the Intermediate Dam indicate that the current results are plotting within level to downward trending historical conditions. In general, DES should continue to monitor the current active list of Intermediate Dam piezometers.
- Subject to YGEMR direction, DES should consider discontinuing the monitoring of three (3) Intermediate Dam standpipe piezometers (BH94-IDC-1, BKS04-06 and BKS04-07) after a reasonable time period of consistent dry response.

2.4 Cross Valley Dam

- Similar to the seasonal IP operating pond conditions, the Cross Valley Pond water level upstream of the Cross Valley Dam achieved a seasonal high of about El. 1029.2 m in late March 2011 and is currently drawn down to about El. 1027.5 m, which is about 0.5 m above the target level of 1027 m. It is desirable to maintain low operating water level conditions in the Cross Valley Pond to improve the long term stability and performance of the Cross Valley Dam.
- It is recommended that the longitudinal tension cracks observed on the crest of the Cross Valley Dam in May 2011 should be re-graded to minimize surface water infiltration and monitored for future ground movements.
- Based on current site data information, the majority of standpipe and pneumatic piezometer results at the Cross Valley Dam indicate that the current results are plotting within level to downward trending historical conditions. DES should continue to monitor the current active list of Cross Valley Dam piezometers.
- Based on available site data information, the thermistor results at the two Cross Valley Dam (BH88-4 and CVDC-6) locations indicate that the historic thermal ground conditions remain warm to the bottom of the monitoring depths at both locations during late fall monitoring. Cold thermal results were observed at BH88-4 in June 2011. DES should obtain fall readings from both thermistor locations for geotechnical review.
- Subject to YGEMR direction, DES should consider discontinuing the monitoring the Cross Valley Dam thermistors after a reasonable time period of consistent seasonally warm response.

2.5 Channels and Creeks

- In general, the rock armour and lined channel conditions observed in the Rose Creek and the Faro Creek Diversion Channels during high flow conditions observed in May 2011 appear stable and are performing satisfactorily. It is recommended that visual monitoring for any change in rip rap and/or seepage loss conditions are recorded and instrumentation monitoring activities are continued.
- Based on pit slope assessment results as summarized in Golder (2011c), it is understood that ongoing performance of the Faro Creek Diversion Channel (FCDC) is subject to the long term stability of the Faro Pit East Wall. During the last 10 years of pit slope inspections carried out by Golder, some seepage and erosion is observed at the overburden-bedrock interface. It is concluded that the undermining of the FCDC appears to be progressing at a very slow to negligible rate.
- The vegetation removal activities, which were completed within the Rose Creek Diversion Channel by DES in 2010, appear reasonable during high flow conditions in May 2011 and should be inspected again during low flow conditions.
- It is recommended that DES repair the guardhouse area well access road crossing of the North Wall Interceptor Ditch during low flow conditions to improve the channel flow conditions, re-grade the access road and shoulder ditches, place a cover layer of small sized rip rap material at channel tie-in locations and hydro-seed the graded slopes to minimize future sediment erosion.
- Based on current site data information, the pneumatic piezometer results at the Diversion Canal Dyke indicate that the current results are plotting within level to downward trending historical conditions. DES should continue to monitor the current active list of Diversion Canal Dyke piezometers.
- DES was unable to provide Golder with historic displacement data or current reduced inclinometer data from the Diversion Canal Backslope locations for geotechnical review.
- Based on available site data information, the historical thermistor results along the Diversion Canal Dyke, Spoil Pipe and Back Slope locations indicate that the thermal ground conditions remain sub-zero within the monitoring depths at most locations, except at CD-10, CD-26, BGC05-04 and SP-2 where warm thermal ground conditions are reported to the depth of the installations. The historical active layer at the instrument locations range between about 1 m and 9 m or greater below existing ground surface.
- Although current thermistor results obtained in June/July 2011 indicate cold thermal conditions were observed at most Diversion Canal Dyke thermistor locations, it is recommended that DES confirm the thermal conditions in late fall to assess the annual seasonal thermal conditions.

2.6 Summary Comments

- It is recommended that DES continue to monitor the structures by way of visual inspections and collection of instrumentation readings on a regular basis and in accordance with the current monitoring schedule.
- It is recommended that the upstream slope, head pond and downstream drainage conditions are monitored at the Faro Creek and K8 Creek Rock Drains locations for potential change in embankment slope erosion, blocked and/or changed drainage conditions. Any changes observed should be reported to YGEMR.
- It is recommended that an annual inspection of the Faro Mine Complex infrastructure including tailings dams and diversion channels, should be carried out this fall by a geotechnical engineer to assess the geotechnical performance of the structures during the annual seasonally low flow and runoff conditions.
- It is understood that as part of future closure planning activities, YGEMR will consider the long term repairs that may be required for the SD, CVD and ID structures, instrumentation upgrades and/or replacements and modifications to the existing instrumentation monitoring program. These additional items should be considered by YGEMR so direction can be given to the existing care and maintenance monitoring program supplied by DES.

The above information is based on our site observations and client discussions during the May 2011 dam inspection and April to July 2011 data review of the information provided by DES.

3.0 CLOSURE

We trust that the above information is sufficient for your present needs. We would be please to review the result of our data review with your project team at your convenience. Should you have any questions or require additional information, please do not hesitate to contact us.

Yours very truly,

GOLDER ASSOCIATES LTD.

ORIGINAL SIGNED AND SEALED

W.J. (Bill) Purdy, P.Eng. (YT)
Associate, Geotechnical Engineer

WJP/JAH/cf

CC: Jon Bronson, DES
Jeff Bailey, Keyeh Nejeih Golder

Appendices: Appendix A
Appendix B

ORIGINAL SIGNED

John A. Hull, P.Eng. (YT)
Principal, Geotechnical Engineer

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REFERENCES

- Golder Associates Ltd., 2011a. Faro Mine Complex – Spring Dam Inspection, Faro, Yukon. Daily Field Report dated May 25 and 26, 2011, Report No. 10-1427-0032, Document No. 004, submitted to Denison Environmental Services, dated June 27, 2011.
- Golder Associates Ltd., 2011b. 2010 Annual Geotechnical Dam Inspection, Faro Mine Complex, Faro, Yukon. Report No. 10-1427-0032, Document No. 002, submitted to Denison Environmental Services, dated February 28, 2011.
- Golder Associates Ltd., 2011c. 2010 Faro Pit Slope Stability Monitoring Data Review, Faro Mine Complex, Faro, Yukon. Report No. 09-1426-0019, submitted to Denison Environmental Services, dated February 23, 2011.

APPENDIX A

**Faro Mine Complex, April/July 2011 Site Data as prepared by
Denison Environmental Services**



Faro Pit Elevations

Date	Elevation (m asl NAD83)	Freeboard (m asl NAD83)	Comments
15-Jan-04	1141.695	2.646	
30-Jan-04	1141.796	2.545	
15-Feb-04	1141.884	2.457	
29-Feb-04	1141.945	2.396	
15-Mar-04	1142.036	2.304	
31-Mar-04	1142.125	2.216	
15-Apr-04	1142.186	2.155	
30-Apr-04	1142.274	2.067	
15-May-04	1142.466	1.875	
18-May-04	1142.515	1.826	
23-May-04	1142.475	1.865	
25-May-04	1142.436	1.905	
31-May-04	1142.326	2.015	
07-Jun-04	1142.271	2.070	
14-Jun-04	1142.195	2.146	
21-Jun-04	1142.061	2.280	
28-Jun-04	1142.094	2.246	
05-Jul-04	1142.146	2.195	
09-Jul-04	1142.180	2.161	
12-Jul-04	1142.195	2.146	
19-Jul-04	1142.067	2.274	
26-Jul-04	1142.116	2.225	
31-Jul-04	1142.155	2.185	
15-Aug-04	1142.241	2.100	
23-Aug-04	1142.271	2.070	
31-Aug-04	1142.033	2.307	
07-Sep-04	1141.860	2.481	
15-Sep-04	1141.689	2.652	
18-Sep-04	1141.680	2.661	
30-Sep-04	1141.750	2.591	
15-Oct-04	1141.857	2.484	
31-Oct-04	1141.951	2.390	
15-Nov-04	1142.039	2.301	
30-Nov-04	1142.125	2.216	
15-Dec-04	1142.235	2.106	
31-Dec-04	1142.335	2.006	
15-Jan-05	1142.414	1.926	
31-Jan-05	1142.484	1.856	
15-Feb-05	1142.558	1.783	
15-Mar-05	1142.675	1.666	
31-Mar-05	1142.747	1.594	
15-Apr-05	1142.805	1.536	
30-Apr-05	1142.960	1.381	
07-May-05	1142.975	1.366	
15-May-05	1143.012	1.329	
18-May-05	1143.061	1.280	
31-May-05	1142.936	1.405	
15-Jun-05	1142.789	1.551	
20-Jun-05	1142.704	1.637	
27-Jun-05	1142.585	1.756	
30-Jun-05	1142.545	1.795	
05-Jul-05	1142.436	1.905	
11-Jul-05	1142.341	1.999	
18-Jul-05	1142.225	2.115	
25-Jul-05	1142.094	2.246	
31-Jul-05	1141.994	2.347	
01-Aug-05	1141.975	2.365	
08-Aug-05	1141.835	2.505	
15-Aug-05	1141.689	2.652	
22-Aug-05	1141.549	2.792	
29-Aug-05	1141.424	2.917	
31-Aug-05	1141.390	2.950	
05-Sep-05	1141.287	3.054	
12-Sep-05	1141.156	3.185	
15-Sep-05	1141.095	3.246	
19-Sep-05	1141.015	3.325	
30-Sep-05	1141.110	3.231	
13-Oct-05	1141.195	3.146	
17-Oct-05	1141.217	3.124	
31-Oct-05	1141.305	3.036	
15-Nov-05	1141.424	2.917	
30-Nov-05	1141.530	2.810	
15-Dec-05	1141.616	2.725	
31-Dec-05	1141.701	2.640	
15-Jan-06	1141.780	2.560	
31-Jan-06	1141.866	2.475	

Faro Pit Elevations

Date	Elevation (m asl NAD83)	Freeboard (m asl NAD83)	Comments
15-Feb-06	1141.951	2.390	
28-Feb-06	1142.021	2.320	
15-Mar-06	1142.094	2.246	
30-Mar-06	1142.164	2.176	
16-Apr-06	1142.244	2.097	
30-Apr-06	1142.305	2.036	
15-May-06	1142.442	1.899	
31-May-06	1142.634	1.707	
15-Jun-06	1142.536	1.804	
30-Jun-06	1142.335	2.006	
15-Jul-06	1142.085	2.256	
31-Jul-06	1141.787	2.554	
15-Aug-06	1141.524	2.816	
22-Aug-06	1141.369	2.972	
31-Aug-06	1141.201	3.139	
08-Sep-06	1141.046	3.295	
30-Sep-06	1141.226	3.115	
15-Oct-06	1141.311	3.030	
31-Oct-06	1141.415	2.926	
15-Nov-06	1141.509	2.832	
30-Nov-06	1141.594	2.746	
15-Dec-06	1141.665	2.676	
31-Dec-06	1141.735	2.606	
15-Jan-07	1141.805	2.536	
31-Jan-07	1141.866	2.475	
15-Feb-07	1141.915	2.426	
28-Feb-07	1141.965	2.376	
15-Mar-07	1142.015	2.326	
31-Mar-07	1142.079	2.262	
15-Apr-07	1142.146	2.195	
30-Apr-07	1142.235	2.106	
15-May-07	1142.375	1.966	
22-May-07	1142.384	1.957	
28-May-07	1142.375	1.966	
31-May-07	1142.375	1.966	
04-Jun-07	1142.372	1.969	
11-Jun-07	1142.384	1.957	
14-Jun-07	1142.390	1.951	
18-Jun-07	1142.381	1.960	
30-Jun-07	1142.314	2.027	
09-Jul-07	1142.241	2.100	
15-Jul-07	1142.140	2.201	
23-Jul-07	1142.015	2.326	
31-Jul-07	1141.875	2.466	
15-Aug-07	1141.616	2.725	
31-Aug-07	1141.314	3.027	
10-Sep-07	1141.131	3.210	
11-Sep-07	1141.140	3.200	Down for Season @ 11.45 AM
15-Sep-07	1141.255	3.085	
30-Sep-07	1141.330	3.011	
15-Oct-07	1141.454	2.886	
31-Oct-07	1141.588	2.752	
15-Nov-07	1141.704	2.637	
30-Nov-07	1141.802	2.539	
15-Dec-07	1141.896	2.444	
31-Dec-07	1141.988	2.353	
15-Jan-08	1142.064	2.277	
31-Jan-08	1142.155	2.185	
15-Feb-08	1142.215	2.126	
29-Feb-08	1142.285	2.056	
15-Mar-08	1142.344	1.996	
31-Mar-08	1142.411	1.929	
15-Apr-08	1142.445	1.896	
30-Apr-08	1142.515	1.826	Faro pit started up April 29/08 @ 12.00 Noon
15-May-08	1142.494	1.847	
31-May-08	1142.396	1.945	
15-Jun-08	1142.189	2.152	
30-Jun-08	1141.966	2.374	
15-Jul-08	1141.851	2.490	
31-Jul-08	1141.677	2.664	
15-Aug-08	1141.506	2.835	
31-Aug-08	1141.384	2.957	
11-Sep-08	1141.207	3.133	
15-Sep-08	1141.146	3.194	
21-Sep-08	1141.065	3.276	
30-Sep-08	1141.195	3.146	

Faro Pit Elevations

Date	Elevation (m asl NAD83)	Freeboard (m asl NAD83)	Comments
15-Oct-08	1141.384	2.957	
31-Oct-08	1141.564	2.777	
15-Nov-08	1141.735	2.606	
30-Nov-08	1141.845	2.496	
15-Dec-08	1141.966	2.374	
31-Dec-08	1142.064	2.277	
15-Jan-09	1142.149	2.192	
31-Jan-09	1142.256	2.085	
14-Feb-09	1142.335	2.006	
26-Feb-09	1142.396	1.945	
15-Mar-09	1142.480	1.861	
31-Mar-09	1142.550	1.791	
15-Apr-09	1142.620	1.721	
30-Apr-09	1142.710	1.631	
15-May-09	1142.850	1.491	
31-May-09	1142.870	1.471	
15-Jun-09	1142.840	1.501	
30-Jun-09	1142.665	1.675	
13-Jul-09	1142.505	1.836	
20-Jul-09	1142.435	1.906	
27-Jul-09	1142.320	2.021	
3-Aug-09	1142.200	2.141	
7-Aug-09	1142.185	2.156	
10-Aug-09	1142.165	2.176	
18-Aug-09	1142.065	2.276	
24-Aug-09	1142.020	2.321	
31-Aug-09	1141.845	2.496	
7-Sep-09	1141.675	2.666	
14-Sep-09	1141.520	2.821	
18-Sep-09	1141.415	2.926	
19-Sep-09	1141.380	2.961	
20-Sep-09	1141.340	3.001	
21-Sep-09	1141.295	3.046	
24-Sep-09	1141.200	3.141	elevation taken at 450pm = 46.465m from top of well
29-Sep-09	1141.240	3.101	Elevation measured on Sep 28 but dated Sep 29 for summary
1-Oct-09	1141.215	3.126	Faro Barge off @ 3:30pm for season
5-Oct-09	1141.240	3.101	
9-Oct-09	1141.270	3.071	
12-Oct-09	1141.285	3.056	
19-Oct-09	1141.365	2.976	
26-Oct-09	1141.500	2.841	
2-Nov-09	1141.645	2.696	
9-Nov-09	1141.679	2.662	
16-Nov-09	1141.745	2.596	
23-Nov-09	1141.785	2.555	
30-Nov-09	1141.825	2.516	
7-Dec-09	1141.845	2.496	
14-Dec-09	1141.906	2.434	
4-Jan-10	1142.000	2.341	
18-Jan-10	1142.095	2.245	
1-Feb-10	1142.185	2.156	
16-Feb-10	1142.280	2.061	
1-Mar-10	1142.315	2.026	
15-Mar-10	1142.340	2.001	
29-Mar-10	1142.530	1.811	
5-Apr-10	1142.561	1.780	

Faro Pit Elevations

Date	Elevation (m asl NAD83)	Freeboard (m asl NAD83)	Comments
12-Apr-10	1142.601	1.739	
19-Apr-10	1142.646	1.695	
26-Apr-10	1142.647	1.694	
3-May-10	1142.656	1.685	
10-May-10	1142.625	1.716	
17-May-10	1142.609	1.732	
24-May-10	1142.566	1.775	
31-May-10	1142.461	1.880	
7-Jun-10	1142.332	2.009	
14-Jun-10	1142.217	2.123	
21-Jun-10	1142.083	2.258	
28-Jun-10	1141.941	2.400	
5-Jul-10	1141.822	2.519	
12-Jul-10	1141.673	2.667	
19-Jul-10	1141.487	2.853	
26-Jul-10	1141.314	3.027	
2-Aug-10	1141.168	3.173	
9-Aug-10	1141.042	3.299	
16-Aug-10	1140.894	3.447	
23-Aug-10	1140.767	3.573	
27-Aug-10	1140.680	3.661	Faro pit pump shutdown at 12:45 PM for the season
30-Aug-10	1140.697	3.644	
6-Sep-10	1140.770	3.570	
13-Sep-10	1140.810	3.530	
20-Sep-10	1140.850	3.491	
27-Sep-10	1140.869	3.472	
4-Oct-10	1140.941	3.399	A new static line was used due to possible tape stretch in the old one.
12-Oct-10	1140.966	3.374	
25-Oct-10	1141.061	3.280	
8-Nov-10	1141.086	3.255	new static line used.
22-Nov-10	1141.164	3.177	new static line used.
6-Dec-10	1141.254	3.087	old static line used
16-Dec-10	1141.316	3.025	old static line used
3-Jan-11	1141.451	2.890	old static line used
17-Jan-11	1141.529	2.812	old static line used
31-Jan-11	1141.616	2.725	new static line used
14-Feb-11	1141.702	2.639	new static line used
28-Feb-11	1141.832	2.509	heron static line used
7-Mar-11	1141.868	2.473	heron static line used

Intermediate Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
06-Jan-04	1047.129	0.571	
13-Feb-04	1047.195	0.505	
16-Apr-04	1047.325	0.375	
30-Apr-04	1046.544	1.156	
03-May-04	1046.615	1.085	
04-May-04	1046.650	1.050	
06-May-04	1046.615	1.085	
07-May-04	1046.590	1.110	
11-May-04	1046.505	1.195	
16-May-04	1046.540	1.160	
21-May-04	1046.468	1.232	
28-May-04	1046.348	1.352	
02-Jun-04	1046.190	1.510	
07-Jun-04	1046.152	1.548	
17-Jun-04	1045.790	1.910	
21-Jun-04	1045.740	1.960	
08-Jul-04	1045.860	1.840	
16-Jul-04	1045.972	1.728	
30-Jul-04	1046.130	1.570	
12-Aug-04	1046.235	1.465	
19-Aug-04	1046.272	1.428	
17-Sep-04	1046.600	1.100	
24-Sep-04	1046.655	1.045	
05-Oct-04	1046.745	0.955	
08-Oct-04	1046.780	0.920	
14-Oct-04	1046.822	0.878	
21-Oct-04	1046.855	0.845	
04-Nov-04	1046.935	0.765	
17-Nov-04	1046.980	0.720	
24-Nov-04	1047.005	0.695	
01-Dec-04	1047.035	0.665	
15-Dec-04	1047.090	0.610	
22-Dec-04	1047.110	0.590	
04-Jan-05	1047.153	0.547	
17-Jan-05	1047.180	0.520	
25-Jan-05	1047.185	0.515	
03-Feb-05	1047.210	0.490	
10-Feb-05	1047.220	0.480	
17-Feb-05	1047.232	0.468	
24-Feb-05	1047.250	0.450	
03-Mar-05	1047.250	0.450	
10-Mar-05	1047.268	0.432	
07-Apr-05	1047.270	0.430	
22-Apr-05	1047.271	0.429	started treatment
25-Apr-05	1047.195	0.505	Stopped treatment (assumed)
26-Apr-05	1047.230	0.470	
04-May-05	1047.280	0.420	
05-May-05	1047.280	0.420	started treatment (assumed)
10-May-05	1047.208	0.492	
24-May-05	1047.012	0.688	
01-Jun-05	1046.810	0.890	
06-Jun-05	1046.690	1.010	
08-Jun-05	1046.652	1.048	
13-Jun-05	1046.490	1.210	
20-Jun-05	1046.321	1.379	
27-Jun-05	1046.042	1.658	
29-Jun-05	1045.975	1.725	Stopped treatment
30-Jun-05	1045.995	1.705	
05-Jul-05	1046.060	1.640	
11-Jul-05	1046.212	1.488	
18-Jul-05	1046.385	1.315	
26-Jul-05	1046.500	1.200	
01-Aug-05	1046.565	1.135	
08-Aug-05	1046.634	1.066	
15-Aug-05	1046.670	1.030	
22-Aug-05	1046.717	0.983	
29-Aug-05	1046.780	0.920	start treatment?
07-Sep-05	1046.516	1.184	
12-Sep-05	1046.370	1.330	
19-Sep-05	1046.170	1.530	
22-Sep-05	1046.090	1.610	

Intermediate Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
26-Sep-05	1046.001	1.699	Stopped treatment
03-Oct-05	1046.113	1.587	
12-Oct-05	1046.180	1.520	
17-Oct-05	1046.230	1.470	
24-Oct-05	1046.270	1.430	
31-Oct-05	1046.320	1.380	
16-Nov-05	1046.438	1.262	
30-Nov-05	1046.530	1.170	
15-Dec-05	1046.540	1.160	
31-Dec-05	1046.556	1.144	assumed increase
17-Jan-06	1046.697	1.003	
31-Jan-06	1046.723	0.977	
15-Feb-06	1046.800	0.900	
20-Feb-06	1046.820	0.880	Started pumping
23-Feb-06	1046.982	0.718	
27-Feb-06	1047.150	0.550	
01-Mar-06	1047.255	0.445	
02-Mar-06	1047.308	0.392	
04-Mar-06	1047.400	0.300	
06-Mar-06	1047.480	0.220	
08-Mar-06	1047.550	0.150	
09-Mar-06	1047.575	0.125	Stopped pumping
20-Mar-06	1047.550	0.150	
30-Mar-06	1047.525	0.175	
06-Apr-06	1047.535	0.165	
18-Apr-06	1047.570	0.130	
24-Apr-06	1047.430	0.270	
01-May-06	1047.258	0.442	
03-May-06	1047.190	0.510	
08-May-06	1047.220	0.480	Stopped pumping
11-May-06	1047.287	0.413	
15-May-06	1047.422	0.278	Started pumping
17-May-06	1047.432	0.268	
23-May-06	1047.335	0.365	
29-May-06	1047.208	0.492	
01-Jun-06	1047.125	0.575	
05-Jun-06	1047.060	0.640	
12-Jun-06	1046.848	0.852	
21-Jun-06	1046.630	1.070	
27-Jun-06	1046.512	1.188	
04-Jul-06	1046.345	1.355	
10-Jul-06	1046.180	1.520	
13-Jul-06	1046.078	1.622	
19-Jul-06	1045.862	1.838	
24-Jul-06	1045.651	2.049	
25-Jul-06	1045.584	2.116	
27-Jul-06	1045.541	2.159	
29-Jul-06	1045.465	2.235	Final Elev. Stopped running
31-Jul-06	1045.480	2.220	
07-Aug-06	1045.580	2.120	
14-Aug-06	1045.690	2.010	
22-Aug-06	1045.771	1.929	
28-Aug-06	1045.832	1.868	
05-Sep-06	1045.950	1.750	
12-Sep-06	1046.050	1.650	
19-Sep-06	1046.115	1.585	very windy
26-Sep-06	1046.180	1.520	
10-Oct-06	1046.295	1.405	
17-Oct-06	1046.338	1.362	80% ice covered
24-Oct-06	1046.400	1.300	
31-Oct-06	1046.435	1.265	5-1/2" ice water flush
07-Nov-06	1046.460	1.240	10" ice 1/2" below ice
14-Nov-06	1046.480	1.220	13-1/2" ice 3/4" below ice
21-Nov-06	1046.500	1.200	16-1/2" ice 3/4" below ice
07-Dec-06	1046.550	1.150	13-1/2" ice 1/2" below new hole
14-Dec-06	1046.570	1.130	14-1/2" ice water flush
21-Dec-06	1046.597	1.103	14-1/2" ice, 1" water over
04-Jan-07	1046.620	1.080	22" ice, 1/4" water over
18-Jan-07	1046.640	1.060	23-1/2" ice, water flush
01-Feb-07	1046.678	1.022	26" ice, 1-1/2" water over
15-Feb-07	1046.717	0.983	26-1/2" ice, 1" water over

Intermediate Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
08-Mar-07	1046.660	1.040	31-1/2" ice, 1-1/4" water over
29-Mar-07	1046.610	1.090	31" ice, 1" water over
12-Apr-07	1046.723	0.977	No measurement, Not safe
18-Apr-07	1046.715	0.985	Started the barge up @ 11: AM Pumping to the mill
23-Apr-07	1046.790	0.910	No measurement, Not safe
26-Apr-07	1046.830	0.870	No measurement, Not safe
30-Apr-07	1046.800	0.900	No measurement, Not safe
03-May-07	1046.800	0.900	No measurement, Not safe
07-May-07	1046.812	0.888	No measurement, Not safe
10-May-07	1046.809	0.891	No measurement, Not safe
14-May-07	1046.772	0.928	No measurement, Not safe
17-May-07	1046.795	0.905	No measurement, Not safe
22-May-07	1046.781	0.919	No measurement, Not safe
24-May-07	1046.705	0.995	Ice all off Pond
28-May-07	1046.638	1.062	
31-May-07	1046.570	1.130	
04-Jun-07	1046.490	1.210	
11-Jun-07	1046.341	1.359	
14-Jun-07	1046.287	1.413	
18-Jun-07	1046.211	1.489	
21-Jun-07	1046.113	1.587	
25-Jun-07	1046.120	1.580	
28-Jun-07	1046.120	1.580	Very windy
03-Jul-07	1046.112	1.588	
05-Jul-07	1046.088	1.612	
09-Jul-07	1046.030	1.670	Windy
12-Jul-07	1046.037	1.663	
19-Jul-07	1046.085	1.615	
26-Jul-07	1046.082	1.618	
02-Aug-07	1046.142	1.558	
09-Aug-07	1046.110	1.590	
16-Aug-07	1046.140	1.560	
23-Aug-07	1046.152	1.548	
27-Aug-07	1046.150	1.550	Down for the season @ 7.45 AM
30-Aug-07	1046.191	1.509	very windy
06-Sep-07	1046.268	1.432	
13-Sep-07	1046.375	1.325	
27-Sep-07	1046.543	1.157	
15-Oct-07	1046.689	1.011	
18-Oct-07	1046.710	0.990	
25-Oct-07	1046.736	0.964	
08-Nov-07	1046.831	0.869	Ice 8" thick, Water flush
22-Nov-07	1046.890	0.810	Ice 11" thick, Water flush
06-Dec-07	1046.920	0.780	Ice 14-1/2" thick, Water flush
03-Jan-08	1047.028	0.672	Ice 16-1/2" thick, Water 1/2' above
16-Jan-08	1047.058	0.642	Ice 20" thick, Water 3/4' above
13-Feb-08	1047.146	0.554	Ice 22-1/2" thick, Water flush
05-Mar-08	1047.216	0.484	Ice 23" thick, Water 3-1/4" over
20-Mar-08	1047.247	0.453	Ice 24" thick, Water 4" over
03-Apr-08	1047.268	0.432	Ice 27" thick, Water flush
21-Apr-08	1047.220	0.480	No measurement, Not safe
24-Apr-08	1047.155	0.545	No measurement, Not safe
28-Apr-08	1047.092	0.608	No measurement, Not safe. Barge down on the 30th for service from 8.30 am to
05-May-08	1047.050	0.650	No measurement, Not safe Syphon 1/3 open
06-May-08	1047.043	0.657	No measurement, Not safe Syphon 1/2 open
08-May-08	1047.008	0.692	No measurement, not safe on the ice, Syphon full open
12-May-08	1047.040	0.660	No measurement, not safe on the ice, Syphon full open
20-May-08	1046.727	0.973	
22-May-08	1046.647	1.053	
26-May-08	1046.473	1.227	
28-May-08	1046.394	1.306	
02-Jun-08	1046.102	1.598	
05-Jun-08	1045.962	1.738	very windy
11-Jun-08	1046.040	1.660	Windy
18-Jun-08	1046.088	1.612	
24-Jun-08	1046.169	1.531	
26-Jun-08	1046.184	1.516	Sunny/cloudy
02-Jul-08	1046.248	1.452	
07-Jul-08	1046.266	1.434	
17-Jul-08	1046.435	1.265	
24-Jul-08	1046.530	1.170	

Intermediate Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
14-Aug-08	1046.627	1.073	
21-Aug-08	1046.681	1.019	
28-Aug-08	1046.780	0.920	Stopped pumping on Aug. 27/08 @ 11.00AM
02-Sep-08	1046.708	0.992	windy
11-Sep-08	1046.565	1.135	
15-Sep-08	1046.478	1.222	
18-Sep-08	1046.440	1.260	
22-Sep-08	1046.285	1.415	
25-Sep-08	1046.197	1.503	
29-Sep-08	1046.095	1.605	
02-Oct-08	1046.023	1.677	Windy
23-Oct-08	1046.432	1.268	
12-Nov-08	1046.663	1.037	Ice is 8.5" thick, Water is flush
04-Dec-08	1046.860	0.840	Ice 11" thick, Water flush
22-Jan-09	1047.020	0.680	Ice 31.5 " thick, Water is 2.5 " below
26-Feb-09	1047.145	0.555	Ice is 33.5" thick, Water is flush, Final Pond elevation for Deloitte & Touche
24-Mar-09	1047.223	0.477	Barge pump to tailings started @ approx 1:00PM - Ice not measured, first pond
27-Mar-09	1047.151	0.549	7.2 cm down from previous
30-Mar-09	1047.111	0.589	4 cm down from previous
02-Apr-09	1047.091	0.609	2 cm down from previous
06-Apr-09	1047.123	0.577	3.2 cm up from previous
08-Apr-09	1047.135	0.565	1.2 cm up from previous
13-Apr-09	1047.146	0.554	F.T.P online at 5:00 PM, 1.1 cm up from previous
16-Apr-09	1047.100	0.600	F.T.P down @ 6:15 PM on April 18, 09 due to power outage, back online @ 6:30
20-Apr-09	1047.097	0.603	
23-Apr-09	1047.090	0.610	
27-Apr-09	1047.022	0.678	
30-Apr-09	1047.031	0.669	0.9 cm up from previous
04-May-09	1047.271	0.429	24 cm up from previous
07-May-09	1047.328	0.372	19 cm up from previous
11-May-09	1047.241	0.459	8.7 cm down from previous
13-May-09	1047.191	0.509	1.9 cm down from previous
15-May-09	1047.109	0.591	
19-May-09	1046.937	0.763	
24-May-09	1046.821	0.879	
31-May-09	1046.680	1.020	
8-Jun-09	1046.495	1.205	
13-Jun-09	1046.428	1.272	
29-Jun-09	1046.480	1.220	
30-Jun-09	1046.508	1.192	
13-Jul-09	1046.410	1.290	
20-Jul-09	1046.338	1.362	
27-Jul-09	1046.299	1.401	
3-Aug-09	1046.242	1.458	Staff Gauge installed by barge @ 2:30pm - Set to 1 meter
7-Aug-09	1046.252	1.448	
10-Aug-09	1046.285	1.415	
18-Aug-09	1046.327	1.373	Staff Gauge: 0.805m
24-Aug-09	1046.448	1.252	Staff Gauge: 0.930m
31-Aug-09	1046.531	1.169	Staff Gauge: 1.005m
3-Sep-09	1046.511	1.189	
7-Sep-09	1046.475	1.225	Staff Gauge: 0.940m
10-Sep-09	1046.348	1.352	Staff Gauge uninstalled - oops
14-Sep-09	1046.259	1.441	
19-Sep-09	1046.081	1.619	
21-Sep-09	1046.024	1.676	DVTP offline on Sep 24, 2009
29-Sep-09	1046.048	1.652	
1-Oct-09	1045.992	1.708	
5-Oct-09	1046.071	1.629	
9-Oct-09	1046.013	1.687	
12-Oct-09	1045.919	1.781	Elevation shot on Oct 13, 2009 - Pump down @ 6:30am
18-Oct-09	1045.942	1.758	Elevation shot at 4:40pm
19-Oct-09	1045.907	1.793	Elevation shot at 9:05am
20-Oct-09	1045.903	1.797	Elevation shot at 9:10am
21-Oct-09	1045.891	1.809	Elevation shot at 9:10am
22-Oct-09	1045.890	1.810	Elevation shot at 9:30am
23-Oct-09	1045.890	1.810	Elevation shot at 9:10 am
24-Oct-09	1045.881	1.819	Elevation shot at 9:50am
26-Oct-09	1045.854	1.846	Elevation shot at 12:26pm
27-Oct-09	1045.826	1.874	Elevation shot at 10:15am
28-Oct-09	1045.814	1.886	Elevation shot at 11:02am
29-Oct-09	1045.799	1.901	Elevation shot at 10:55am

Intermediate Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
30-Oct-09	1045.782	1.918	Elevation shot at 10:53am
31-Oct-09	1045.766	1.934	Elevation shot at 11:01am
1-Nov-09	1045.755	1.945	Elevation shot at 8:35am
2-Nov-09	1045.738	1.962	Elevation shot at 11:09am
9-Nov-09	1045.786	1.914	Elevation shot at 8:50am
16-Nov-09	1045.896	1.804	
23-Nov-09	1045.944	1.756	
30-Nov-09	1046.029	1.671	
7-Dec-09	1046.089	1.611	Elevation shot at 1:35pm
14-Dec-09	1046.143	1.557	
4-Jan-10	1046.165	1.535	
18-Jan-10	1046.331	1.369	Elevation shot on January 19th, 2010
20-Jan-10	1046.181	1.519	Elevation reshot after Peg Test
1-Feb-10	1046.164	1.536	Elevation reshot on February 2, 2010 - 1046.159. Shots suspect due to leve
16-Feb-10	1046.176	1.524	
1-Mar-10	1046.292	1.408	
15-Mar-10	1046.394	1.306	
29-Mar-10	1046.498	1.202	
5-Apr-10	1046.536	1.164	
12-Apr-10	1046.428	1.272	
16-Apr-10	1046.330	1.370	
19-Apr-10	1046.227	1.473	very windy
21-Apr-10	1046.447	1.253	
26-Apr-10	1046.482	1.218	High wind conditions
3-May-10	1046.555	1.145	
10-May-10	1046.424	1.276	
17-May-10	1046.269	1.431	
24-May-10	1046.128	1.572	
31-May-10	1045.940	1.760	
7-Jun-10	1045.763	1.937	
14-Jun-10	1045.574	2.126	
21-Jun-10	1045.388	2.312	
28-Jun-10	1045.185	2.515	
5-Jul-10	1045.037	2.663	
12-Jul-10	1044.854	2.846	
19-Jul-10	1044.656	3.044	
26-Jul-10	1044.454	3.246	
2-Aug-10	1044.285	3.415	
9-Aug-10	1044.110	3.590	
16-Aug-10	1043.910	3.790	
23-Aug-10	1043.754	3.946	
30-Aug-10	1043.545	4.155	
6-Sep-10	1043.726	3.974	
13-Sep-10	1043.818	3.882	
20-Sep-10	1043.998	3.702	
27-Sep-10	1044.151	3.549	
4-Oct-10	1044.269	3.431	
12-Oct-10	1044.377	3.323	
18-Oct-10	1044.467	3.233	
25-Oct-10	1044.543	3.157	
1-Nov-10	1044.597	3.103	
8-Nov-10	1044.690	3.010	
15-Nov-10	1044.745	2.955	
22-Nov-10	1044.814	2.886	
29-Nov-10	1044.896	2.804	
6-Dec-10	1044.976	2.724	
13-Dec-10	1045.020	2.680	
16-Dec-10	1045.047	2.653	
3-Jan-11	1045.195	2.505	
10-Jan-11	1045.247	2.453	
17-Jan-11	1045.281	2.419	
24-Jan-11	1045.352	2.348	
31-Jan-11	1045.405	2.295	
7-Feb-11	1045.447	2.253	
14-Feb-11	1045.490	2.210	
21-Feb-11	1045.531	2.169	
28-Feb-11	1045.561	2.139	
7-Mar-11	1045.594	2.106	

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
12-Feb-04	1030.329	0.871	
23-Feb-04	1030.230	0.970	
29-Feb-04	1030.065	1.135	
04-Mar-04	1030.038	1.162	
08-Mar-04	1029.715	1.485	
19-Apr-04	1030.165	1.035	
22-Apr-04	1030.300	0.900	
23-Apr-04	1030.270	0.930	
26-Apr-04	1030.150	1.050	
30-Apr-04	1029.882	1.318	
03-May-04	1029.795	1.405	
06-May-04	1029.702	1.498	
10-May-04	1029.610	1.590	
11-May-04	1029.644	1.556	
12-May-04	1029.645	1.555	
13-May-04	1029.658	1.542	
16-May-04	1029.642	1.558	
21-May-04	1029.610	1.590	
28-May-04	1029.730	1.470	
02-Jun-04	1029.803	1.397	
07-Jun-04	1029.868	1.332	
21-Jun-04	1029.698	1.502	
08-Jul-04	1029.868	1.332	
16-Jul-04	1029.805	1.395	
30-Jul-04	1029.740	1.460	
12-Aug-04	1029.868	1.332	
19-Aug-04	1029.930	1.270	
17-Sep-04	1028.902	2.298	
24-Sep-04	1029.030	2.170	
05-Oct-04	1029.202	1.998	
08-Oct-04	1029.252	1.948	
14-Oct-04	1029.345	1.855	
21-Oct-04	1029.261	1.939	
25-Oct-04	1028.782	2.418	
26-Oct-04	1028.748	2.452	
28-Oct-04	1028.795	2.405	
28-Oct-04	1028.795	2.405	
04-Nov-04	1028.929	2.271	
09-Nov-04	1029.020	2.180	
17-Nov-04	1029.135	2.065	
24-Nov-04	1029.240	1.960	
01-Dec-04	1029.330	1.870	
15-Dec-04	1029.515	1.685	
22-Dec-04	1029.580	1.620	
17-Jan-05	1029.878	1.322	
25-Jan-05	1029.940	1.260	
03-Feb-05	1030.030	1.170	
10-Feb-05	1030.090	1.110	
17-Feb-05	1030.134	1.066	
22-Feb-05	1030.176	1.024	
23-Feb-05	1030.045	1.155	start
24-Feb-05	1029.854	1.346	
25-Feb-05	1029.693	1.507	
26-Feb-05	1029.525	1.675	
27-Feb-05	1029.355	1.845	
28-Feb-05	1029.185	2.015	
02-Mar-05	1029.030	2.170	
03-Mar-05	1028.940	2.260	
06-Mar-05	1028.580	2.620	
07-Mar-05	1028.443	2.757	
08-Mar-05	1028.340	2.860	
09-Mar-05	1028.195	3.005	
10-Mar-05	1028.180	3.020	
11-Mar-05	1028.050	3.150	
12-Mar-05	1027.885	3.315	
13-Mar-05	1027.745	3.455	
14-Mar-05	1027.605	3.595	
15-Mar-05	1027.457	3.743	
16-Mar-05	1027.280	3.920	
18-Mar-05	1027.018	4.182	
21-Mar-05	1026.580	4.620	

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
22-Mar-05	1026.453	4.747	
23-Mar-05	1026.307	4.893	
04-Apr-05	1026.630	4.570	stop
07-Apr-05	1026.702	4.498	
02-May-05	1027.923	3.277	
03-May-05	1027.847	3.353	started 16"syphon
04-May-05	1027.742	3.458	
05-May-05	1027.626	3.574	
09-May-05	1027.382	3.818	
16-May-05	1027.260	3.940	
24-May-05	1028.265	2.935	syphon down
25-May-05	1028.313	2.887	started 16"syphon
26-May-05	1028.310	2.890	
30-May-05	1028.262	2.938	
01-Jun-05	1028.213	2.987	
06-Jun-05	1028.145	3.055	
08-Jun-05	1028.129	3.071	
13-Jun-05	1028.134	3.066	
20-Jun-05	1028.183	3.017	
27-Jun-05	1028.343	2.857	
29-Jun-05	1028.290	2.910	
30-Jun-05	1028.245	2.955	
05-Jul-05	1028.070	3.130	
08-Jul-05	1028.015	3.185	
11-Jul-05	1028.021	3.179	
18-Jul-05	1027.840	3.360	
26-Jul-05	1027.685	3.515	
01-Aug-05	1027.568	3.632	
08-Aug-05	1027.470	3.730	
15-Aug-05	1027.335	3.865	
22-Aug-05	1027.202	3.998	
30-Aug-05	1027.140	4.060	
07-Sep-05	1027.395	3.805	
12-Sep-05	1027.540	3.660	
19-Sep-05	1027.670	3.530	
22-Sep-05	1027.525	3.675	
26-Sep-05	1027.264	3.936	
27-Sep-05	1027.174	4.026	
29-Sep-05	1026.949	4.251	
03-Oct-05	1026.540	4.660	
05-Oct-05	1026.325	4.875	
12-Oct-05	1026.564	4.636	stop
17-Oct-05	1026.714	4.486	
24-Oct-05	1026.920	4.280	
31-Oct-05	1027.115	4.085	
16-Nov-05	1027.515	3.685	
30-Nov-05	1027.782	3.418	
15-Dec-05	1028.032	3.168	
17-Jan-06	1028.515	2.685	
30-Jan-06	1028.655	2.545	
13-Feb-06	1028.613	2.587	
15-Feb-06	1028.615	2.585	
20-Feb-06	1028.602	2.598	
21-Feb-06	1028.545	2.655	Started pumping
23-Feb-06	1028.420	2.780	
27-Feb-06	1028.050	3.150	
01-Mar-06	1027.890	3.310	
02-Mar-06	1027.795	3.405	
04-Mar-06	1027.630	3.570	
06-Mar-06	1027.452	3.748	
08-Mar-06	1027.275	3.925	
09-Mar-06	1027.180	4.020	
20-Mar-06	1027.433	3.767	Stopped pumping
30-Mar-06	1027.610	3.590	
06-Apr-06	1027.725	3.475	
18-Apr-06	1027.890	3.310	
24-Apr-06	1028.160	3.040	
01-May-06	1028.585	2.615	
03-May-06	1028.550	2.650	Started pumping
08-May-06	1028.422	2.778	
11-May-06	1028.065	3.135	

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
15-May-06	1027.870	3.330	Stopped pumping
23-May-06	1027.872	3.328	
25-May-06	1027.777	3.423	syphon full open
29-May-06	1027.585	3.615	syphon 1/2 open
01-Jun-06	1027.463	3.737	
05-Jun-06	1027.475	3.725	
12-Jun-06	1027.522	3.678	very windy
21-Jun-06	1027.510	3.690	
27-Jun-06	1027.272	3.928	
04-Jul-06	1027.520	3.680	
06-Jul-06	1027.521	3.679	syphon 2/3 open
10-Jul-06	1027.552	3.648	syphon 2/3 open
13-Jul-06	1027.522	3.678	syphon 2/3 open
19-Jul-06	1027.522	3.678	syphon 2/3 open
24-Jul-06	1027.518	3.682	syphon 2/3 open
31-Jul-06	1027.437	3.763	syphon 2/3 open
07-Aug-06	1027.555	3.645	syphon 1/4 open
14-Aug-06	1027.387	3.813	syphon 1/4 open
22-Aug-06	1027.490	3.710	syphon 3/4 open on Aug. 10/06
28-Aug-06	1027.570	3.630	syphon 1/3 open on Aug.16/06
29-Aug-06	1027.525	3.675	syphon 1/2 open on Aug. 27/06
05-Sep-06	1027.268	3.932	syphon 1/2 open on Aug. 27/06
12-Sep-06	1027.473	3.727	syphon 1/3 open
19-Sep-06	1027.450	3.750	syphon down Sept. 8/06
20-Sep-06	1027.336	3.864	syphon open 1/2 on Sept.18/06
21-Sep-06	1027.227	3.973	syphon 1/3 open
26-Sep-06	1027.320	3.880	syphon down @ 7.30 am Sept. 22/06
04-Oct-06	1027.468	3.732	
10-Oct-06	1027.601	3.599	
17-Oct-06	1027.749	3.451	
24-Oct-06	1027.902	3.298	75% ice covered
31-Oct-06	1028.035	3.165	ice covered
07-Nov-06	1028.168	3.032	5-1/2" ice, water is 1/2" above ice
14-Nov-06	1028.303	2.897	8-1/2" ice, water flush
21-Nov-06	1028.420	2.780	11"ice, water is 1/2" below ice
07-Dec-06	1028.635	2.565	10-1/2" water is 1/2" below ice
14-Dec-06	1028.732	2.468	13" ice, water flush
04-Jan-07	1028.950	2.250	15" ice, water flush
18-Jan-07	1029.090	2.110	19-1/2" ice, 1/4 water over
01-Feb-07	1029.200	2.000	23-1/2" ice, water flush
15-Feb-07	1029.308	1.892	24" ice, water 1/2" over
08-Mar-07	1029.480	1.720	27" ice, water 1-1/2" over
29-Mar-07	1029.632	1.568	29-1/2" ice, water 1/4" over
02-Apr-07	1029.650	1.550	31" ice, water 2" over
12-Apr-07	1028.750	2.450	32" ice, water 1/4" over
26-Apr-07	1029.100	2.100	No measurement, Not safe
03-May-07	1029.358	1.842	No measurement, Not safe
07-May-07	1029.498	1.702	No measurement, Not safe
09-May-07	1029.295	1.905	No measurement, Not safe
10-May-07	1029.191	2.009	No measurement, Not safe
14-May-07	1028.770	2.430	No measurement, Not safe
17-May-07	1028.980	2.220	No measurement, Not safe
22-May-07	1028.933	2.267	No measurement, Not safe
24-May-07	1028.837	2.363	No measurement, Not safe
28-May-07	1028.846	2.354	No measurement, Not safe
31-May-07	1028.840	2.360	Ice all off Pond
04-Jun-07	1028.661	2.539	
11-Jun-07	1028.626	2.574	
14-Jun-07	1028.605	2.595	
18-Jun-07	1028.561	2.639	
21-Jun-07	1028.560	2.640	
25-Jun-07	1028.880	2.320	
28-Jun-07	1028.850	2.350	Heavy rain syphon down on 24th and opened on 25th @11.am
03-Jul-07	1028.787	2.413	Very windy
05-Jul-07	1028.789	2.411	
09-Jul-07	1028.846	2.354	
12-Jul-07	1028.800	2.400	
19-Jul-07	1028.763	2.437	
26-Jul-07	1028.692	2.508	
02-Aug-07	1028.608	2.592	
09-Aug-07	1028.547	2.653	

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
16-Aug-07	1028.374	2.826	
23-Aug-07	1028.085	3.115	Syphon open 1/2 on Aug. 13/07 @ 9.00AM
30-Aug-07	1028.038	3.162	Syphon cut back to 1/3 @ 8.30 AM
06-Sep-07	1028.025	3.175	very windy
11-Sep-07	1028.025	3.175	
12-Sep-07	1027.910	3.290	Syphon shut down @ 8.50 AM
13-Sep-07	1027.845	3.355	
17-Sep-07	1027.559	3.641	
24-Sep-07	1027.755	3.445	Syphon shut down @ 12.45 PM
27-Sep-07	1027.840	3.360	
15-Oct-07	1028.295	2.905	
18-Oct-07	1028.358	2.842	
22-Oct-07	1028.442	2.758	
25-Oct-07	1028.220	2.980	Syphon open 1/3 @ 9.50 AM
29-Oct-07	1027.997	3.203	
08-Nov-07	1028.268	2.932	Syphon down @ 9.25 AM
22-Nov-07	1028.551	2.649	Ice 9" thick, Water 1" above
06-Dec-07	1028.802	2.398	Ice 14" thick, Water 1 1/2 " above
03-Jan-08	1029.270	1.930	Ice 15" thick, Water 1" below
16-Jan-08	1029.442	1.758	Ice 31" thick, Water 1-1/2" above
13-Feb-08	1029.782	1.418	Ice 17" thick, Water 1" over (new hole)
05-Mar-08	1029.996	1.204	Ice 22" thick, Water 3/4" over
20-Mar-08	1030.116	1.084	Ice 22" thick, Water 1-1/2" over
03-Apr-08	1030.211	0.989	Ice 27" thick, Water 1/4" below
10-Apr-08	1030.254	0.946	Ice 27" thick, Water flush
14-Apr-08	1029.930	1.270	Started syphon @ 10.00 AM 1/3 open
21-Apr-08	1029.625	1.575	No measurement, Not safe
24-Apr-08	1029.398	1.802	No measurement, Not safe
28-Apr-08	1029.250	1.950	No measurement, Not safe
05-May-08	1029.433	1.767	No measurement, Not safe
06-May-08	1029.440	1.760	No measurement, Not safe. Syphon 1/2 open
07-May-08	1029.421	1.779	No measurement, Not safe. Syphon 2/3 open
08-May-08	1029.402	1.798	No measurement, Not safe. Syphon 2/3 open
12-May-08	1029.362	1.838	No measurement, Not safe on the ice., Syphon 2/3 open
20-May-08	1029.340	1.860	No measurement, Not safe on the ice., Syphon 2/3 open
21-May-08	1029.335	1.865	Syphon 3/4 open at 1:15 PM
22-May-08	1029.332	1.868	Syphon 7/8 open at 1:25 PM
26-May-08	1029.276	1.924	Syphon full open at 12:15 PM
28-May-08	1029.254	1.946	Syphon full open at 2:00 PM
02-Jun-08	1029.251	1.949	
05-Jun-08	1029.164	2.036	
11-Jun-08	1028.976	2.224	Very windy
18-Jun-08	1028.891	2.309	Windy
23-Jun-08	1028.686	2.514	
24-Jun-08	1028.638	2.562	
26-Jun-08	1028.549	2.651	Sunny w/ clouds
02-Jul-08	1028.271	2.929	
03-Jul-08	1028.240	2.960	
07-Jul-08	1028.222	2.978	
08-Jul-08	1028.235	2.965	
10-Jul-08	1028.252	2.948	syphon 1/4 open
17-Jul-08	1028.280	2.920	
24-Jul-08	1028.273	2.927	
14-Aug-08	1028.068	3.132	
21-Aug-08	1028.150	3.050	
28-Aug-08	1028.340	2.860	
02-Sep-08	1028.426	2.774	syphon 3/4 open Aug 29, 2008
11-Sep-08	1028.565	2.635	syphon full open Sept 2, 2008
18-Sep-08	1028.638	2.562	
22-Sep-08	1028.582	2.618	Very windy
25-Sep-08	1028.504	2.696	
29-Sep-08	1028.402	2.798	
02-Oct-08	1028.227	2.973	
06-Oct-08	1028.043	3.157	Windy - Syphon closed to 1/4 open @ 7:00am On October 3, 2008
09-Oct-08	1028.005	3.195	
16-Oct-08	1027.365	3.835	
22-Oct-08	1027.135	4.065	
12-Nov-08	1027.803	3.397	Syphon down @ 12:00 PM for season
04-Dec-08	1028.325	2.875	Ice is 8" thick, Water is flush
22-Jan-09	1029.148	2.052	Ice is 12" thick, Water is flush
26-Feb-09	1029.560	1.640	Ice is 24.5" thick, water is flush

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
24-Mar-09	1029.837	1.363	Ice is 25" thick, water is 1.5" over, final Pond elevation for Deloitte & Touche
27-Mar-09	1029.796	1.404	Ice is 35" thick, water is 1.5" over, first pond elevation for Denison
28-Mar-09	1029.724	1.476	X5 - 16" syphon up @ 1:15PM to 1/3 open
30-Mar-09	1029.596	1.604	
02-Apr-09	1029.368	1.832	
06-Apr-09	1028.939	2.261	X5 - 16" syphon opened to 1/2 On April 4, 2009
08-Apr-09	1028.736	2.464	
13-Apr-09	1028.164	3.036	
16-Apr-09	1027.744	3.456	F.T.P Online April 13, 2009 @ 5:00 PM, discharge to intermediate pond @ 5:00
20-Apr-09	1027.716	3.484	Windy - Syphon cut back to 1/3 open on April 17, 2009 @ 6:45 AM, cut back to
23-Apr-09	1027.487	3.713	X5 Syphon opened to 1/3 on April 20, 2009 @ 12:45 PM
27-Apr-09	1027.273	3.927	X5 Syphon 1/3 open
30-Apr-09	1027.159	4.041	X5 Syphon 1/3 open
04-May-09	1027.229	3.971	X5 Syphon 1/3 open
07-May-09	1027.419	3.781	X5 Syphon opened to 1/2 @ 1:50 PM
11-May-09	1027.604	3.596	X5 Syphon 2/3 open
13-May-09	1027.690	3.510	X5 Syphon 1/3 open
15-May-09	1027.734	3.466	X5 Syphon 1/3 open
16-May-09	1027.831	3.369	X5 Syphon 1/3 open
19-May-09	1027.831	3.369	X5 Syphon 1/3 open
31-May-09	1028.163	3.037	X5 Syphon 1/2 open
8-Jun-09	1028.338	2.862	X5 Syphon 1/2 open
13-Jun-09	1028.266	2.934	X5 Syphon 1/2 open
29-Jun-09	1027.668	3.532	X5 Syphon 1/4 open as of June 29th @ 8pm
30-Jun-09	1027.704	3.496	X5 Syphon 1/4 open
13-Jul-09	1028.033	3.167	X5 Syphon 1/4 open
20-Jul-09	1027.826	3.374	X5 Syphon 1/2 open on July 16 @ 7:50am
27-Jul-09	1027.711	3.489	X5 1/3 open on July 25 @ 2:00pm - X5 1/4 open on July 27 @ 1:10pm
3-Aug-09	1027.985	3.215	X5 1/3 open @ 2:05pm - cut back to 1/8 open ??
7-Aug-09	1027.966	3.234	X5 Syphon opened to 1/4 @ 12:10pm
10-Aug-09	1028.034	3.166	X5 Syphon 1/4 open
18-Aug-09	1028.026	3.174	X5 Siphon 1/10 open @ 10:15am
24-Aug-09	1028.317	2.883	X5 siphon opened to 1/3 at 4:15pm
31-Aug-09	1028.281	2.919	X5 siphon opened to 1/2 at 3:15pm
7-Sep-09	1028.280	2.920	X5 siphon opened to 5/8 @ 4:00 PM
14-Sep-09	1028.360	2.840	X5 Siphon opened to 3/4 @ 10:30am
21-Sep-09	1028.587	2.613	X5 Syphon opened full @ 3:30pm
29-Sep-09	1028.852	2.348	X5 Syphon off on Sep 24 @ 11:20am
1-Oct-09	1028.980	2.220	X5 Syphon off: Elevation for Sep 29, 2009 was corrected based on Staff Gauge reads
5-Oct-09	1028.938	2.262	
9-Oct-09	1028.668	2.532	
12-Oct-09	1028.428	2.772	
13-Oct-09	1028.338	2.862	Drained X5 syphon @ 11:18am
16-Oct-09	1028.393	2.807	shot at 10am (to ice) by Roy/Kevin
19-Oct-09	1028.132	3.068	
20-Oct-09	1028.000	3.200	
21-Oct-09	1027.925	3.275	
22-Oct-09	1027.864	3.336	Elevation shot at 8:50am
23-Oct-09	1027.775	3.425	Elevation shot at 8:50am
24-Oct-09	1027.669	3.531	Elevation shot at 9:30am
25-Oct-09	1027.542	3.658	Elevation shot at 5:25pm
26-Oct-09	1027.496	3.704	Elevation shot at 12:15pm
27-Oct-09	1027.395	3.805	Elevation shot at 9:45am
28-Oct-09	1027.320	3.880	Elevations shot at 10:37am
29-Oct-09	1027.235	3.965	Elevation shot at 11:18am
30-Oct-09	1027.188	4.012	Elevation shot at 11:15am
31-Oct-09	1027.123	4.077	Elevation shot at 11:09am
1-Nov-09	1027.034	4.166	Elevation shot at 8:25am
2-Nov-09	1026.960	4.240	Elevation shot at 11:18am
9-Nov-09	1027.174	4.026	Elevation shot at 9:18am
16-Nov-09	1027.381	3.819	Elevation shot on November 17th
23-Nov-09	1027.537	3.663	
30-Nov-09	1027.720	3.480	
7-Dec-09	1027.822	3.378	
14-Dec-09	1027.966	3.234	
4-Jan-10	1028.332	2.868	
18-Jan-10	1028.556	2.644	
1-Feb-10	1028.778	2.422	
16-Feb-10	1028.954	2.246	
1-Mar-10	1029.097	2.103	
15-Mar-10	1029.236	1.964	

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
23-Mar-10	1029.294	1.906	X5 discharge Pipe opened at 11:30am - Full On
25-Mar-10	1029.218	1.982	X5 discharge pipe 1/3 open @ 3:19pm on the 24/3/10
29-Mar-10	1029.135	2.065	
5-Apr-10	1029.093	2.107	
12-Apr-10	1029.039	2.161	

Polishing Pond Elevations

Date	Elevation (masl)	Freeboard (masl)	Comments
19-Apr-10	1029.127	2.073	very windy
21-Apr-10	1029.193	2.007	
26-Apr-10	1029.399	1.801	High wind conditions
3-May-10	1029.386	1.814	
10-May-10	1029.108	2.092	
17-May-10	1028.894	2.306	
24-May-10	1028.700	2.500	
31-May-10	1028.542	2.658	
7-Jun-10	1028.440	2.760	
14-Jun-10	1028.392	2.808	
21-Jun-10	1028.170	3.030	
28-Jun-10	1027.916	3.284	
5-Jul-10	1027.660	3.540	
12-Jul-10	1027.452	3.748	
19-Jul-10	1027.298	3.902	
26-Jul-10	1027.168	4.032	
2-Aug-10	1027.060	4.140	
9-Aug-10	1027.834	3.366	
16-Aug-10	1027.663	3.537	
23-Aug-10	1027.884	3.316	
30-Aug-10	1027.837	3.363	
6-Sep-10	1027.410	3.790	
13-Sep-10	1027.291	3.909	
20-Sep-10	1027.446	3.754	
27-Sep-10	1027.595	3.605	
4-Oct-10	1027.738	3.462	
12-Oct-10	1027.881	3.319	
18-Oct-10	1028.011	3.189	
25-Oct-10	1028.136	3.064	
1-Nov-10	1028.226	2.974	
8-Nov-10	1028.397	2.803	
15-Nov-10	1028.458	2.742	Readings double checked as it seemed low.
18-Nov-10	1028.441	2.759	
19-Nov-10	1028.379	2.821	
20-Nov-10	1028.332	2.868	
21-Nov-10	1028.285	2.915	
22-Nov-10	1028.257	2.943	Results were double checked.
23-Nov-10	1028.204	2.996	
24-Nov-10	1028.155	3.045	
25-Nov-10	1028.120	3.080	
26-Nov-10	1028.073	3.127	
27-Nov-10	1028.028	3.172	
29-Nov-10	1027.949	3.251	
2-Dec-10	1027.823	3.377	Elevation taken at 9:25am; Siphon shut down at 1:22pm
6-Dec-10	1027.902	3.298	
13-Dec-10	1028.035	3.165	
16-Dec-10	1028.075	3.125	
3-Jan-11	1028.362	2.838	
10-Jan-11	1028.458	2.742	
17-Jan-11	1028.540	2.660	
24-Jan-11	1028.652	2.548	
31-Jan-11	1028.724	2.476	
7-Feb-11	1028.798	2.402	
14-Feb-11	1028.893	2.307	
21-Feb-11	1028.969	2.231	
28-Feb-11	1029.037	2.163	
7-Mar-11	1029.101	2.099	

Date	Elevation (masl)	Freeboard* (masl)	Comments
11-Apr-10	1091.853	2.917	Elevation shot over 200m
03-May-10	1091.871	2.899	
10-May-10	1089.898	4.872	
17-May-10	1089.811	4.959	
24-May-10	1091.192	3.578	
31-May-10	1090.511	4.259	
07-Jun-10	1090.086	4.684	
14-Jun-10	1089.886	4.884	
21-Jun-10	1089.746	5.024	
28-Jun-10	1089.781	4.989	
05-Jul-10	1090.222	4.548	
12-Jul-10	1089.771	4.999	
19-Jul-10	1089.368	5.402	
26-Jul-10	1089.326	5.444	
02-Aug-10	1089.103	5.667	
16-Aug-10	1088.968	5.802	
06-Sep-10	1089.295	5.475	
20-Sep-10	1089.107	5.663	
12-May-11	1094.345	0.425	
20-Jun-11	1091.185	3.585	
27-Jun-11	1091.847	2.923	

*Freeboard calculated based on maximum elevation of 1094.77 m asl

Date	Elevation* (masl)	Freeboard** (masl)	Comments
10-May-10	1086.294	0.250	Avg Elevation: 1086.20 m asl
10-May-10	1086.265	0.279	
10-May-10	1086.434	0.110	
10-May-10	1085.792	0.752	
17-May-10	1086.207	0.337	Avg Elevation: 1086.08
17-May-10	1086.215	0.329	
17-May-10	1086.145	0.399	
17-May-10	1086.164	0.380	
17-May-10	1085.651	0.893	
24-May-10	1085.857	0.687	Avg Elevation: 1086.41
24-May-10	1086.659	-0.115	
24-May-10	1086.561	-0.017	
24-May-10	1086.570	-0.026	
31-May-10	1086.430	0.114	Avg Elevation: 1086.40
31-May-10	1086.444	0.100	
31-May-10	1086.384	0.160	
31-May-10	1086.340	0.204	
07-Jun-10	1086.602	-0.058	Avg Elevation: 1086.34
07-Jun-10	1086.270	0.274	
07-Jun-10	1086.280	0.264	
07-Jun-10	1086.282	0.262	
07-Jun-10	1086.279	0.265	
14-Jun-10	1086.082	0.462	Avg Elevation: 1086.31
14-Jun-10	1086.460	0.084	
14-Jun-10	1086.308	0.236	
14-Jun-10	1086.328	0.216	
14-Jun-10	1086.370	0.174	
21-Jun-10	1086.220	0.324	Avg Elevation: 1086.28
21-Jun-10	1086.451	0.093	
21-Jun-10	1086.297	0.247	
21-Jun-10	1086.335	0.209	
21-Jun-10	1086.098	0.446	
28-Jun-10	1085.154	1.390	Avg Elevation: 1085.55
28-Jun-10	1085.019	1.525	
28-Jun-10	1085.223	1.321	
28-Jun-10	1085.438	1.106	
28-Jun-10	1086.262	0.282	
28-Jun-10	1086.214	0.330	
05-Jul-10	1086.440	0.104	Avg Elevation: 1086.57
05-Jul-10	1086.647	-0.103	
05-Jul-10	1086.592	-0.048	
05-Jul-10	1086.598	-0.054	
05-Jul-10	1086.594	-0.050	
12-Jul-10	1085.048	1.496	Avg Elevation: 1085.52
12-Jul-10	1085.167	1.377	

Date	Elevation* (masl)	Freeboard** (masl)	Comments
12-Jul-10	1085.656	0.888	
12-Jul-10	1085.450	1.094	
12-Jul-10	1086.277	0.267	
19-Jul-10	1085.919	0.625	Avg Elevation: 1085.73
19-Jul-10	1085.457	1.087	
19-Jul-10	1085.321	1.223	
19-Jul-10	1085.644	0.900	
19-Jul-10	1086.132	0.412	
19-Jul-10	1085.924	0.620	
26-Jul-10	1086.234	0.310	Avg Elevation: 1086.13
26-Jul-10	1086.113	0.431	
26-Jul-10	1086.154	0.390	
26-Jul-10	1085.968	0.576	
26-Jul-10	1086.193	0.351	
2-Aug-10	1085.751	0.793	Avg Elevation: 1086.07
2-Aug-10	1086.143	0.401	
2-Aug-10	1086.192	0.352	
2-Aug-10	1085.989	0.555	
2-Aug-10	1086.264	0.280	
16-Aug-10	1085.593	0.951	Avg Elevation: 1086.04
16-Aug-10	1086.202	0.342	
16-Aug-10	1086.098	0.446	
16-Aug-10	1086.166	0.378	
16-Aug-10	1086.125	0.419	
6-Sep-10	1085.972	0.572	Avg Elevation: 1086.18
6-Sep-10	1086.334	0.210	
6-Sep-10	1086.185	0.359	
6-Sep-10	1086.209	0.335	
20-Sep-10	1085.764	0.780	Avg Elevation: 1086.12
20-Sep-10	1086.263	0.281	
20-Sep-10	1086.175	0.369	
20-Sep-10	1086.264	0.280	
12-May-11	1087.444	-0.900	Avg Elevation: 1088.50
12-May-11	1088.768	-2.224	
12-May-11	1088.418	-1.874	
12-May-11	1089.114	-2.570	
12-May-11	1088.402	-1.858	
26-May-11	1087.188	-0.644	Avg Elevation: 1086.99
26-May-11	1087.393	-0.849	
26-May-11	1087.053	-0.509	
26-May-11	1086.798	-0.254	
26-May-11	1086.508	0.036	
13-Jun-11	1086.298	0.246	Avg Elevation: 1086.55
13-Jun-11	1086.575	-0.031	

Date	Elevation* (masl)	Freeboard** (masl)	Comments
13-Jun-11	1086.7	-0.156	
13-Jun-11	1086.686	-0.142	
13-Jun-11	1086.506	0.038	
20-Jun-11	1085.787	0.757	Avg Elevation: 1086.31
20-Jun-11	1086.266	0.278	
20-Jun-11	1086.596	-0.052	
20-Jun-11	1086.621	-0.077	
20-Jun-11	1086.304	0.240	
27-Jun-11	1086.445	0.099	Avg Elevation: 1086.73
27-Jun-11	1086.828	-0.284	
27-Jun-11	1086.872	-0.328	
27-Jun-11	1086.724	-0.180	
27-Jun-11	1086.777	-0.233	

* Max elevation measured at several locations across rock drain on date - average used to determine head

**Freeboard calculated based on maximum elevation of 1086.544 m asl

FCD-1 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
24-May-07	19:50:00	0.480	1022	newly installed
25-May-07	09:40:00	0.412	984.0	
13-Jun-07	15:20:00	0.300	662	
26-Jun-07	15:10:00	0.215	395	
27-Jun-07	09:30:00	0.218	302.5	tail end of thundershower
11-Jul-07	13:30:00	0.175	179	
18-Jul-07	14:00:00	0.200	236	
18-Jul-07	12:40:00	0.200	249.0	
24-Jul-07		0.153	107.2	
1-Aug-07	11:50:00	0.170	198	
8-Aug-07	15:20:00	0.172	151.9	LES survey, conclude gauge zero is 97.677 (average of 4 trials)
4-Sep-07	15:40:00		155.0	
6-Sep-07		0.220	277.0	
26-Jun-08	08:00:00	0.240	342	
4-Jul-08	10:40:00	0.220	289	
7-Jul-08	11:40:00	0.250	371	
14-Jul-08	11:00:00	0.265	415	
15-Jul-08	10:40:00	0.630	2213	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.185	207	
25-Aug-08	12:55:00	0.440	1105	
13-Sep-08	08:15:00	0.250	371	
05-May-09		0.400	919	
14-May-09	8:20 AM	0.195	229	
22-May-09	6:35 AM	0.300	527	
24-May-09	7:00 AM	0.450	1155	
29-May-09	8:40 AM	0.380	833	
31-May-09	7:00 AM	0.350	710	
04-Jun-09	1:45 PM	0.370	791	
05-Jun-09	6:30 AM	0.410	964	
06-Jun-09	7:55 AM	0.390	876	
09-Jun-09	6:48 AM	0.310	562	
10-Jun-09	6:48 AM	0.310	562	
10-Jun-09	2:30 PM	0.250	371	
13-Jun-09	8:55 AM	0.250	371	
17-Jun-09	5:15 PM	0.255	385	
25-Jun-09	3:10 PM	0.200	241	
02-Jul-09	12:53 PM	0.185	207	
07-Jul-09	5:40 PM	0.155	147	
15-Jul-09	10:30 AM	0.145	129	
30-Jul-09	3:05 PM	0.110	76	
02-Aug-09	8:05 AM	0.115	83	
07-Aug-09	9:00 AM	0.110	76	
17-Aug-09	8:20 AM	0.135	113	
21-Aug-09	10:25 AM	0.140	121	
29-Aug-09	12:32 PM	0.150	138	
04-Sep-09	9:57 AM	0.155	147	
11-Sep-09	8:05 AM	0.150	138	

FCD-1 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
19-Sep-09	4:24 PM	0.165	166	
20-Sep-09	12:14 PM	0.170	176	
21-Sep-09	4:22 PM	0.190	218	
4-Oct-09	5:35 PM	0.175	186	
30-Apr-10				
03-May-10	12:08 PM			
04-May-10	8:17 AM			
05-May-10	9:37 AM			
17-May-10	11:52 AM	0.245	356	
02-Jun-10	11:50 AM	0.270	430	
14-Jun-10	12:06 PM	0.199	238	Instream flow Measurement gave 216.39
03-Jul-10	3:10 PM	0.225	302	
12-Jul-10	1:15 PM	0.165	166	Instream flow Measurement gave 62.85
03-Aug-10	3:15 PM	0.113	80	Instream flow Measurement gave 79.848
15-Aug-10	2:24 PM	0.105	69	Instream flow Measurement gave 105.67
02-Sep-10	5:10 PM	0.139	119	Instream flow Measurement gave 164.575
23-Sep-10	5:32 PM	0.110	76	
04-Oct-10	1:19 PM	0.113	80	Instream flow Measurement gave 80.695
18-Oct-10	4:46 PM			
14-Apr-11	5:00 PM	Frozen	n/a	
28-Apr-11	2:25 PM	Frozen	n/a	
16-May-11	3:40 PM	Frozen	n/a	
25-May-11	1:31 PM	0.600	17,379	
14-Jun-11	10:36 AM	0.226	398	
04-Jul-11	3:01 PM	0.238	486	Instream flow Measurement gave 444

Note: Data until end of 2009 as compiled in BGC 2009 Annual Geotechnical Evaluation and Instrumentation Review;
2010 Data compiled by DES

FCD-2 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
24-May-07	18:30:00	0.460	1133	lots of shore ice rapidly melting: gain is invalid
25-May-07	11:40:00	0.475	1069	newly installed gauge. Gain is invalid due to heavy melting on banks
13-Jun-07	16:05:00	0.340	525	Avil Lab checked survey = OK
26-Jun-07	15:30:00	0.255	326	
27-Jun-07	12:30:00	0.247	308.3	tail end of thundershower, invalid
11-Jul-07	14:30:00	0.195	130	
18-Jul-07	14:20:00	0.210	158	
18-Jul-07	11:30:00	0.210	165.0	Good check Anvil Lab vs LES flows
24-Jul-07	17:00:00	0.185	87.9	rainfall affected
1-Aug-07	12:25:00	0.195	133	
8-Aug-07	14:40:00	0.200	106.3	
4-Sep-07	15:10:00	0.202	112.1	
6-Sep-07	PM	0.241	235.0	affected by construction
7-Sep-07				
26-Jun-08	08:00:00	0.325	470	
4-Jul-08	10:40:00	0.280	320	
7-Jul-08	11:40:00	0.355	591	
14-Jul-08	11:00:00	0.390	753	
15-Jul-08	10:40:00	0.880	6178	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.195	126	
25-Aug-08	12:55:00	0.590	2197	
13-Sep-08	08:15:00	0.395	779	
14-Sep-08				
05-May-09		0.690	3294	
14-May-09	8:20 AM	0.380	705	
22-May-09	6:35 AM	0.570	2010	
24-May-09	7:00 AM	0.730	3811	
29-May-09	8:40 AM	0.590	2197	
31-May-09	7:00 AM	0.650	2823	
04-Jun-09	1:45 PM	0.650	2823	
05-Jun-09	6:30 AM	0.625	2550	
06-Jun-09	7:55 AM	0.570	2010	
09-Jun-09	6:48 AM	0.470	1221	
10-Jun-09	6:48 AM	0.470	1221	
10-Jun-09	2:30 PM	0.390	753	
13-Jun-09	8:55 AM	0.378	695	
17-Jun-09	5:15 PM	0.400	804	
25-Jun-09	3:10 PM	0.280	320	
02-Jul-09	12:53 PM	0.220	171	
07-Jul-09	5:40 PM	0.115	32	
15-Jul-09	10:30 AM	0.110	29	
30-Jul-09	3:05 PM	0.092	18	
02-Aug-09	8:05 AM	0.085	15	
07-Aug-09	9:00 AM	0.090	17	
17-Aug-09	8:20 AM	0.100	22	
21-Aug-09	10:25 AM	0.110	29	

FCD-2 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
29-Aug-09	12:32 PM	0.115	32	
04-Sep-09	9:57 AM	0.120	36	
11-Sep-09	8:05 AM	0.110	29	
19-Sep-09	4:24 PM	0.120	36	
20-Sep-09	12:14 PM	0.125	40	
21-Sep-09	4:22 PM	0.140	53	
4-Oct-09	5:35 PM	0.125	40	
30-Apr-10				
3-May-10	12:07 PM			
04-May-10	8:15 AM			
5-May-10	9:36 AM			
17-May-10	11:55 AM	0.219	169	
2-Jun-10	11:52 AM	0.260	264	
14-Jun-10	12:04 PM	0.143	56	Instream flow Measurement gave 181.67
3-Jul-10	3:08 PM	0.165	81	
12-Jul-10	1:45 PM	0.100	22	Instream flow Measurement gave 106.33
3-Aug-10	3:25 PM	0.071	9	Instream flow Measurement gave 68.407
15-Aug-10	2:45 PM	0.064	7	Instream flow Measurement gave 70.118
2-Sep-10	5:06 PM	0.088	16	Instream flow Measurement gave 80.135
23-Sep-10	5:28 PM			
4-Oct-10	1:39 PM			
18-Oct-10	4:43 PM			
14-Apr-11	5:02 PM	Frozen	n/a	
28-Apr-11	2:21 PM	Frozen	n/a	
16-May-11	3:45 PM	Frozen	n/a	
25-May-11	1:38 PM	Iced	n/a	
14-Jun-11	10:39 AM	Broken		Staff gauge broken
04-Jul-11	2:24 PM	0.335	447	New staff gauge installed; Instream flow Measurement gave 373.7

Note: Data until end of 2009 as compiled in BGC 2009 Annual Geotechnical Evaluation and Instrumentation Review;
2010 Data compiled by DES

FCD-3 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
26-Jun-08	08:00:00	0.250	n/a	Previously called FD-1A
4-Jul-08	10:40:00	0.230	n/a	
7-Jul-08	11:40:00	0.270	n/a	
14-Jul-08	11:00:00	0.285	n/a	
15-Jul-08	10:40:00	0.640	n/a	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.190	n/a	
25-Aug-08	12:55:00	0.400	n/a	
13-Sep-08	08:15:00	0.290	n/a	
05-May-09		0.980	n/a	
14-May-09	8:20 AM	0.300	n/a	
22-May-09	6:35 AM	0.350	n/a	
24-May-09	7:00 AM	0.480	n/a	
29-May-09	8:40 AM	0.400	n/a	
31-May-09	7:00 AM	0.390	n/a	
04-Jun-09	1:45 PM	0.390	n/a	
05-Jun-09	6:30 AM	0.400	n/a	
06-Jun-09	7:55 AM	0.390	n/a	
09-Jun-09	6:48 AM	0.300	n/a	
10-Jun-09	6:48 AM	0.300	n/a	
10-Jun-09	2:30 PM	0.270	n/a	
13-Jun-09	8:55 AM	0.265	n/a	
17-Jun-09	5:15 PM	0.275	n/a	
25-Jun-09	3:10 PM	0.210	n/a	
02-Jul-09	12:53 PM	0.185	n/a	
07-Jul-09	5:40 PM	0.150	n/a	
15-Jul-09	10:30 AM	0.141	n/a	
30-Jul-09	3:05 PM	0.105	n/a	
02-Aug-09	8:05 AM	-	n/a	
07-Aug-09	9:00 AM	0.100	n/a	
17-Aug-09	8:20 AM	0.125	n/a	
21-Aug-09	10:25 AM	0.135	n/a	
29-Aug-09	12:32 PM	0.160	n/a	
04-Sep-09	9:57 AM	0.160	n/a	
11-Sep-09	8:05 AM	0.155	n/a	
19-Sep-09	4:24 PM	0.150	n/a	
20-Sep-09	12:14 PM	0.170	n/a	
21-Sep-09	4:22 PM	0.190	n/a	
4-Oct-09	5:35 PM	0.175	n/a	
9-Oct-09	11:03 AM	Frozen	n/a	
30-Apr-10	10:00 AM	0.370	n/a	
3-May-10	12:06 PM	Frozen	n/a	
4-May-10	8:14 AM	0.197	n/a	
5-May-10	9:35 AM	Frozen	n/a	
17-May-10	11:57 AM	Frozen	n/a	
2-Jun-10	11:54 AM	0.210	n/a	
14-Jun-10	12:02 PM	0.196	129.01	
3-Jul-10	3:07 PM	0.220	n/a	

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
12-Jul-10	2:32 PM	0.150	106.97	
3-Aug-10	3:40 PM	0.106	47.08	
15-Aug-10	2:56 PM	0.100	59.44	
2-Sep-10	4:48 PM	0.132	76.98	
23-Sep-10	5:08 PM	Frozen	n/a	
4-Oct-10	1:38 PM	Frozen	n/a	
18-Oct-10	4:40 PM	Frozen	n/a	
14-Apr-11	5:03 PM	Frozen	n/a	
28-Apr-11	2:19 PM	Frozen	n/a	
16-May-11	3:50 PM	Icy Flow	n/a	
25-May-11	1:53 PM	0.580		
14-Jun-11	10:42 AM	0.192		
04-Jul-11	2:08 PM	0.231	468	Instream Flow: 447.2 L/s

Note: Data until end of 2009 as compiled in BGC 2009 Annual Geotechnical Evaluation and Instrumentation Review;
2010 Data compiled by DES

FCD-4 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
26-Jun-08	08:00:00	0.250	n/a	Previously called FD-1B
4-Jul-08	10:40:00	0.270	n/a	
7-Jul-08	11:40:00	0.270	n/a	
14-Jul-08	11:00:00	0.290	n/a	
15-Jul-08	10:40:00	0.540	n/a	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.195	n/a	
25-Aug-08	12:55:00	0.405	n/a	
13-Sep-08	08:15:00	0.285	n/a	
05-May-09		0.820	n/a	
14-May-09	8:20 AM		n/a	
22-May-09	6:35 AM	0.320	n/a	
24-May-09	7:00 AM	0.450	n/a	
29-May-09	8:40 AM	0.400	n/a	
31-May-09	7:00 AM	0.360	n/a	
04-Jun-09	1:45 PM	0.385	n/a	
05-Jun-09	6:30 AM	0.420	n/a	
06-Jun-09	7:55 AM	0.400	n/a	
09-Jun-09	6:48 AM	0.300	n/a	
10-Jun-09	6:48 AM	0.300	n/a	
10-Jun-09	2:30 PM	0.260	n/a	
13-Jun-09	8:55 AM	0.250	n/a	
17-Jun-09	5:15 PM	0.270	n/a	
25-Jun-09	3:10 PM	0.240	n/a	
02-Jul-09	12:53 PM	0.215	n/a	
07-Jul-09	5:40 PM	0.190	n/a	
15-Jul-09	10:30 AM	<0.15	n/a	
30-Jul-09	3:05 PM	>0.15	n/a	
02-Aug-09	8:05 AM	-	n/a	
07-Aug-09	9:00 AM	-	n/a	
17-Aug-09	8:20 AM	0.160	n/a	
21-Aug-09	10:25 AM	0.170	n/a	
29-Aug-09	12:32 PM	0.195	n/a	
04-Sep-09	9:57 AM	0.190	n/a	
11-Sep-09	8:05 AM	0.180	n/a	
19-Sep-09	4:24 PM	0.199	n/a	
20-Sep-09	12:14 PM	0.200	n/a	
21-Sep-09	4:22 PM	0.220	n/a	
4-Oct-09	5:35 PM	0.205	n/a	
9-Oct-09	11:03 AM	Frozen	n/a	
30-Apr-10	10:05 AM	0.410	n/a	
3-May-10	12:05 PM	0.239	n/a	
4-May-10	8:12 AM	0.238	n/a	
5-May-10	9:33 AM	Frozen	n/a	
17-May-10	12:00 PM	0.200	n/a	
2-Jun-10	11:56 AM	0.240	n/a	
14-Jun-10	12:00 PM	0.245	150.37	
3-Jul-10	3:05 PM	0.250	n/a	

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
12-Jul-10	2:50 PM	0.200	150.61	
3-Aug-10	3:55 PM	0.158	48.94	
15-Aug-10	3:10 PM	0.154	47.06	
2-Sep-10	4:36 PM	0.175	48.20	
23-Sep-10	4:52 PM	Frozen	n/a	
4-Oct-10	1:19 PM	Frozen	n/a	
18-Oct-10	4:37 PM	Frozen	n/a	
14-Apr-11	2:18 PM	Frozen	n/a	
28-Apr-11	5:05 PM	Frozen	n/a	
16-May-11	3:55 PM	Icy flow	n/a	
25-May-11	1:56 PM	0.610		
14-Jun-11	10:45 AM	Broken	n/a	Staff gauge broken
04-Jul-11	1:14 PM	0.268		New staff gauge installed

Note: Data until end of 2009 as compiled in BGC 2009 Annual Geotechnical Evaluation and Instrumentation Review;
 2010 Data compiled by DES

Date	X2SG		NFRC #23		RCSG-4		X14SG		Comments
	Time	Reading (m)	Time	Reading (m)	Time	Reading (m)	Time	Reading (m)	
1-Apr-11									
2-Apr-11									
3-Apr-11									
4-Apr-11									
5-Apr-11	2:03 PM	0.474	2:05 PM	0.470	2:13 PM	0.218	2:25 PM	0.427	Staff gauges steamed out this morning.
6-Apr-11	10:01 AM	0.465	10:00 AM	0.555	9:50 AM	0.200	9:32 AM	0.412	RCSG#4 is rusted and can't be read accurately
7-Apr-11	11:20 AM	0.453	11:23 AM	0.550	11:41 AM	0.215	9:26 AM	0.421	
8-Apr-11									
9-Apr-11	9:02 AM	0.420							
10-Apr-11	8:23 AM	Frozen	8:27 AM	0.464	8:14 AM	2.000	7:46 AM	0.415	RCSG#4 is rusted and can't be read accurately
11-Apr-11	8:40 AM	0.462	8:35 AM	0.490	8:46 AM	0.200	9:05 AM	0.410	RCSG#4 is rusted and can't be read accurately
12-Apr-11									
13-Apr-11	8:24 AM	0.479	Slushy		8:40 AM	0.200	8:52 AM	0.410	RCSG#4 is rusted and can't be read accurately. NFRC slushy and cannot take a read.
14-Apr-11	8:42 AM	0.480	Slushy		9:04 AM	0.230	9:23 AM	0.419	
15-Apr-11	8:55 AM	0.500	Frozen		8:38 AM	0.220	8:24 AM	0.421	
16-Apr-11									
17-Apr-11	8:54 AM	0.450	Frozen		8:36 AM	0.220	8:24 AM	0.420	
18-Apr-11	10:30 AM	0.452	Frozen		10:26 AM	0.190	8:46 AM	0.420	
19-Apr-11	10:26 AM	0.405	10:35 AM	Frozen	10:19 AM	0.197	9:41 AM	0.418	
20-Apr-11	9:20 AM	0.400	9:22 AM	Frozen	9:12 AM	0.150	9:00 AM	0.420	
21-Apr-11	9:10 AM	0.410	9:12 AM	Frozen	8:50 AM	0.175	8:49 AM	0.420	
22-Apr-11	9:29 AM	0.440			9:17 AM	0.190	8:23 AM	0.420	
23-Apr-11									
24-Apr-11	9:14 AM	0.410	9:12 AM	Frozen	8:57 AM	0.170	8:40 AM	0.420	
25-Apr-11	10:00 AM	0.337	10:02 AM	Frozen	9:49 AM	0.170	9:37 AM	0.419	
26-Apr-11	10:16 AM	0.290	10:17 AM	0.360	10:42 AM	0.180	11:27 AM	0.421	
27-Apr-11	10:24 AM	0.305	10:26 AM	0.370	10:36 AM	0.155	12:11 PM	0.418	
28-Apr-11	12:22 PM	0.320	12:23 PM	0.380	12:04 PM	0.162	9:42 AM	0.421	
29-Apr-11	11:15 AM	0.310	11:17 AM	0.360	11:04 AM	0.140	5:40 AM	0.420	
30-Apr-11	8:36 AM	0.320	8:38 AM	0.365	8:28 AM	0.249	8:15 AM	0.421	

Date	X2SG		NFRC #23		RCSG-4		X14SG		Comments
	Time	Reading (m)	Time	Reading (m)	Time	Reading (m)	Time	Reading (m)	
1-May-11	8:34 AM	0.185	8:37 AM	0.375	8:25 AM	0.192	8:10 AM	0.421	
2-May-11									
3-May-11	10:55 AM	no flow	10:56 AM	0.375	10:47 AM	0.120	9:25 AM	0.459	X2SG is in a pool of slush
4-May-11	9:10 AM	no flow	9:12 AM	0.350	9:00 AM	0.130	8:45 AM	0.425	X2SG is in a pool of slush
5-May-11									
6-May-11									
7-May-11									
8-May-11									
9-May-11	9:10 AM	no flow	9:11 AM	0.360	9:05 AM	0.160	8:50 AM	0.482	X2SG is in a pool of slush
10-May-11	8:55 AM	no flow	8:56 AM	no flow	8:52 AM	0.172	8:30 AM	0.482	
11-May-11	8:47 AM	no flow	8:46 AM	0.449	8:38 AM	0.199	8:20 AM	0.504	
12-May-11	9:03 AM	no flow	9:02 AM	0.561	8:55 AM	0.225	8:44 AM	0.525	
13-May-11	4:22 PM	no flow	4:25 PM	0.365	4:15 PM	0.201	10:11 AM	0.500	
14-May-11	5:50 PM	no flow	5:55 PM	0.370	5:42 PM	0.220	9:55 AM	0.513	
15-May-11	8:50 AM	no flow	8:48 AM	0.440	8:37 AM	0.320	8:25 AM	0.512	
16-May-11	9:19 AM	0.156	9:20 AM	0.599	9:10 AM	0.305			
17-May-11	8:34 AM	0.743	10:03 AM	1.199	10:03 AM	0.470	9:07 AM	0.665	
18-May-11	8:52 AM	0.561	8:53 AM	1.375	8:42 AM	0.570	8:25 AM	0.899	
19-May-11	8:45 AM	0.450	8:46 AM	1.125	8:40 AM	0.775	8:23 AM	1.199	
20-May-11	9:34 AM	0.435	9:35 AM	1.188	9:28 AM	0.797	9:07 AM	1.273	
21-May-11	8:48 AM	0.495	8:49 AM	1.375	8:35 AM	-	8:27 AM	1.555	RCSG#4 - water level above top of SG
22-May-11	8:38 AM	0.485	8:40 AM	1.355	8:30 AM	1.010	8:24 AM	1.553	
23-May-11	8:35 AM	0.645	8:36 AM	1.750	8:24 AM	1.100	8:13 AM	1.885	Estimates for NFRC#23 and RCSG#4 could not read
24-May-11	8:05 AM	0.662	8:06 AM	1.690	8:15 AM	~1.3	8:27 AM	1.855	RCSG#4 - estimate b/c water level above top of SG.
25-May-11	11:01 AM	0.605	11:10 AM	0.575	10:45 AM	-			Wavy @ X2 & NFRC#23 (read at bottom of crest). RCSG#4 - level above top of SG.
26-May-11	4:15 PM	0.510	4:16 PM	0.260	4:08 PM	0.910	1:32 PM	0.460	
27-May-11	11:11 AM	0.495	11:16 AM	0.315	11:54 AM	0.928	3:10 PM	0.432	
28-May-11	9:24 AM	0.510	9:25 AM	0.350	9:33 AM	0.938	10:08 AM	0.449	Water wavy @ X2, NFRC#23, & RCSG#4
29-May-11	8:43 AM	0.505	8:44 AM	0.280	9:31 AM	0.848	9:44 AM	0.331	
30-May-11	9:18 AM	0.495	9:20 AM	1.270	9:10 AM	0.895			
31-May-11	11:02 AM	0.580	11:04 AM	1.275	10:55 AM	0.890	10:10 AM	1.392	

Date	X2SG		NFRC #23		RCSG-4		X14SG		Comments
	Time	Reading (m)	Time	Reading (m)	Time	Reading (m)	Time	Reading (m)	
1-Jun-11	9:01 AM	0.455	9:03 AM	1.255	8:51 AM	0.884	8:38 AM	1.372	
2-Jun-11	8:50 AM	0.435	8:51 AM	1.080	8:43 AM	0.765	8:30 AM	1.208	
3-Jun-11	8:24 AM	0.390	8:26 AM	0.965	8:16 AM	0.697	8:00 AM	1.105	
4-Jun-11	8:21 AM	0.320	8:23 AM	0.840	8:14 AM	0.599	8:02 AM	0.972	Water wavy @ X2 & NFRC#23
5-Jun-11	7:54 AM	0.340	7:55 AM	0.875	7:47 AM	0.610	7:36 AM	0.989	Water wavy @ X2 & NFRC#23
6-Jun-11	8:58 AM	0.315	8:59 AM	0.815	8:50 AM	0.574	8:35 AM	0.940	Water wavy @ X2 & NFRC#23
7-Jun-11	10:17 AM	0.285	10:18 AM	0.770	8:08 AM	0.545	9:55 AM	0.909	
8-Jun-11	9:50 AM	0.310	9:52 AM	0.780	9:39 AM	0.556	9:25 AM	0.914	Water wavy @ X2 & NFRC#23
9-Jun-11	9:02 AM	0.290	9:03 AM	0.772	8:59 AM	0.549	8:37 AM	0.901	
10-Jun-11	8:53 AM	0.275	8:55 AM	0.735	9:01 AM	0.521	9:10 AM	0.874	
11-Jun-11	9:11 AM	0.290	9:09 AM	0.768	9:17 AM	0.558	9:33 AM	0.926	
12-Jun-11	8:52 AM	0.360	8:53 AM	0.945	8:45 AM	0.683	8:32 AM	1.098	
13-Jun-11	1:32 PM	0.299	1:33 PM	0.780	1:41 PM	0.565	8:51 AM	0.951	
14-Jun-11	9:04 AM	0.275	9:05 AM	0.730	8:57 AM	0.519	8:42 AM	0.877	
15-Jun-11	8:52 AM	0.255	8:53 AM	0.695	8:35 AM	0.491	8:17 AM	0.840	
16-Jun-11	8:26 AM	0.244	8:24 AM	0.674	8:35 AM	0.464	8:50 AM	0.812	
17-Jun-11	7:10 AM	0.238	7:12 AM	0.652	7:02 AM	0.448	6:53 AM	0.888	
18-Jun-11	9:32 AM	0.238	9:33 AM	0.653	9:24 AM	0.448	9:06 AM	0.791	
19-Jun-11	10:25 AM	0.226	10:27 AM	0.635	10:17 AM	0.433	10:03 AM	0.774	
20-Jun-11	8:49 AM	0.295	8:50 AM	0.760	8:40 AM	0.570	8:26 AM	0.898	Water wavy @ X2 & NFRC#23
21-Jun-11	8:29 AM	0.360	8:27 AM	0.954	8:36 AM	0.692	8:54 AM	0.994	Water wavy @ X2 & NFRC#23
22-Jun-11	9:18 AM	0.355	9:20 AM	0.952	9:05 AM	0.745	8:49 AM	1.170	
23-Jun-11	8:34 AM	0.410	8:35 AM	1.056	9:07 AM	0.824	8:53 AM	1.289	
24-Jun-11	8:03 AM	0.330	8:04 AM	0.910	7:52 AM	0.685	7:38 AM	1.101	
25-Jun-11	8:07 AM	0.290	8:09 AM	0.800	8:00 AM	0.599	7:47 AM	0.985	
26-Jun-11	7:58 AM	0.290	7:59 AM	0.790	7:51 AM	0.576	7:41 AM	0.945	
27-Jun-11	9:03 AM	0.345	9:01 AM	0.914	9:07 AM	0.630	9:38 AM	1.000	
28-Jun-11	10:20 AM	0.340	10:21 AM	0.928	10:26 AM	0.620	11:22 AM	1.000	
29-Jun-11	8:47 AM	0.410	8:48 AM	1.110	8:57 AM	0.760	9:16 AM	1.184	
30-Jun-11					8:35 AM	0.792	8:20 AM	1.250	

January 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
06-Jan-11	11:27	2.1	7.25	0.109	5.35	Weir measurement taken.
12-Jan-11	00:00					Weather conditions unsuitable for field work.
20-Jan-11	14:07	1.7	6.96	0.106	4.99	Weir measurement taken.
27-Jan-11	14:00	2.3	7.04	0.109	5.35	Weir measurement taken.
February 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Feb-11	10:54	2.4	7.17	0.109	5.35	Weir measurement taken.
09-Feb-11	14:40	2.9	7.01	0.116	6.25	Weir measurement taken.
16-Feb-11	14:33	1.3	6.95	0.113	5.85	Weir measurement taken.
24-Feb-11	13:08	2.9	6.860	0.115	6.11	Weir measurement taken.
March 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Mar-11	14:56	1.6	6.98	0.113	5.85	Weir measurement taken.
09-Mar-11	16:34	1.7	7.13	0.120	6.80	Weir measurement taken.
17-Mar-11	11:18	2.7	7.33	0.121	6.94	Weir measurement taken.
24-Mar-11	14:55	3.5	6.98	0.122	7.09	Weir measurement taken.
April 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
07-Apr-11	12:04	3.4	6.93	0.120	6.80	Weir measurement taken.
13-Apr-11	17:11	5.1	7.07	0.113	5.85	Weir measurement taken.
21-Apr-11	11:52	3.9	7.03	0.109	5.35	Weir measurement taken.
28-Apr-11	11:38	4.8	6.98	0.105	4.87	Weir measurement taken.
May 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
05-May-11	09:45	3.9	6.91	0.110	5.47	Weir measurement taken.
12-May-11	15:06	4.6	6.91	0.114	5.98	Weir measurement taken.
20-May-11	09:20	4.6	6.78	0.117	6.38	Weir measurement taken.
26-May-11	14:25	9.5	7.03	0.114	5.98	Weir measurement taken.
June 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
02-Jun-11	14:55	9.9	6.85	0.116	6.25	Weir measurement taken.
09-Jun-11	11:14	6.1	7.18	0.109	5.35	Weir measurement taken.
16-Jun-11	10:49	6.8	6.69	0.108	5.22	Weir measurement taken.
23-Jun-11	11:00	9.2	7.05	0.113	5.85	Weir measurement taken.
29-Jun-11	09:59	6.4	6.93	0.126	7.68	Weir measurement taken.

January 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
06-Jan-11	11:08	0.8	7.47	0.022	0.10	Weir measurement taken.
12-Jan-11	00:00					Weather conditions unsuitable for field work.
20-Jan-11	14:22	0.3	7.39	0.018	0.06	Weir measurement taken.
27-Jan-11	13:45	2.2	7.23	0.019	0.07	Weir measurement taken.
February 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Feb-11	11:32	1.1	7.50	0.013	0.03	Weir measurement taken.
09-Feb-11	14:50	0.7	7.79	0.022	0.10	Weir measurement taken.
16-Feb-11	14:47	0.5	7.62	0.019	0.07	Weir measurement taken.
24-Feb-11	13:22	0.9	7.30	0.025	0.13	Weir measurement taken.
March 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Mar-11	15:11	0.3	7.36	0.023	0.11	Weir measurement taken.
09-Mar-11	16:20	0.3	7.34	0.021	0.09	Weir measurement taken.
17-Mar-11	10:56	0.7	7.76	0.021	0.09	Weir measurement taken.
24-Mar-11	14:45	0.5	7.19	0.030	0.21	Weir measurement taken.
					0.00	
April 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
07-Apr-11	11:54	0.6	7.25	0.021	0.09	Weir measurement taken.
13-Apr-11	17:03	0.7	7.34	0.027	0.16	Weir measurement taken.
21-Apr-11	11:46	1.2	7.44	0.021	0.09	Weir measurement taken.
28-Apr-11	11:51	0.3	7.62	0.025	0.13	Weir measurement taken.
May 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
05-May-11	10:00	1.2	7.38	0.025	0.13	Weir measurement taken.
12-May-11	14:48	2.0	7.16	0.030	0.21	Weir measurement taken.
20-May-11	09:25	0.4	7.62	0.040	0.44	Weir measurement taken.
26-May-11	14:17	5.8	7.53	0.030	0.21	Weir measurement taken.
June 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
02-Jun-11	14:45	7.8	7.29	0.034	0.29	Weir measurement taken.
09-Jun-11	11:24	4.2	7.45	0.022	0.10	Weir measurement taken.
16-Jun-11	10:57	5.0	7.27	0.036	0.34	Weir measurement taken.
23-Jun-11	11:15	8.2	7.61	0.048	0.69	Weir measurement taken.
29-Jun-11	10:06	6.5	7.56	0.048	0.69	Weir measurement taken.

Weir 3

January 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
06-Jan-11	11:12	2.9	7.32	0.069	1.70	Weir measurement taken.
12-Jan-11	00:00					Weather conditions unsuitable for field work.
20-Jan-11	14:14	1.2	7.14	0.068	1.64	Weir measurement taken.
27-Jan-11	13:52	2.2	7.06	0.070	1.77	Weir measurement taken.
February 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Feb-11	11:15	2.7	7.33	0.075	2.10	Weir measurement taken.
09-Feb-11	14:45	3.0	7.33	0.071	1.83	Weir measurement taken.
16-Feb-11	14:41	2.4	7.18	0.072	1.90	Weir measurement taken.
24-Feb-11	13:16	3.1	7.00	0.068	1.64	Weir measurement taken.
March 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Mar-11	15:05	1.8	7.25	0.071	1.83	Weir measurement taken.
09-Mar-11	16:25	2.5	7.08	0.078	2.32	Weir measurement taken.
17-Mar-11	11:12	2.5	7.55	0.077	2.24	Weir measurement taken.
24-Mar-11	14:49	3.1	7.00	0.077	2.24	Weir measurement taken.
					0.00	
April 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
07-Apr-11	11:59	3.5	6.86	0.079	2.39	Weir measurement taken.
13-Apr-11	17:07	3.9	7.02	0.073	1.96	Weir measurement taken.
21-Apr-11	11:48	3.2	7.07	0.076	2.17	Weir measurement taken.
28-Apr-11	11:47	4.6	7.03	0.074	2.03	Weir measurement taken.
May 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
12-May-11	09:55	3.9	6.94	0.074	2.03	Weir measurement taken.
12-May-11	15:02	4.3	6.86	0.076	2.17	Weir measurement taken.
20-May-11	09:22	3.6	6.94	0.082	2.62	Weir measurement taken.
26-May-11	14:11	7.5	7.05	0.075	2.10	Weir measurement taken.
June 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
02-Jun-11	14:50	8.3	6.95	0.074	2.03	Weir measurement taken.
09-Jun-11	11:20	5.0	7.20	0.079	2.39	Weir measurement taken.
16-Jun-11	10:53	4.5	6.81	0.080	2.47	Weir measurement taken.
23-Jun-11	11:10	7.6	7.08	0.083	2.70	Weir measurement taken.
29-Jun-11	10:05	6.4	7.20	0.090	3.31	Weir measurement taken.

January 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
06-Jan-11	11:24	1.5	7.28	0.042	14.46	Weir measurement taken.
12-Jan-11	13:42	1.0	7.42	0.038	12.45	Weir measurement taken.
20-Jan-11	14:02	1.3	7.04	0.046	16.58	Weir measurement taken.
27-Jan-11	14:02	1.9	7.27	0.037	11.96	Weir measurement taken.
February 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Feb-11	10:39	2.7	7.20	0.035	11.00	Weir measurement taken.
09-Feb-11	14:34	2.8	7.11	0.036	11.48	Weir measurement taken.
16-Feb-11	14:27	1.4	7.18	0.039	13.09	Weir measurement taken.
24-Feb-11	13:03	2.7	7.10	0.043	14.98	Weir measurement taken.
March 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
03-Mar-11	15:00	2.0	7.11	0.040	13.44	Weir measurement taken.
09-Mar-11	16:31	1.6	7.18	0.044	15.51	Weir measurement taken.
17-Mar-11	11:21	2.6	7.38	0.044	15.51	Weir measurement taken.
24-Mar-11	14:58	3.1	7.17	0.047	17.12	Weir measurement taken.
					0.00	
April 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
07-Apr-11	12:07	3.3	7.02	0.045	16.04	Weir measurement taken.
13-Apr-11	17:13	3.9	7.14	0.041	13.95	Weir measurement taken.
21-Apr-11	11:54	3.8	7.04	0.041	13.95	Weir measurement taken.
28-Apr-11	11:41	4.4	7.05	0.046	16.58	Weir measurement taken.
May 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
05-May-11	09:47	3.9	6.98	0.046	16.58	Weir measurement taken.
12-May-11	15:09	4.4	6.92	0.051	19.35	Weir measurement taken.
20-May-11	09:14	5.0	6.37	0.052	19.92	Weir measurement taken.
26-May-11	14:21	7.5	7.05	0.075	34.51	Weir measurement taken.
June 2011						
Date	Time	Temp	pH	S.G (m)	Flow (L/s)	Comment
02-Jun-11	14:59	9.3	6.96	0.043	14.98	Weir measurement taken.
09-Jun-11	11:16	5.3	7.12	0.050	18.79	Weir measurement taken.
16-Jun-11	10:45	7.0	6.850	0.05	19.92	Weir measurement taken.
23-Jun-11	11:05	7.5	7.060	0.05	18.50	Weir measurement taken.
29-Jun-11	10:01	6.0	7.000	0.04	14.72	Weir measurement taken.

Intermediate Dam - Piezometric Monitoring BH96-2



BH96-2		Location:	Intermediate Dam Crest		
		Coordinates:	8V580696 6914096	Tip Elevation (m amsl):	1028.87
Surface Protector:	Yes	Date Installed:	1996	2004 Surface Elevation: (m amsl)	1049.22
		Screened Interval (m bgs):	17.13 - 20.12	2004 Stick Up (m):	0.72
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Comments		
8-Sep-96	19.74	1030.31			
26-Sep-96					
27-Sep-96	19.94	1030.11			
13-May-97					
6-Jun-97					
11-Jul-97					
7-Oct-97	18.30	1031.75			
1-Jun-98	18.44	1031.61			
31-Oct-98	19.80	1030.25			
13-Nov-98	19.69	1030.36			
8-Jun-99	18.11	1031.94			
19-Jun-99					
3-Jul-99					
29-Oct-99	20.25	1029.80			
31-Oct-99					
31-May-00					
27-Jun-00					
25-Jul-00					
21-Sep-00	19.78	1030.27			
10-Oct-00					
6-Jun-01					
15-Jul-01					
5-Sep-01					
18-Jun-02	19.38	1030.68			
5-Aug-02	20.15	1029.90			
10-Sep-02	19.68	1030.37			
4-Nov-02	19.82	1030.24			
10-Nov-02	19.73	1030.32			
11-Jun-03	19.71	1030.34			
10-Sep-03	20.65	1029.40			
10-May-04	21.07	1028.87	Dry reading, 2004 survey data used from here on		
19-Jul-04	19.62	1030.33			
9-Sep-04	20.02	1029.92			
26-May-05	19.95	1029.99			
14-Sep-05	21.04	1028.90	bottom iron mud on probe		
9-Mar-06	21.15	1028.79			
27-Mar-06	21.03	1028.91	no beep, mud on probe		
14-Jun-06	13.05				
2-Oct-06	21.04	1028.90			
22-May-07	20.34	1029.60	no beep, dry		
26-Sep-07	21.40	1028.54			
20-May-08	19.89	1030.06			
11-Jun-08	20.19	1029.75			
24-Sep-08	20.58	1029.36			
29-Jun-09	21.50	1028.44	no beep		
30-Sep-09	20.24	1029.70			
15-May-10	20.27	1029.67			
2-Jun-10	20.67	1029.27			
10-Sep-10	21.04	1028.91			
27-Apr-11	20.93	1029.02			

Intermediate Dam - Piezometric Monitoring BH96-2



Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Comments
3-May-11	20.81	1029.13	
9-May-11	20.84	1029.10	
17-May-11	21.05	1028.89	
24-May-11	21.06	1028.88	Soft bottom; muddy tip on tape.
30-May-11	21.05	1028.89	Bottom
13-Jun-01	21.05	1028.89	

Intermediate Dam - Piezometric Monitoring P01-03



P01-03		Location:	Intermediate Dam Toe	2004 Stick-Up (m):	0.61
		Coordinates:	8V580636 6914064	2004 Surface Elevation (m amsl):	1031.52
Surface Protector:	Yes	Date Installed:	1996	Tip Elevation (m amsl):	1022.35
				Screened Interval (m bgs):	7.78 - 9.30
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
11-Sep-01		1.58	1030.63		
10-Jun-02		2.39	1029.82		
23-Sep-02		2.06	1030.15	1047.19	
11-Jun-03		1.61	1030.60		
10-Sep-03		3.08	1029.14		
10-May-04		1.70	1030.43	1046.59	2004 survey info used from here on
8-Jul-04		1.82	1030.31	1045.86	
19-Jul-04		2.07	1030.06	1045.97	
9-Sep-04		2.46	1029.68	1046.27	Dirty, strong sulphur smell
26-May-05		3.29	1028.85	1047.01	ph=6.7, temp=9.0C
14-Sep-05		3.96	1028.17	1046.37	ph=6.8, temp=6.4C
9-Mar-06		4.38	1027.75	1047.58	
27-Mar-06		4.07	1028.06	1047.55	
14-Jun-06		4.06	1028.07	1046.85	
2-Oct-06		4.14	1027.99	1046.18	
22-May-07		2.45	1029.69	1046.78	No Beep, frozen
26-Sep-07		4.01	1028.12	1046.38	
20-May-08		1.85	1030.28	1046.73	No Beep, frozen
11-Jun-08		2.71	1029.42	1046.04	
24-Sep-08		3.12	1029.02	1046.29	
29-Jun-09		3.92	1028.21	1046.48	
30-Sep-09		2.76	1029.37	1046.05	
15-May-10		2.77	1029.36	1046.42	
2-Jun-10		3.19	1028.94	1045.94	
10-Sep-10		4.40	1027.74	1043.73	
10-May-11		2.49	1029.64	1045.27	frozen
17-May-11		2.49	1029.64	1045.45	
24-May-11		2.49	1029.64	1045.59	frozen
30-May-11		2.49	1029.64	1045.44	frozen
13-Jun-11		2.50	1029.63	1045.13	frozen
12-Jul-11		3.79	1028.35	1044.57	

Intermediate Dam - Piezometric Monitoring BH96-4



BH96-4		Location:		Intermediate Dam Toe,	2004 Stick Up - A (m):		0.95		
		Coordinates:		8V580669 6914113	2004 Stick Up - B (m):		0.87		
Surface Protector:	N/A	Date Installed:		1996	2004 Stick Up - C (m):		0.91		
Screened Interval - A (m bgs):	5.7-6.48	Screened Interval - C (m bgs):		14.97-16.47	2004 Stick Up - D (m):		0.88		
Screened Interval - B (m bgs):	9.8-11.3	Screened Interval - D (m bgs):		26.84-28.34	2004 Surface Elevation (m amsl):		1032.16		
Date	Water level from top of pipe (m)				Piezometric Elevation (m amsl)				Comments
	A	B	C	D	A	B	C	D	
08-Sep-96	3.11	3.04	2.98	2.88	1029.99	1030.01	1030.02	1030.12	
26-Sep-96	3.27	3.25	3.12	3.05	1029.83	1029.80	1029.88	1029.95	
27-Sep-96									
13-May-97	5.21		4.85		1027.89		1028.15		
06-Jun-97									
11-Jul-97		3.51				1029.54			
07-Oct-97	1.45	1.87	1.82		1031.65	1031.18	1031.18		
01-Jun-98	1.84	1.84	1.83	1.62	1031.26	1031.21	1031.17	1031.38	
31-Oct-98	3.18	3.15	3.09	3.01	1029.92	1029.90	1029.91	1029.99	
13-Nov-98									
08-Jun-99									
19-Jun-99	1.43	1.38	1.36	1.25	1031.67	1031.67	1031.64	1031.75	
03-Jul-99									
29-Oct-99	3.68	3.62	3.60	3.48	1029.42	1029.43	1029.40	1029.52	
31-Oct-99									
31-May-00									
27-Jun-00	3.14	3.08	3.07	2.93	1029.96	1029.97	1029.93	1030.07	
25-Jul-00			2.84				1030.16		
21-Sep-00									
10-Oct-00	2.92	2.85	2.83	2.71	1030.18	1030.20	1030.17	1030.29	
06-Jun-01	3.13	3.04	3.06	2.94	1029.97	1030.01	1029.94	1030.06	
15-Jul-01									
05-Sep-01	2.77	2.68	2.71	2.57	1030.33	1030.37	1030.29	1030.43	
18-Jun-02	1.06	0.77			1032.04	1032.28			
05-Aug-02									
10-Sep-02	3.31	3.24	3.25	3.11	1029.80	1029.82	1029.75	1029.90	
04-Nov-02									
10-Nov-02									
11-Jun-03	3.24	3.15	3.21	3.06	1029.86	1029.90	1029.79	1029.94	
10-Sep-03	4.19	3.82	4.15	3.99	1028.91	1029.23	1028.85	1029.01	
10-May-04	3.18	3.10	3.14	3.01	1029.93	1029.94	1029.93	1030.03	2004 survey info used from here on
08-Jul-04	3.16	3.09	3.12	2.99	1029.95	1029.94	1029.96	1030.06	
19-Jul-04	3.56	3.09	3.12	2.99	1029.55	1029.94	1029.96	1030.06	
09-Sep-04	3.41	3.41	3.50	3.38	1029.70	1029.62	1029.57	1029.67	a, b and c - dirty; d - clear; a and d - sulphur smell
26-May-05	4.415	3.74		4.22	1028.70	1029.29		1028.83	coarse sand frozen
14-Sep-05	5.1	3.75	5.25	4.89	1028.01	1029.28	1027.82	1028.15	b- bottom blocked
09-Mar-06	5.50	blocked	5.33	5.31	1027.61		1027.74	1027.73	b- bottom blocked
27-Mar-06	5.19	blocked	5.12	4.99	1027.92		1027.96	1028.05	b- bottom blocked, ice crystals on probe
14-Jun-06	2.66	3.75	0.40	4.98		1028.41		1028.06	b-bottom. C-bottom fine sand
02-Oct-06	5.28	3.75	5.20	5.07	1027.83	1028.41	1027.87	1027.97	
22-May-07	3.15	3.75	1.52	3.11	1029.96	1028.41	1031.55	1029.93	a, b and d- frozen no beep
26-Sep-07	4.92	3.74	4.84	4.71	1028.20	1028.42	1028.23	1028.34	b: drv

Intermediate Dam - Piezometric Monitoring BH96-4



Date	Water level from top of pipe (m)				Piezometric Elevation (m amsl)				Comments
	A	B	C	D	A	B	C	D	
20-May-08	3.46	3.37	3.39	2.60	1029.65	1028.79	1029.68	1030.44	
11-Jun-08	3.79	3.70	3.72	3.60	1029.32	1028.46	1029.35	1029.44	
24-Sep-08	4.23	3.75	4.15	4.01	1028.88	1028.41	1028.92	1029.03	b: dry
29-Jun-09	5.03	3.77	4.93	4.80	1028.08	1028.39	1028.14	1028.24	b: no beep
30-Sep-09	3.85	3.77	3.77	2.65	1029.26	1028.39	1029.30	1030.39	
15-May-10				3.66				1029.38	
2-Jun-10				4.08				1028.96	
27-Apr-11				4.28				1028.76	
3-May-11				4.17				1028.87	
9-May-11				4.19				1028.86	
17-May-11				4.45				1028.59	
24-May-11				4.59				1028.45	frozen
30-May-11				4.75				1028.29	
13-Jun-11				4.99				1028.05	frozen

Intermediate Dam - Piezometric Monitoring

BH91-ID4



BH91-ID4		Location:	Intermediate Dam Toe @St.0+567		Shallow Tip Elevation (m amsl):	1024.22
		Coordinates:	8V580517 6913926		Deep Tip Elevation (m amsl):	1017.08
Surface Protector:	Yes	Date Installed:	1991		*Surface Elevation (m amsl):	1031.80
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond Elev. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
	(upper)	(lower)	(upper)	(lower)		
Jul-91	10.34	19.06	1031.46	1030.42	1042.2	
Aug-91	10.81	19.20	1031.79	1030.52	1042.2	
Sep-91	11.10	19.30	1031.99	1030.59	1042.2	
Feb-92	12.24	19.59	1032.79	1030.79	1047.7	
Apr-92	12.44	19.64	1032.93	1030.83	1047.7	
Jun-92	14.80	20.40	1034.58	1031.36	1047.7	
Sep-92	11.86	21.10	1032.52	1031.85	1047.7	
May-94	10.00	18.70	1031.22	1030.17	1047.7	
Sep-94	8.90	17.40	1030.45	1029.26	1047.7	
Sep-95	11.00	19.00	1031.92	1030.38	1047.7	
Sep-96	10.00		1031.22		1048.1	
Oct-96	9.7	18.8	1031.01	1030.24		
7-May-97	6.3		1028.63			
17-Oct-97	11.58		1032.33			
27-May-98	11.04		1031.95		1048.1	
7-Aug-98		19.4		1030.66	1048.1	
12-Nov-98	9.22		1030.67		1047.8	
4-Dec-98	8.7	18.0	1030.31	1029.68	1047.8	
29-May-99	11.40	20.00	1032.20	1031.08	1048	
16-Sep-99	7.7	16.2	1029.61	1028.42	1047.7	
14-Jun-00	10.5	19.1	1031.57	1030.45	1047.6	
9-Sep-00	9.8	18.2	1031.08	1029.82		
10-Jun-01	9.50	18.1	1030.87	1029.75		
20-Sep-01	9.70	18.2	1031.01	1029.82		
18-Jun-02	9.70	18.80	1031.01	1030.24		
10-Sep-02	9.00	17.80	1030.52	1029.54		
4-Nov-02	9.00	17.60	1030.52	1029.40		
10-Nov-02	9.20	17.7	1030.66	1029.47		
11-Jun-03	9.00	17.7	1030.52	1029.47		*New piezometer readout used
10-Sep-03	7.60	16.4	1029.54	1028.56		
10-May-04	8.9	18.1	1030.45	1029.75	1046.590	No 2004 elevation data
19-Jul-04	9.2	17.8	1030.66	1029.54	1045.972	
9-Sep-04	8.6	17.2	1030.24	1029.12	1046.272	
26-May-05	7.5	16	1029.47	1028.28	1047.012	
14-Sep-05	6.5	15.1	1028.77	1027.65	1046.370	
09-Mar-06	5.9	14.5	1028.35	1027.23	1047.575	
27-Mar-06	6.3	14.9	1028.63	1027.51	1047.550	
14-Jun-06	6.3	14.9	1028.63	1027.51	1046.848	
02-Oct-06	6.3	14.9	1028.63	1027.51	1046.180	
22-May-07	8.2	16.8	1029.96	1028.84	1046.781	Good Flow
26-Sep-07	5.8	15	1028.28	1027.58	1046.375	
20-May-08	9.2	17.5	1030.66	1029.33	1046.727	
11-Jun-08	8.7	16.9	1030.31	1028.91	1046.040	
24-Sep-08	7.9	16.4	1029.75	1028.56	1046.285	
29-Jun-09	6.7	15.2	1028.91	1027.72	1046.480	
30-Sep-09	8.7	16.9	1030.31	1028.91	1046.048	
15-May-10	8.4	16.9	1030.10	1028.91	1046.424	
02-Jun-10	16.7	13.8	1035.91	1026.74	1045.940	
10-Sep-10	6.7	14.6	1028.91	1027.30	1043.726	
27-Apr-11	7.7	16	1029.61	1028.28	1045.500	
09-May-11	7.8	16.1	1029.68	1028.35	1045.272	
17-May-11	7.4	15.6	1029.40	1028.00	1045.445	
24-May-11	7.3	15.8	1029.33	1028.14	1045.586	

Intermediate Dam - Piezometric Monitoring BH91-ID4



Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond Elev. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
	(upper)	(lower)	(upper)	(lower)		
30-May-11	6.8	15.2	1028.98	1027.72	1045.436	
13-Jun-11	7.8	15	1029.68	1027.58	1045.132	

Intermediate Dam - Piezometric Monitoring

BH94-IDC-1



BH94-IDC-1		Location:	Intermediate Dam Crest	2004 Stick Up (m):	0.27
		Coordinates:	8V580605 6913969	2004 Surface Elevation (m amsl):	1049.21
Surface Protector:	Yes	Date Installed:	1994	Tip Elevation:	N/A
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments	
2-Jun-94			1047.70	dry	
16-Sep-94			1047.70	dry	
22-Sep-95			1047.70	dry	
25-Sep-96			1048.10	dry	
28-May-98			1048.10	dry	
13-Nov-98	14.10	1035.48	1047.80	dry	
8-Jun-99	14.10	1035.48	1047.80	dry	
16-Sep-99	14.18	1035.40	1047.70	dry	
14-Jun-00	14.11	1035.47	1047.60	dry	
9-Sep-00	14.11	1035.47	1047.60	H2O	
10-Jun-01	14.11	1035.47	1047.60		
1-Aug-01	14.11	1035.47	1047.60	dry	
18-Jun-02	14.11	1035.47		dry	
5-Aug-02	14.19	1035.40		dry	
2-Sep-02	14.11	1035.47		dry	
2-Nov-02	14.11	1035.47		dry	
10-Nov-02	14.11	1035.47		dry	
11-Jun-03	14.12	1035.46		dry	
10-Sep-03	14.11	1035.47		dry	
10-May-03	14.11	1035.47		dry	
19-Jul-04	14.11	1035.37	1045.972	dry	
9-Sep-04	14.11	1035.37	1046.272	dry	
26-May-05	14.12	1035.36	1047.012	bottom	
14-Sep-05	14.12	1035.36	1046.370	bottom	
9-Mar-06	14.17	1035.31	1047.575		
27-Mar-06	14.13	1035.35	1047.550	no beep, ice crystals	
14-Jun-06	14.13	1035.36	1046.848	bottom	
2-Oct-06	14.12	1035.36	1046.180		
22-May-07	14.14	1035.35	1046.781	bottom and beep	
26-Sep-07	14.13	1035.36	1046.375	no beep	
20-May-08	14.15	1035.33	1046.727	no beep	
11-Jun-08	14.14	1035.34	1046.040	no beep	
24-Sep-08	14.14	1035.34	1046.285	no beep	
29-Jun-09	14.15	1035.33	1046.480	no beep	
30-Sep-09	14.16	1035.33	1046.048	no beep	
15-May-10	14.17	1035.31	1046.424	no beep	
2-Jun-10	14.15	1035.33	1045.940	no beep	
10-Sep-10	14.15	1035.33	1043.726	no beep	
10-May-11	14.14	1035.35	1045.272	dry	
17-May-11	14.14	1035.34	1045.445		
24-May-11	14.14	1035.34	1045.586	dry	
30-May-11	14.13	1035.35	1045.436	dry	
13-Jun-11	14.13	1035.35	1045.132	dry	

Intermediate Dam - Piezometric Monitoring BH96-1



BH96-1		Location:	Intermediate Dam Crest	
		Coordinates:	8V580563 6913908	2004 Stick Up: 0.68
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation (m amsl): 1049.15
		Screened Interval (m bgs):	18.77 - 21.80	Tip Elevation (m amsl): 1027.35
Date		Water level from top of pipe (m)		Piezometric Elevation (m amsl)
				Comments
8-Sep-96		20.06		1029.99
26-Sep-96				
27-Sep-96				
13-May-97				
6-Jun-97				
11-Jul-97				
7-Oct-97		18.77		1031.28
1-Jun-98		18.73		1031.32
31-Oct-98		20.08		1029.97
13-Nov-98		19.97		1030.08
8-Jun-99		18.40		1031.65
19-Jun-99				
3-Jul-99				
29-Oct-99		20.55		1029.50
31-Oct-99				
31-May-00				
27-Jun-00				
25-Jul-00				
21-Sep-00		20.13		1029.92
10-Oct-00				
6-Jun-01				
15-Jul-01				
5-Sep-01				
18-Jun-02				
5-Aug-02		20.48		1029.57
10-Sep-02		20.02		1030.03
4-Nov-02		20.14		1029.91
10-Nov-02		20.06		1029.99
11-Jun-03		20.03		1030.03
10-Sep-03		20.96		1029.09
12-May-04		19.93		1029.91
8-Jul-04		19.70		1030.14
19-Jul-04		19.95		1029.89
9-Sep-04		20.33		1029.51
26-May-05		21.17		1028.66
14-Sep-05		21.82		1028.01
9-Mar-06				
27-Mar-06				no read, frozen
14-Jun-06		2.27		likely a mistake
2-Oct-06		21.98		1027.85
22-May-07				no read, frozen
26-Sep-07		21.66		1028.18
20-May-08		1.22		no beep, frozen
11-Jun-08		1.20		no beep, frozen
24-Sep-08		20.97		1028.86
29-Jun-09		3.08		frozen
30-Sep-09		20.59		1029.24
15-May-10		20.59		1029.24
2-Jun-10		21.02		1028.81
10-Sep-10		22.20		1027.63

Intermediate Dam - Piezometric Monitoring BH96-1



Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)	Comments
10-May-11	21.17		1028.67	
17-May-11	21.40		1028.43	
24-May-11	21.56		1028.27	
30-May-11	21.69		1028.15	
13-Jun-11	21.91		1027.92	

Intermediate Dam - Piezometric Monitoring BH96-3



BH96-3		Location:	Intermediate Dam Toe, near the North Abutment	2004 Stick Up - A (m):	0.65
		Coordinates:	8V580529 6913934	2004 Stick Up - B (m):	0.59
Surface Protector:	Yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1031.48
		Tip Elevation - A (m amsl):	1022.43	Screened Interval - A (m bgs):	7.44 - 8.97
		Tip Elevation - B (m amsl):	1012.23	Screened Interval - B (m bgs):	17.7 - 19.17
Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)		Comments
	A	B	96-3A (Shallow)	96-3B (Deep)	
08-Sep-96	2.37	2.25	1029.71	1029.78	
26-Sep-96	2.53	2.40	1029.55	1029.63	
27-Sep-96					
13-May-97	4.50	4.32	1027.58	1027.71	
06-Jun-97					
11-Jul-97					
07-Oct-97	1.06	0.95	1031.02	1031.08	
01-Jun-98	1.07	0.99	1031.01	1031.04	
31-Oct-98	2.44	2.34	1029.64	1029.69	
13-Nov-98					
08-Jun-99					
19-Jun-99	0.70	0.58	1031.38	1031.45	
03-Jul-99					
29-Oct-99	2.94	2.82	1029.14	1029.21	
31-Oct-99					
31-May-00					
27-Jun-00	2.41	2.26	1029.67	1029.77	
25-Jul-00					
21-Sep-00					
10-Oct-00	2.20	2.05	1029.88	1029.98	
06-Jun-01	2.38	2.24	1029.70	1029.79	
15-Jul-01	2.00	1.86	1030.08	1030.17	
05-Sep-01	1.98	1.86	1030.10	1030.17	
18-Jun-02	1.81		1030.27		
05-Aug-02					
10-Sep-02	2.57	2.42	1029.52	1029.61	
04-Nov-02					
10-Nov-02					
11-Jun-03	2.47	2.34	1029.61	1029.69	
10-Sep-03	3.43	3.28	1028.65	1028.75	
08-Jul-04	2.15	2.01	1029.98	1030.06	2004 survey data used from here on
19-Jul-04	2.40	2.23	1029.73	1029.85	
09-Sep-04	2.77	2.65	1029.36	1029.43	clear, sulphur smell
26-May-05	3.66	3.49	1028.47	1028.58	
14-Sep-05	4.37	4.18	1027.77	1027.89	
09-Mar-06	4.76	4.59	1027.37	1027.48	
27-Mar-06	4.43	4.26	1027.70	1027.81	
14-Jun-06	4.45	4.26	1027.68	1027.81	
2-Oct-06	4.42	4.30	1027.71	1027.77	
22-May-07	2.29	2.88	1029.84	1029.19	a- frozen no beep
26-Sep-07	4.06	3.94	1028.07	1028.13	
20-May-08	2.56	2.48	1029.57	1029.59	
11-Jun-08	2.91	2.81	1029.22	1029.26	
24-Sep-08	3.36	3.25	1028.77	1028.82	
29-Jun-09	4.17	4.04	1027.96	1028.03	

Intermediate Dam - Piezometric Monitoring BH96-3

Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)		Comments
	A	B	96-3A (Shallow)	96-3B (Deep)	
30-Sep-09	2.97	2.87	1029.16	1029.20	
15-May-10	2.95	2.85	1029.18	1029.22	
02-Jun-10	3.39	3.28	1028.74	1028.79	
10-Sep-10	5.51	3.77	1026.62	1028.31	
27-Apr-11	3.57	3.47	1028.56	1028.60	
03-May-11	3.46	3.37	1028.67	1028.70	
09-May-11	3.48	3.38	1028.65	1028.69	
17-May-11	3.79	3.68	1028.34	1028.39	
24-May-11	3.92	3.81	1028.21	1028.26	
30-May-11	4.08	3.98	1028.05	1028.09	
13-Jun-11	4.35	4.22	1027.78	1027.86	

Intermediate Dam - Piezometric Monitoring P01-04



P01-04		Location:	Intermediate Dam Toe	2004 Stick Up - A (m):	0.45
		Coordinates:	8V580489 6913888	2004 Stick Up - B (m):	0.45
Surface Protector:	Yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1032.32
		Screened Interval - A (m bgs):	31.7 - 33.22	Tip Elevation - A (m amsl):	998.17
		Screened Interval - B (m bgs):	51.0 - 52.5	Tip Elevation - B (m amsl):	978.89
Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)		Comments
	A	B	A	B	
11-Sep-01	0.78	0.43	1031.12	1031.46	
10-Jun-02	1.67	1.29	1030.23	1030.60	
23-Sep-02	1.39	1.00	1030.51	1030.89	
11-Jun-03	1.45	1.03	1030.45	1030.86	
10-Sep-03	2.35	1.90	1029.55	1029.99	
10-May-04	1.25	1.17	1031.52	1031.60	2004 survey info used from this point on
08-Jul-04	1.18	0.76	1031.59	1032.02	
19-Jul-04	1.42	0.99	1031.35	1031.78	
09-Sep-04	1.83	1.40	1030.95	1031.37	
26-May-05	0.53	0.60	1032.24	1032.17	bottom, no beep
14-Sep-05	2.69	3.22	1030.08	1029.56	
09-Mar-06	1.99	3.71	1030.78	1029.06	
27-Mar-06	1.99	3.42	1030.78	1029.35	bottom
14-Jun-06	1.99	2.60	1030.79	1030.18	bottom
02-Oct-06	2.85	3.40	1029.92	1029.37	
22-May-07	0.82	2.13	1031.95	1030.64	a-beep, b-frozen no beep
26-Sep-07	2.45	3.00	1030.33	1029.77	
20-May-08	0.69	1.56	1032.09	1031.21	b-no beep, frozen
11-Jun-08	1.39	1.93	1031.38	1030.84	
24-Sep-08	1.65	2.26	1031.13	1030.51	
29-Jun-09	2.44	3.04	1030.33	1029.73	
30-Sep-09	1.37	1.85	1031.41	1030.93	
15-May-10	1.60	2.04	1031.18	1030.73	
02-Jun-10	1.78	2.05	1030.99	1030.72	
10-Sep-10	3.50	2.95	1029.27	1029.82	
10-May-11	1.346	2.10	1031.42	1030.67	both wells frozen
17-May-11	1.851	2.10	1030.92	1030.67	both wells frozen
24-May-11	1.853	2.10	1030.92	1030.67	both wells frozen
30-May-11	1.851	2.10	1030.92	1030.67	both wells frozen
13-Jun-11	1.846	2.09	1030.92	1030.68	both wells frozen
12-Jul-11	2.275	2.85	1030.50	1029.93	both wells frozen

Intermediate Dam - Piezometric Monitoring

BH91-ID6



BH91-ID6		Location:	Intermediate Dam Toe @St.0+630		Shallow Tip Elevation (m amsl):	1024.80
		Coordinates:	8V580475 6913866		Deep Tip Elevation (m amsl):	1016.90
Surface Protector:	Yes	Date Installed:	1991		2004 Surface Elevation (m amsl):	1031.36
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond Elev. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
	(upper)	(lower)	(upper)	(lower)		
Jul-91	7.89	20.33	1030.32	1031.13	1042.20	
Aug-91	8.06	20.91	1030.44	1031.54	1042.20	
Sep-91	8.20	20.80	1030.54	1031.46	1042.20	
Feb-92	8.20	20.70	1030.54	1031.39	1047.70	
Apr-92	9.06	23.10	1031.14	1033.07	1047.70	
Jun-92	9.91	25.80	1031.74	1034.96	1047.70	
Sep-92	8.67	21.36	1030.87	1031.85	1047.70	
May-94	7.20	20.00	1029.84	1030.90	1047.70	
Sep-94	6.20	18.90	1029.14	1030.13	1047.70	
Sep-95	7.50	20.00	1030.05	1030.90	1047.70	
Sep-96	6.60		1029.42		1048.10	
Oct-96	5.80	21.10	1028.86	1031.67		
7-May-97	2.90		1026.83			
17-Oct-97	8.41		1030.69			
27-May-98	8.56		1030.79		1048.10	
7-Aug-98		20.80		1031.46	1048.10	
12-Nov-98	6.57		1029.40		1047.80	
4-Dec-98	6.80	19.50	1029.56	1030.55	1047.80	
29-May-99	8.78	21.50	1030.95	1031.95	1048.00	
16-Sep-99	5.30	17.60	1028.51	1029.22	1047.70	
14-Jun-00	7.70	20.41	1030.19	1031.19	1047.60	
9-Sep-00	6.80	19.70	1029.56	1030.69		
10-Jun-01	6.80	19.50	1029.56	1030.55		
20-Sep-01	7.00	19.70	1029.70	1030.69		
18-Jun-02	6.80	19.60	1029.56	1030.62		
10-Sep-02	6.50	19.20	1029.35	1030.34		
4-Nov-02	6.30	19.00	1029.21	1030.20		
10-Nov-02	6.30	19.20	1029.21	1030.34		
11-Jun-03	6.40	19.00	1029.28	1030.20		*New piezometer started use here
10-Sep-03	5.10	17.60	1028.37	1029.22		
10-May-04	6.30	19.00	1029.21	1030.20	1046.590	2004 survey data used from this point on
19-Jul-04	6.50	19.10	1029.35	1030.27	1045.972	
9-Sep-04	5.90	18.60	1028.93	1029.92	1046.272	
26-May-05	4.50	17.40	1027.95	1029.08	1047.012	
14-Sep-05	3.60	16.50	1027.32	1028.45	1046.370	
9-Mar-06	3.50	16.10	1027.25	1028.17	1047.575	
27-Mar-06	3.40	16.40	1027.18	1028.38	1047.550	3.4/3.5 won't stabilize
14-Jun-06	3.70	16.30	1027.39	1028.31	1046.848	
2-Oct-06	3.50	16.30	1027.25	1028.31	1046.180	
22-May-07	5.40	18.10	1028.58	1029.57	1046.781	Good flow
26-Sep-07	3.60	16.60	1027.32	1028.52	1046.375	
20-May-08	6.10	18.90	1029.07	1030.13	1046.727	
11-Jun-08	5.70	18.40	1028.79	1029.78	1046.040	
24-Sep-08	5.20	17.90	1028.44	1029.43	1046.285	
29-Jun-09	3.90	16.60	1027.53	1028.52	1046.480	
15-Sep-09	4.80	n/r	1028.16		1046.259	
30-Sep-09	5.50	18.50	1028.65	1029.85	1046.048	
15-May-10	5.60	18.30	1028.72	1029.71	1046.424	
2-Jun-10	23.00	5.60	1040.90	1020.82	1045.940	
10-Sep-10	3.30	16.00	1027.11	1028.10	1043.726	

Intermediate Dam - Piezometric Monitoring BH91-ID6

Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond Elev. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
	(upper)	(lower)	(upper)	(lower)		
27-Apr-11	4.70	17.10	1028.09	1028.87	1045.500	
3-May-11	4.70	17.50	1028.09	1029.15	1045.342	
11-May-11	4.40	17.30	1027.88	1029.01	1045.272	
17-May-11	4.20	17.00	1027.74	1028.80	1045.445	
24-May-11	4.20	16.80	1027.74	1028.66	1045.586	
30-May-11	3.90	16.60	1027.53	1028.52	1045.436	
13-Jun-11	4.70	16.50	1028.09	1028.45	1045.132	

Intermediate Dam - Piezometric Monitoring

BKS04-06



BKS04-06		Location:	Intermediate Dam South Abutment	2004 Stick-Up (m):	1.51
		Coordinates:	N 6913803 E 580454.9	Tip Elevation (m amsl):	1036.00
Surface Protector:	Yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1049.1
				Screened Interval (m bgs):	12.8 - 13.1
Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
26-May-05	13.01		1037.60	1047.012	
14-Sep-05	14.15		1036.46	1046.370	bottom - no beep
09-Mar-06	13.87		1036.74	1047.575	
27-Mar-06	13.04		1037.57	1047.550	no beep
14-Jun-06	14.14		1036.47	1046.848	sticky at 11.0m
02-Oct-06	14.11		1036.50	1046.180	
22-May-07	13.86		1036.75	1046.781	Bottom no beep
26-Sep-07	14.15		1036.46	1046.375	no beep
20-May-08	1.82			1046.727	no beep
11-Jun-08	1.79			1046.040	no beep
24-Sep-08	14.16		1036.45	1046.285	no beep
29-Jun-09	14.17		1036.44	1046.480	beeped
30-Sep-09	14.27		1036.34	1046.048	no beep
15-May-10	1.94			1046.424	Stuck in slush; No beep
02-Jun-10	14.17		1036.44	1045.940	
10-Sep-10	13.88		1036.73	1043.726	Stuck in slush; No beep
11-May-11	14.02		1036.59	1045.272	dry
17-May-11	14.01		1036.60	1045.445	dry
24-May-11	13.89		1036.72	1045.586	frozen; ice on tip of tape
30-May-11	14.01		1036.60	1045.436	dry
13-Jun-11	13.89		1036.72	1045.132	frozen; ice on tip of tape

Intermediate Dam - Piezometric Monitoring BH91-ID3



BH91-ID3		Location:	Intermediate Dam South Abutment @ Stn. 0+810		Shallow Tip Elevation (m amsl):	1036.82
		Coordinates:	8V580359 6913723		Deep Tip Elevation (m amsl):	1028.62
Surface Protector:	Yes	Date Installed:	1991		2004 Surface Elevation (m amsl):	1043.82
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond Elev. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
Jul-91	1.23	9.71	1037.68	1035.42	1042.2	
Aug-91	0.04	9.40	1036.85	1035.20	1042.2	
Sep-91		8.60	1036.82	1034.64	1042.2	
Feb-92						
Apr-92						
Jun-92	3.44	13.46	1039.23	1038.04	1047.7	
Sep-92	1.10	10.51	1037.59	1035.98	1047.7	
May-94	0.20	10.70	1036.96	1036.11	1047.7	
Sep-94	0.40	9.10	1037.10	1034.99	1047.7	
Sep-95	0.00	9.50	1036.82	1035.27	1047.7	
Oct-96	0.10	7.50	1036.89	1033.87	1048.1	
7-May-97	0.20	6.40	1036.96	1033.10		
17-Oct-97	0.40	8.31	1037.10	1034.44		
27-May-98	0.10	11.70	1036.89	1036.81	1048.1	
12-Nov-98	0.22	7.10	1036.97	1033.59	1047.8	
16-Dec-98	0.00	6.30	1036.82	1033.03	1047.8	
29-May-99	0.40	11.05	1037.10	1036.36	1048	
16-Sep-99	0.02	8.40	1036.83	1034.50	1047.7	
14-Jun-00	0.01	10.41	1036.83	1035.91	1047.6	
9-Sep-00	0.00	9.50	1036.82	1035.27		
10-Jun-01	0.10	10.30	1036.89	1035.83		
20-Sep-01	0.01	8.20	1036.83	1034.36		
18-Jun-02	0.00	9.10	1036.82	1034.99		
10-Sep-02	0.00	8.20	1036.82	1034.36		
4-Nov-02	0.00	7.10	1036.82	1033.59		
10-Nov-02	0.00	6.50	1036.82	1033.17		
11-Jun-03	0.20	8.70	1036.96	1034.71		*have to continue using old piezometer, tips are too big
10-Sep-03	0.00	6.30	1036.82	1033.03		* Installed new tips, now using new box
10-May-04	0.00	5.20	1036.82	1032.26	1046.590	2004 survey data used from this point on
19-Jul-04	0.00	6.20	1036.82	1032.96	1045.972	
9-Sep-04	0.10	5.70	1036.89	1032.61	1046.272	
26-May-05	0.00	8.40	1036.82	1034.50	1047.012	
14-Sep-05	0.00	4.90	1036.82	1032.05	1046.370	
09-Mar-06	0.00	3.30	1036.82	1030.93	1047.575	
27-Mar-06	0.10	3.40	1036.89	1031.00	1047.550	
14-Jun-06	0.10	7.10	1036.89	1033.59	1046.848	
02-Oct-06	0.10	4.10	1036.89	1031.49	1046.180	
22-May-07	0.00	4.60	1036.82	1031.84	1046.781	Good Flow
26-Sep-07	0.10	5.70	1036.89	1032.61	1046.375	
24-Sep-08	0.10	6.10	1036.89	1032.89	1046.285	
29-Jun-09	0.10	5.70	1036.89	1032.61	1046.480	
30-Sep-09	0.20	5.30	1036.96	1032.33	1046.048	
15-May-10	0.20	5.20	1036.96	1032.26	1046.424	
02-Jun-10	1.00	7.90	1037.52	1034.15	1045.940	
04-Aug-10	0.10	3.40	1036.89	1031.00	1044.285	
10-Sep-10	0.10	3.10	1036.89	1030.79	1043.726	
27-Apr-11	0.10	2.40	1036.89	1030.30	1045.500	
03-May-11	0.10	2.50	1036.89	1030.37	1045.342	
09-May-11	0.10	2.50	1036.89	1030.37	1045.272	

Intermediate Dam - Piezometric Monitoring BH91-ID3



Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond Elev. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
17-May-11	0.00	2.00	1036.82	1030.02	1045.445	
24-May-11	0.10	5.70	1036.89	1032.61	1045.586	Deep reading checked twice
30-May-11	0.10	7.50	1036.89	1033.87	1045.436	
13-Jun-11	0.70	6.70	1037.31	1033.31	1045.132	Deep reading checked twice
13-Aug-11	0.10	1.00	1036.89	1029.32	1044.314	

Intermediate Dam - Piezometric Monitoring BH91-ID7



BH91-ID7		Location:	Intermediate Dam Toe @St.0+759	
		Coordinates:	8V580377 6913751	Tip Elevation (m amsl): 1025.95
Surface Protector:	Yes	Date Installed:	1991	2004 Ground Elevation (amsl): 1032.42
Date	Reading (psi)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
Jul-91	8.94	1032.21	1042.20	
Aug-91	9.06	1032.29	1042.20	
Sep-91	8.90	1032.18	1042.20	
Feb-92	13.21	1035.20	1047.70	
Apr-92	10.01	1032.96	1047.70	
Jun-92	10.61	1033.38	1047.70	
Sep-92	9.21	1032.40	1047.70	
May-94	8.60	1031.97	1047.70	
Sep-94	7.40	1031.13	1047.70	
Sep-95	9.00	1032.25	1047.70	
Sep-96	8.10	1031.62	1048.10	
7-May-97	5.10	1029.52		
17-Oct-97	9.36	1032.50		
27-May-98	9.49	1032.59	1048.10	
12-Nov-98	7.56	1031.24	1047.80	
16-Dec-98	7.60	1031.27	1047.80	
29-May-99	9.60	1032.67	1048.00	
16-Sep-99	6.60	1030.57	1047.70	
14-Jun-00	8.90	1032.18	1047.60	
9-Sep-00	7.50	1031.20		
10-Jun-01	8.20	1031.69		
20-Sep-01	8.10	1031.62		
18-Jun-02	8.30	1031.76		
10-Sep-02	7.70	1031.34		
4-Nov-02	7.50	1031.20		
10-Nov-02	7.40	1031.13		
11-Jun-03	7.70	1031.34		*New piezometer started use here
10-Sep-03	6.20	1030.29		
10-May-04	7.20	1030.99	1046.590	2004 survey data used from here on
19-Jul-04	7.40	1031.13	1045.972	
9-Sep-04	6.90	1030.78	1046.272	
26-May-05	6.10	1030.22	1047.012	
14-Sep-05	5.10	1029.52	1046.370	
9-Mar-06	4.60	1029.17	1047.575	
27-Mar-06	4.80	1029.31	1047.550	
14-Jun-06	5.40	1029.73	1046.848	
2-Oct-06	4.90	1029.38	1046.180	
22-May-07	6.30	1030.36	1046.781	Good Flow
26-Sep-07	5.50	1029.80	1046.375	
20-May-08	7.30	1031.06	1046.727	
11-Jun-08	6.90	1030.78	1046.040	
24-Sep-08	6.40	1030.43	1046.285	
29-Jun-09	5.30	1029.66	1046.480	
15-Sep-09	5.80	1030.01	1046.259	
30-Sep-09	6.50	1030.50	1046.048	
15-May-10	6.50	1030.50	1046.424	
2-Jun-10	5.80	1030.01	1045.940	
10-Sep-10	4.30	1028.96	1043.726	
3-May-11	5.40	1029.73	1045.342	
9-May-11	5.40	1029.73	1045.272	
17-May-11	5.00	1029.45	1045.445	
24-May-11	5.40	1029.73	1045.586	

Intermediate Dam - Piezometric Monitoring BH91-ID7

Date	Reading (psi)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
30-May-11	5.70	1029.94	1045.436	
13-Jun-11	5.40	1029.73	1045.132	

Intermediate Dam - Piezometric Monitoring

BKS04-07



BKS04-07		Location:	Intermediate Dam South Abutment	2004 Stick-Up (m):	1.51
		Coordinates:	N 6913747 E 580407.6	Tip Elevation (m amsl):	1037.29
Surface Protector:	Yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1049.2
				Screened Interval (m bgs):	11.5 - 11.81
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments	
26-May-05	14.155		1047.012	Impossible reading	
14-Sep-05	12.99	1037.72	1046.370		
09-Mar-06	13.03	1037.68	1047.575		
27-Mar-06	14.16	1036.55	1047.550	no beep	
14-Jun-06	13.02	1037.69	1046.848	sticky at 12.7 m	
02-Oct-06	13.01	1037.70	1046.180		
22-May-07	2.03		1046.781	no beep, frozen	
26-Sep-07	13.025	1037.69	1046.375		
20-May-08	1.99		1046.727	no beep	
11-Jun-08	2.89		1046.040	no beep	
24-Sep-08	13.405	1037.31	1046.285		
29-Jun-09	3.58		1046.480	blocked	
30-Sep-09	13.053	1037.66	1046.048		
15-May-10	13.081	1037.63	1046.424		
02-Jun-10			1045.940	Hit something solid - either ground or ice.	
10-Sep-10	12.785	1037.93	1043.726	Hit something solid - probably ground; No beep.	
11-May-11	12.935	1037.78	1045.272		
17-May-11	12.926	1037.78	1045.445		
25-May-11	12.770	1037.94	1045.586		
30-May-11	12.919	1037.79	1045.436	dry	
13-Jun-11	12.806	1037.90	1045.132		

CD-26		Location:	Canal Dyke St.2+600	Ground Elevation (m amsl):	1053.10
		Coordinates:	1674.7N, 71.7E 8V580284 6913710	Shallow Tip Elevation (m amsl):	1048.20
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP	Deep PP	Shallow	Deep	
	(#349)	(#356)	(#349)	(#356)	
Nov-81	0.3	0.5	1048.41	1042.35	
Dec-81	0.5	0.7	1048.55	1042.49	
Mar-82	0.6	0.7	1048.62	1042.49	
May-82	0.4	0.4	1048.48	1042.28	
Aug-82	0.3	0.5	1048.41	1042.35	
Apr-83	0.4	0.6	1048.48	1042.42	
Sep-83	0.4	0.6	1048.48	1042.42	
Mar-84	0.2	0.4	1048.34	1042.28	
Jun-84	0.2	0.5	1048.34	1042.35	
Sep-84	0.4	0.6	1048.48	1042.42	
Oct-85	1.1	1.3	1048.97	1042.91	
Oct-86	1.3	1.2	1049.11	1042.84	
Oct-87	1.0	1.3	1048.90	1042.91	
Jul-88	2.3	2.3	1049.81	1043.61	
Oct-88	0.7	0.8	1048.69	1042.56	
Sep-89	0.5	0.8	1048.55	1042.56	
Oct-90	1.0	1.1	1048.90	1042.77	
Sep-91	0.5	0.7	1048.55	1042.49	
Sep-92	1.3	1.9	1049.11	1043.33	
May-94	0.5	0.8	1048.55	1042.56	
Sep-94	0.6	0.8	1048.62	1042.56	
Sep-95	0.0	0.0	1048.20	1042.00	
Sep-96	0.8	1.2	1048.76	1042.84	
08-May-97	0.6	0.8	1048.62	1042.56	
10-Nov-97	0.6	0.3	1048.59	1042.21	
26-May-98	0.4	0.6	1048.51	1042.42	
12-Nov-98	0.6	0.7	1048.60	1042.49	
28-May-99	1.0	1.2	1048.89	1042.84	
11-Sep-99	0.6	1.0	1048.62	1042.70	
14-Jun-00	0.5	0.8	1048.55	1042.56	
09-Sep-00	0.8	1.2	1048.76	1042.84	
06-Jun-01	0.6	1.0	1048.62	1042.70	
19-Sep-01	0.1	1.0	1048.25	1042.70	
13-Jun-02	0.7	0.9	1048.69	1042.63	
12-Sep-02	0.5	0.9	1048.55	1042.63	
17-Jun-03	0.5	0.8	1048.55	1042.56	*readings recorded with new piezometer
12-Sep-03	0.6	0.9	1048.62	1042.63	
06-Jul-04	0.5	0.9	1048.55	1042.63	
16-Sep-04	0.6	1.0	1048.62	1042.70	
31-May-05	0.5	0.7	1048.55	1042.49	good flow
14-Sep-05	0.5	0.9	1048.55	1042.63	
14-Jun-06	0.5	0.7	1048.55	1042.49	
2-Oct-06	0.5	0.8	1048.55	1042.56	wet in casing
06-Jun-07	0.6	1.0	1048.62	1042.70	good flow
24-Sep-07	0.0	0.3	1048.20	1042.21	
30-Jun-09	0.5	0.6	1048.55	1042.42	
29-Sep-09	0.6	0.8	1048.62	1042.56	
18-May-10	0.5	0.8	1048.55	1042.56	
02-Jun-10	1.0	1.3	1048.90	1042.91	
10-Sep-10	0.6	0.5	1048.62	1042.35	
10-May-11	0.6	0.7	1048.62	1042.49	

Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP	Deep PP	Shallow	Deep	
	(#349)	(#356)	(#349)	(#356)	
17-May-11	0.5	0.6	1048.55	1042.42	
24-May-11	0.6	0.7	1048.62	1042.49	
30-May-11	0.4	0.5	1048.48	1042.35	
15-Jun-11	0.6	0.7	1048.62	1042.49	

CVDC-4		Location:	Cross Valley Dam Crest Stn. 0+215	2004 Ground Elevation (m amsl):	1033.3		
		Coordinates:	8V580266 6914331	Shallow Tip Elevation (m amsl):	1007.9	2004 Shallow stick-up 2004 (m):	0.11
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	999.7	2004 Deep stick-up (m):	0.3
Date	Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments	
	Shallow	Deep	Shallow	Deep			
Aug-82	15.10	15.26	1018.33	1018.04			
Dec-82	15.82	15.71	1017.61	1017.59			
Apr-83	15.71	15.84	1017.72	1017.46	1029.33		
Jun-83	16.54	16.33	1016.89	1016.97	1025.88		
Aug-83	16.57	16.52	1016.86	1016.78			
Oct-83	16.34	16.30	1017.09	1017.00			
Feb-84	16.21	16.22	1017.22	1017.08			
Mar-84					1030.60		
Apr-84	16.75	16.58	1016.68	1016.72			
Jun-84	16.40	16.37	1017.03	1016.93	1026.80		
Aug-84	16.50	16.48	1016.93	1016.82			
Jun-85	15.50	15.55	1017.93	1017.75	1031.20		
Oct-85	16.00	16.10	1017.43	1017.20			
May-86	15.58	15.54	1017.85	1017.76	1030.70		
Oct-86	14.99	15.14	1018.44	1018.16	1030.90		
Oct-87	15.42	16.45	1018.01	1016.85			
Jun-88		15.67		1017.63			
Jan-90		15.78		1017.59			
Oct-90		15.54		1017.83			
May-91		15.31		1018.06			
Jun-92		14.32		1019.05			
Sep-92		14.63		1018.74			
May-94		14.93		1018.47			
Sep-94		14.95		1018.45			
Sep-95		14.80		1018.60			
13-Sep-96		14.89		1018.51	1029.92		
7-May-97		15.34		1018.06			
2-Dec-97		14.89		1018.51			shallow standpipe - dry
26-May-98		14.66		1018.92	1031.20		
13-Nov-98		14.91		1018.67	1029.80		
29-Dec-98		14.89		1018.69	1029.80		
03-Jun-99		14.67		1018.91	1031.40		
18-Sep-99		15.60		1017.98	~1029.2		
08-Jun-00		14.73		1018.85	~1030.2		
14-Aug-00		14.88		1018.70			
31-Aug-00		14.86		1018.72			
07-Sep-00		14.83		1018.75			
14-Sep-00		14.76		1018.82			
21-Sep-00		14.84		1018.74			shallow standpipe - plugged
28-Sep-00		14.79		1018.79			shallow standpipe - plugged
06-Oct-00		14.75		1018.83			shallow standpipe - n.r.
12-Oct-00		14.76		1018.82			shallow standpipe - n.r.
20-Oct-00		14.74		1018.84			blocked @ 1.25m
27-Oct-00		14.76		1018.82			shallow standpipe - blocked @ 7.60m
10-Jun-01	7.67	14.87		1018.71			shallow standpipe - blocked @ 7.61m
14-Sep-01	7.61	14.82		1018.76			shallow standpipe - blocked @ 7.61m
16-Oct-01	7.61	14.90		1018.68			shallow standpipe - blocked @ 7.62m
18-Oct-01	7.61	14.93		1018.65			shallow standpipe - blocked @ 7.61m
19-Oct-01	7.61	14.95		1018.63			shallow standpipe - blocked @ 7.61m
20-Oct-01	7.61	14.96		1018.62			shallow standpipe - blocked @ 7.61m
21-Oct-01	7.61	14.97		1018.61			shallow standpipe - blocked @ 7.61m
22-Oct-01	7.61	14.98		1018.60			shallow standpipe - blocked @ 7.61m
25-Oct-01	7.61	14.98		1018.60			shallow standpipe - blocked @ 7.61m
29-Oct-01	7.61	14.98		1018.60			shallow standpipe - blocked @ 7.61m
01-Nov-01	7.61	14.98		1018.61			shallow standpipe - blocked @ 7.61m
05-Nov-01	7.61	14.97		1018.61			
06-Nov-01	7.61	14.97		1018.61			
08-Nov-01	7.61	14.97		1018.62			
12-Nov-01	7.61	14.96		1018.62			

Date	Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
15-Nov-01	7.61	14.95		1018.63		
19-Nov-01	7.61	14.95		1018.63		
21-Nov-01	7.61	14.95		1018.63		
23-Nov-01	7.61	14.94		1018.64		pond elev approx - 8 ft.
26-Nov-01	7.61	14.95		1018.63		daytime temp -34 C
28-Nov-01	7.61	14.94		1018.64		
30-Nov-01	7.61	14.94		1018.64		
03-Dec-01	7.61	14.96		1018.62		
05-Dec-01	7.61	14.97		1018.61		
12-Dec-01	7.61	14.94		1018.64		
14-Dec-01	7.61	14.82		1018.76		
15-Dec-01	7.61	14.84		1018.74		
16-Dec-01	7.61	14.87		1018.71		
17-Dec-01	7.61	14.90		1018.68		
18-Dec-01	7.61	14.92		1018.66		
19-Dec-01	7.61	14.94		1018.64		
26-Dec-01	7.61	14.96		1018.62		
02-Jan-02	7.61	14.94		1018.64		
09-Jan-02	7.61	14.99		1018.59		
16-Jan-02	7.61	15.04		1018.54		
23-Jan-02	7.61	15.02		1018.56		
30-Jan-02	7.61	15.02		1018.56		
06-Feb-02	7.61	15.00		1018.58		
13-Feb-02	7.61	15.00		1018.58		
20-Feb-02	7.61	14.99		1018.59		
01-May-02	7.61	14.92		1018.67		
12-Jun-02	7.61	14.90		1018.69		
17-Jul-02	7.61	14.85		1018.74		
07-Aug-02	7.61	14.90		1018.69		
09-Sep-02	7.61	14.82		1018.76		
04-Nov-02	7.61	14.86		1018.72		
10-Nov-02	7.61	14.85		1018.73		
30-Jan-03	7.61	14.75		1018.83		
09-Feb-03	7.61	14.76		1018.83		start siphon
11-Feb-03	7.61	14.77		1018.82		
13-Feb-03	7.61	14.78		1018.80		
18-Feb-03	7.61	14.80		1018.78		
21-Feb-03	7.61	14.83		1018.75	1026.18	
23-Apr-03	7.61	14.78		1018.80		
07-May-03	7.61	14.88		1018.71		
16-May-03	7.61	14.87		1018.71		
11-Jun-03	7.61	14.85		1018.73		
15-Jul-03	7.61	14.78		1018.80		
10-Sep-03	7.61	14.97		1018.62		
04-Mar-04	7.61	14.84		1018.76	1030.038	2004 Survey data used from here on
08-Mar-04	7.61	14.86		1018.74	1029.715	
26-Apr-04	7.61	14.83		1018.77	1030.150	
19-Jul-04	7.61	14.88		1018.73	1029.805	
26-Aug-04	7.61	14.78		1018.83	1029.930	
09-Sep-04	7.61	14.89		1018.71	1029.930	
22-Feb-05	7.61	14.84		1018.76	1030.176	
23-Feb-05	7.61	14.84		1018.76	1030.045	
24-Feb-05	7.61	14.85		1018.76	1029.854	
26-May-05	7.61	14.79		1018.81	1028.310	
14-Sep-05	7.61	15.12		1018.48	1027.540	
09-Mar-06	7.61	15.23		1018.38	1027.180	
14-Jun-06	7.61	15.14		1018.46	1027.522	
04-Oct-06	7.61	15.23		1018.38	1027.468	
09-May-07	7.61	14.86		1018.75	1029.295	

Date	Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
24-Sep-07	7.61	15.21		1018.39	1027.755	
25-Sep-07	7.61	15.21		1018.39	1027.755	
09-Apr-08	7.61	14.79		1018.81	1030.211	
14-Apr-08	7.61	14.82		1018.78	1029.930	
21-Apr-08	7.61	14.85		1018.75	1029.625	
28-Apr-08	7.61	14.86		1018.74	1029.250	
05-May-08	7.61	14.86		1018.74	1029.433	
12-May-08	7.61	14.83		1018.77	1029.362	
20-May-08	7.61	14.83		1018.78	1029.340	
26-May-08	7.61	14.81		1018.79	1029.276	
24-Jun-08	7.61	14.85		1018.75	1028.638	
24-Sep-08	7.61	14.82		1018.79	1028.582	
31-Mar-09	7.61	14.76		1018.84	1029.596	
13-Apr-09	7.61	14.91		1018.70	1028.164	
16-Apr-09	7.61	14.95		1018.65	1027.744	
20-Apr-09	7.61	15.04		1018.57	1027.716	
23-Apr-09	7.61	15.15		1018.45	1027.487	
27-Apr-09	7.61	15.20		1018.40	1027.273	
30-Apr-09	7.61	15.23		1018.38	1027.159	
05-May-09	7.61	15.23		1018.38	1027.229	
19-May-09	7.61	15.03		1018.58	1027.831	
29-Jun-09	7.61	14.99		1018.61	1027.668	
15-Sep-09	7.61	14.92		1018.68	1028.360	
19-May-10	7.55	14.73		1018.88	1028.894	
03-Jun-10	7.67	14.73		1018.87	1028.542	shallow well dry
07-Sep-10	7.67	15.07		1018.53	1027.410	shallow well dry
27-Apr-11		15.00		1018.60	1028.349	
10-May-11	7.62	14.95		1018.65	1028.417	shallow well dry
17-May-11	7.61	14.94		1018.66	1028.126	shallow well dry
24-May-11	7.61	14.92		1018.68	1027.964	shallow well dry
30-May-11	7.60	14.94		1018.66	1027.767	shallow well dry
13-Jun-11	7.61	15.02		1018.58	1027.511	

Cross Valley Dam - Piezometric Monitoring CVDC-7



CVDC-7		Location:	Cross Valley Dam Crest St.0+450	2004 Ground Elevation (m amsl):	1033.24		
		Coordinates:	8V580158 6914127	2004 Shallow Tip Elevation (m amsl):	1007.80	2004 Shallow	0.31
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1002.90	2004 Deep stick-up	0.23
Date	Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments	
	Shallow	Deep	Shallow	Deep			
Aug-82	17.58	14.44	1016.04	1019.09			
Dec-82	18.02	15.10	1015.60	1018.43			
Apr-83	17.83	15.24	1015.79	1018.29	1029.33		
Jun-83	18.06	14.88	1015.56	1018.65	1025.88		
Aug-83	18.30	16.24	1015.32	1017.29			
Oct-83	18.26	16.01	1015.36	1017.52			
Feb-84	18.24	15.92	1015.38	1017.61			
Mar-84					1030.60		
Apr-84	18.41	16.36	1015.21	1017.17			
Jun-84	18.22	16.06	1015.40	1017.47	1026.80		
Jun-85	17.87	16.06	1015.75	1017.47	1031.20		
Oct-85	18.20	15.55	1015.42	1017.98			
May-86	18.14	15.14	1015.48	1018.39	1030.70		
Oct-86	17.35	14.40	1016.27	1019.13	1030.90		
Oct-87	17.85	14.85	1015.77	1018.68			
Jun-88	17.90	15.10	1015.73	1018.59			
Sep-89	17.88	15.03	1015.75	1018.66			
Oct-90	17.68	15.03	1015.95	1018.66			
May-91	17.89	15.36	1015.74	1018.33			
Sep-91	17.81		1015.82				
Jun-92	17.37	14.48	1016.26	1019.21			
Sep-92	17.33	14.66	1016.30	1019.03			
May-94	17.99	15.50	1015.70	1018.16			
Sep-94	17.95	15.47	1015.74	1018.19			
Sep-95	17.81	15.08	1015.88	1018.58			
13-Sep-96	17.93	15.34	1015.76	1018.32	1029.915		
7-May-97	18.19	16.07	1015.50	1017.59			
20-Nov-97	17.91	15.29	1015.78	1018.37			
26-May-98	17.87	15.12	1015.82	1018.54	1031.2		
15-Nov-98	17.91	15.38	1015.78	1018.28	1029.8		
03-Jun-99	n.r.	15.10		1018.56	1031.4		
18-Sep-99	18.00	15.59	1015.69	1018.07	~1029.2		
08-Jun-00	17.85	15.08	1015.84	1018.58	~1030.2		
14-Aug-00	17.82	15.10	1015.87	1018.56			
31-Aug-00	17.80	15.16	1015.89	1018.50			
07-Sep-00	17.78	15.09	1015.91	1018.57			
14-Sep-00	17.78	15.80	1015.91	1017.86			
19-Sep-00	17.82	15.19	1015.87	1018.47			
21-Sep-00	17.82	15.16	1015.87	1018.50			
28-Sep-00	17.77	15.60	1015.92	1018.06			
06-Oct-00	17.71	14.96	1015.98	1018.70			
12-Oct-00	17.75	15.03	1015.94	1018.63			
20-Oct-00	17.76	15.00	1015.93	1018.66			
27-Oct-00	17.80	15.08	1015.89	1018.58			
10-Jun-01	17.97	15.39	1015.72	1018.27			
14-Sep-01	17.86	15.16	1015.83	1018.50			
16-Oct-01	17.95	15.43	1015.74	1018.23			
18-Oct-01	17.97	15.48	1015.72	1018.18			
19-Oct-01	17.98	15.49	1015.71	1018.17			
20-Oct-01	17.98	15.49	1015.71	1018.17			
21-Oct-01	17.98	15.49	1015.71	1018.17			
22-Oct-01	17.98	15.50	1015.71	1018.16			
25-Oct-01	17.99	15.51	1015.70	1018.15			
29-Oct-01	17.99	15.51	1015.70	1018.15			
01-Nov-01	17.99	15.50	1015.71	1018.17			
05-Nov-01	17.99	15.51	1015.70	1018.16			
06-Nov-01	17.99	15.51	1015.70	1018.16			
08-Nov-01	17.99	15.51	1015.70	1018.15			
12-Nov-01	18.00	15.51	1015.69	1018.15			
15-Nov-01	18.00	15.51	1015.69	1018.15			
19-Nov-01	18.00	15.51	1015.69	1018.15			
21-Nov-01	17.99	15.50	1015.70	1018.17			
23-Nov-01	17.99	15.50	1015.70	1018.17			pond elev approx - 8 ft.
26-Nov-01	18.00	15.50	1015.69	1018.17			daytime temp -34 C
28-Nov-01	18.00	15.50	1015.69	1018.16			
30-Nov-01	18.01	15.50	1015.68	1018.16			
03-Dec-01	18.01	15.51	1015.68	1018.15			

Date	Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
05-Dec-01	18.01	15.52	1015.68	1018.14		
12-Dec-01	18.01	15.52	1015.68	1018.14		
14-Dec-01	18.01	15.50	1015.68	1018.16		
15-Dec-01	18.02	15.54	1015.67	1018.12		
16-Dec-01	18.03	15.58	1015.66	1018.08		
17-Dec-01	18.04	15.61	1015.65	1018.05		
18-Dec-01	18.05	15.63	1015.64	1018.03		
19-Dec-01	18.06	15.65	1015.63	1018.01		
26-Dec-01	18.07	15.66	1015.62	1018.00		
02-Jan-02	18.07	15.65	1015.62	1018.01		
09-Jan-02	18.08	15.66	1015.61	1018.00		
16-Jan-02	18.08	15.65	1015.61	1018.01		
23-Jan-02	18.07	15.63	1015.62	1018.03		
30-Jan-02	18.08	15.63	1015.61	1018.03		
06-Feb-02	18.08	15.62	1015.62	1018.04		
13-Feb-02	18.07	15.60	1015.62	1018.06		
20-Feb-02	18.08	15.60	1015.62	1018.06		
01-May-02	18.07	15.60	1015.62	1018.06		Water being discharged from the polishing pond
12-Jun-02	17.98	15.35	1015.72	1018.31		
17-Jul-02	17.85	15.23	1015.84	1018.44		
07-Aug-02	17.90	15.35	1015.79	1018.31		
09-Sep-02	17.82	15.17	1015.88	1018.49		
04-Nov-02	17.91	15.36	1015.78	1018.30		
10-Nov-02	17.91	15.36	1015.78	1018.31		
30-Jan-03	17.90	15.24	1015.80	1018.43		
09-Feb-03	17.90	15.25	1015.79	1018.42		start siphon
11-Feb-03	17.91	15.26	1015.79	1018.40		
13-Feb-03	17.91	15.28	1015.78	1018.38		
18-Feb-03	17.93	15.31	1015.77	1018.35		
21-Feb-03	17.93	15.32	1015.76	1018.34	1026.18	
23-Apr-03	17.98	15.37	1015.71	1018.29		
07-May-03	18.01	15.47	1015.68	1018.19		
16-May-03	18.01	15.46	1015.68	1018.21		
11-Jun-03	17.91	15.33	1015.78	1018.33		
15-Jul-03	17.84	15.21	1015.85	1018.46		
10-Sep-03	18.00	15.59	1015.55	1017.88		
04-Mar-04	17.97	15.39	1015.58	1018.08	1030.038	2004 Survey data used from here on
08-Mar-04	18.00	15.46	1015.55	1018.01	1029.715	
26-Apr-04	17.98	15.40	1015.57	1018.07	1030.150	
19-Jul-04	17.91	15.33	1015.64	1018.14	1029.805	
26-Aug-04	17.93	15.34	1015.62	1018.13	1029.930	
09-Sep-04	17.99	15.50	1015.56	1017.97	1029.930	
22-Feb-05	18.00	15.43	1015.55	1018.04	1030.176	
23-Feb-05	18.00	15.45	1015.55	1018.02	1030.045	smells like old oil
24-Feb-05	18.00	15.48	1015.55	1017.99	1029.854	
26-May-05	17.99	15.58	1015.56	1017.89	1028.310	milky on probe
14-Sep-05	18.25	16.04	1015.30	1017.43	1027.540	
09-Mar-06	18.41	16.30	1015.14	1017.17	1027.180	
14-Jun-06	18.26	16.03	1015.29	1017.44	1027.522	
04-Oct-06	18.27	16.10	1015.28	1017.37	1027.468	
09-May-07	18.20	15.80	1015.35	1017.67	1029.295	
24-Sep-07	18.19	15.97	1015.36	1017.50	1027.755	
09-Apr-08	18.11	15.55	1015.44	1017.92	1030.211	
14-Apr-08	18.11	15.61	1015.44	1017.86	1029.930	
21-Apr-08	18.12	15.70	1015.43	1017.77	1029.625	
28-Apr-08	18.13	15.76	1015.42	1017.71	1029.250	
05-May-08	18.14	15.72	1015.41	1017.75	1029.433	
12-May-08	18.14	15.71	1015.41	1017.76	1029.362	
20-May-08	18.14	15.75	1015.41	1017.72	1029.340	
26-May-08	18.15	15.76	1015.40	1017.71	1029.276	
24-Jun-08	18.03	15.60	1015.52	1017.87	1028.638	
24-Sep-08	18.00	15.65	1015.55	1017.82	1028.582	
31-Mar-09	18.12	15.70	1015.43	1017.77	1029.596	
13-Apr-09	18.16	16.00	1015.39	1017.47	1028.164	

Date	Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
16-Apr-09	18.19	16.06	1015.36	1017.41	1027.744	
20-Apr-09	18.22	16.14	1015.33	1017.33	1027.716	
23-Apr-09	18.28	16.19	1015.27	1017.28	1027.487	
27-Apr-09	18.31	16.26	1015.24	1017.21	1027.273	
30-Apr-09	18.32	16.28	1015.23	1017.19	1027.159	
05-May-09	18.31	16.25	1015.24	1017.22	1027.229	
19-May-09	18.27	16.15	1015.28	1017.32	1027.831	
29-Jun-09	18.11	15.91	1015.44	1017.56	1027.668	
15-Sep-09	18.16	15.92	1015.39	1017.55	1028.360	
19-May-10	15.87	18.14	1017.68	1015.33	1028.894	
03-Jun-10	15.81	18.15	1017.74	1015.32	1028.542	
07-Sep-10	16.15	18.20	1017.40	1015.27	1027.410	
27-Apr-11	18.20	16.14	1015.35	1017.33	1028.349	
03-May-11	18.20	16.12	1015.35	1017.35	1028.413	
09-May-11	18.21	16.07	1015.34	1017.40	1028.417	
17-May-11	18.19	16.08	1015.36	1017.39	1028.126	
24-May-11	18.20	16.08	1015.35	1017.39	1027.964	
30-May-11	18.19	16.12	1015.36	1017.35	1027.767	
13-Jun-11	18.19	16.00	1015.36	1017.47	1027.511	Sulfur smell in shallow well.

Cross Valley Dam - Piezometric Monitoring

94CVDC-1



94CVDC-1		Location:	Cross Valley Dam Crest Stn. 0+215	2004 Stick-up (m):	0.64
		Coordinates:	8V580263 6914326	2004 Ground Elevation (m amsl):	1033.38
Surface Protector:	Yes	Date Installed:	1994	2004 Tip Elevation (m amsl):	1020.4
Date	Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments	
May-94	9.90	1024.00			
Sep-94	9.57	1024.33			
Sep-95	9.32	1024.58			
Sep-96	10.04	1023.86	1029.92		
7-May-97	11.00	1022.91			
20-Nov-97	10.07	1023.83			
26-May-98	9.84	1024.06	1031.20		
13-Nov-98	10.16	1023.74	1029.80		
03-Jun-99	9.65	1024.25	1031.40		
18-Sep-99	10.69	1023.21	~1029.2		
08-Jun-00	9.84	1024.06	~1030.2		
14-Aug-00	10.10	1023.80			
31-Aug-00	10.38	1023.52			
07-Sep-00	10.38	1023.52			
14-Sep-00	10.10	1023.80			
21-Sep-00	13.61			frozen?	
28-Sep-00	10.30	1023.60			
06-Oct-00	9.99	1023.91			
12-Oct-00	10.06	1023.84			
20-Oct-00	9.87	1024.03			
27-Oct-00	9.91	1023.99			
10-Jun-01	10.28	1023.62			
14-Sep-01	10.08	1023.82			
16-Oct-01	10.39	1023.51			
18-Oct-01	10.51	1023.39			
19-Oct-01	10.53	1023.37			
20-Oct-01	10.54	1023.36			
21-Oct-01	10.55	1023.35			
22-Oct-01	10.53	1023.37			
25-Oct-01	10.53	1023.37			
29-Oct-01	10.44	1023.46			
01-Nov-01	10.43	1023.48			
05-Nov-01	10.49	1023.42			
06-Nov-01	10.49	1023.42			
08-Nov-01	10.41	1023.49			
12-Nov-01	10.41	1023.49			
15-Nov-01	10.39	1023.51			
19-Nov-01	10.38	1023.52			
21-Nov-01	10.38	1023.53			
23-Nov-01	10.42	1023.48		pond elev approx - 8 ft.	
26-Nov-01	10.42	1023.48		daytime temp -34 C	
28-Nov-01	10.39	1023.51			
30-Nov-01	10.37	1023.53			
03-Dec-01	10.37	1023.53			
05-Dec-01	10.37	1023.54			
12-Dec-01	10.36	1023.54			
14-Dec-01	10.42	1023.48			
15-Dec-01	10.48	1023.42			
16-Dec-01	10.53	1023.37			
17-Dec-01	10.59	1023.31			
18-Dec-01	10.62	1023.28			
19-Dec-01	10.65	1023.25			
26-Dec-01	10.64	1023.26			
02-Jan-02	10.56	1023.34			
09-Jan-02	10.57	1023.33			
16-Jan-02	10.56	1023.34			
23-Jan-02	10.43	1023.47			
30-Jan-02	10.42	1023.48			
06-Feb-02	10.42	1023.48			
13-Feb-02	10.41	1023.49			

Cross Valley Dam - Piezometric Monitoring 94CVDC-1



Date	Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
20-Feb-02	10.41	1023.49		
01-May-02	10.45	1023.45		
12-Jun-02	10.59	1023.31		
17-Jul-02	10.49	1023.42		
07-Aug-02	10.60	1023.31		
09-Sep-02	10.36	1023.54		
04-Nov-02	10.44	1023.47		
10-Nov-02	10.44	1023.46		
30-Jan-03	10.18	1023.72		
09-Feb-03	10.24	1023.67		start siphon
11-Feb-03	10.24	1023.67		
13-Feb-03	10.28	1023.63		
18-Feb-03	10.31	1023.59		
21-Feb-03	10.31	1023.59	1026.18	
23-Apr-03	10.26	1023.64		
07-May-03	10.49	1023.42		
16-May-03	10.47	1023.43		
11-Jun-03	10.47	1023.44		
15-Jul-03	10.38	1023.52		
10-Sep-03	10.76	1023.15		
04-Mar-04	10.25	1023.77	1030.038	2004 Survey data used from here on.
08-Mar-04	10.36	1023.67	1029.715	
26-Apr-04	10.24	1023.78	1030.150	
19-Jul-04	10.38	1023.64	1029.805	
26-Aug-04	10.31	1023.72	1029.930	
09-Sep-04	10.51	1023.51	1029.930	
22-Feb-05	10.15	1023.87	1030.176	
23-Feb-05	10.18	1023.85	1030.045	
24-Feb-05	10.22	1023.81	1029.854	
26-May-05	10.87	1023.16	1028.310	dirty
14-Sep-05	11.10	1022.93	1027.540	
09-Mar-06	11.29	1022.73	1027.180	
14-Jun-06	11.20	1022.83	1027.522	
04-Oct-06	11.11	1022.92	1027.468	
09-May-07	10.54	1023.48	1029.295	
24-Sep-07	11.03	1022.99	1027.755	
09-Apr-08	10.10	1023.92	1030.211	
14-Apr-08	10.20	1023.82	1029.930	
21-Apr-08	10.39	1023.64	1029.625	
28-Apr-08	10.47	1023.55	1029.250	
05-May-08	10.44	1023.58	1029.433	
12-May-08	10.43	1023.59	1029.362	
20-May-08	10.46	1023.56	1029.340	
26-May-08	10.48	1023.54	1029.276	
24-Jun-08	10.69	1023.34	1028.638	
24-Sep-08	10.70	1023.33	1028.582	
31-Mar-09	10.42	1023.61	1029.596	
13-Apr-09	10.89	1023.14	1028.164	
16-Apr-09	10.98	1023.05	1027.744	
20-Apr-09	11.07	1022.96	1027.716	
23-Apr-09	11.13	1022.89	1027.487	
27-Apr-09	11.23	1022.80	1027.273	
30-Apr-09	11.28	1022.75	1027.159	
05-May-09	11.25	1022.78	1027.229	
19-May-09	11.04	1022.98	1027.831	
29-Jun-09	11.11	1022.92	1027.668	
15-Sep-09	10.89	1023.14	1028.360	
19-May-10	10.74	1023.29	1028.894	
03-Jun-10	10.87	1023.15	1028.542	
07-Sep-10	11.22	1022.81	1027.410	
27-Apr-11	10.94	1023.08	1028.349	
09-May-11	10.84	1023.18	1028.417	
17-May-11	10.96	1023.06	1028.126	
24-May-11	11.06	1022.96	1027.964	
30-May-11	11.08	1022.94	1027.767	
13-Jun-11	11.16	1022.87	1027.511	

Cross Valley Dam - Piezometric Monitoring

CVDT-1



CVDT-1		Location:	Cross Valley Dam Toe, black PVC adj. to X11 channel	2004 Stick-up (m):	0.27
		Coordinates:	8V580219 6914353	2004 Ground Elevation (m amsl):	1018.30
Surface Protector:	N/A	Date Installed:	1994	2004 Tip Elevation (m amsl):	1007.90
Date	Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments	
31-May-94	2.07	1017.13			
15-Sep-94	1.92	1017.28			
22-Sep-95	1.80	1017.40			
13-Sep-96	1.87	1017.33	1029.92		
20-Nov-97	1.78	1017.42			
26-May-98	1.62	1017.58	1031.20		
13-Nov-98	1.87	1017.33	1029.80		
03-Jun-99	0.87	1018.33	1031.40		
18-Sep-99	1.94	1017.26	~1029.20		
08-Jun-00	1.73	1017.47	~1030.20		
14-Aug-00	1.84	1017.36			
31-Aug-00	1.81	1017.39			
07-Sep-00	1.80	1017.40			
14-Sep-00	1.75	1017.45			
21-Sep-00	1.81	1017.39			
28-Sep-00	1.76	1017.44			
6-Oct-00	1.73	1017.47			
12-Oct-00	1.73	1017.47			
20-Oct-00	1.71	1017.49			
27-Oct-00	1.71	1017.49			
10-Jun-01	1.80	1017.40			
14-Sep-01	1.77	1017.43			
16-Oct-01	1.81	1017.39			
18-Oct-01	1.81	1017.39			
19-Oct-01	1.81	1017.39			
20-Oct-01	1.81	1017.39			
21-Oct-01	1.81	1017.39			
22-Oct-01	1.81	1017.39			
25-Oct-01	1.81	1017.39			
29-Oct-01	1.81	1017.39			
01-Nov-01	1.81	1017.39			
05-Nov-01	1.81	1017.39			
06-Nov-01	0.44	1017.39		Stick up changed	
08-Nov-01	0.44	1017.39			
12-Nov-01	0.44	1017.39			
15-Nov-01	0.44	1017.39			
19-Nov-01	0.44	1017.39			
21-Nov-01	0.44	1017.39			
23-Nov-01	0.44	1017.39		pond elev approx - 8 ft.	
26-Nov-01	0.44	1017.39		daytime temp -34 C	
28-Nov-01	0.44	1017.39			
30-Nov-01	0.44	1017.39			
03-Dec-01	0.44	1017.39			
05-Dec-01	0.44	1017.39			
12-Dec-01	0.44	1017.39			
14-Dec-01	0.44	1017.39			
15-Dec-01	0.44	1017.39			
16-Dec-01	0.44	1017.39			
17-Dec-01	0.44	1017.39			
18-Dec-01	0.44	1017.39			
19-Dec-01	0.44	1017.39			
26-Dec-01	0.44	1017.39			
02-Jan-02	0.44	1017.39			
09-Jan-02	0.44	1017.39			
16-Jan-02	0.44	1017.39			

Date	Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
23-Jan-02	0.44	1017.39		
30-Jan-02	0.44	1017.39		
06-Feb-02	0.44	1017.39		
13-Feb-02	0.44	1017.39		
20-Feb-02	0.44	1017.39		
01-May-02	0.44	1017.39		
12-Jun-02	0.44	1017.40		
17-Jul-02	0.40	1017.44		
07-Aug-02	0.00			not read
09-Sep-02	0.37	1017.46		
04-Nov-02	0.40	1017.44		
10-Nov-02	0.40	1017.44		
30-Jan-03	0.42	1017.41		
09-Feb-03	0.42	1017.41	1058.60	start siphon
11-Feb-03	0.42	1017.41	1058.50	
13-Feb-03	0.42	1017.41	1058.50	
18-Feb-03	0.42	1017.41		
21-Feb-03	0.42	1017.41	1058.48	
23-Apr-03	0.41	1017.43	1030.14	
07-May-03	0.39	1017.44		
16-May-03	0.39	1017.45		
11-Jun-03	0.36	1017.48		
15-Jul-03	0.31	1017.53		
04-Sep-03	0.36	1017.47		
10-Sep-03	0.47	1017.37	996.28	
04-Mar-04	0.35	1018.23	1030.038	2004 survey data use from here on
08-Mar-04	0.00	1018.57	1029.715	Pulled ice and snow
26-Apr-04	0.32	1018.26	1030.150	
19-Jul-04	0.27	1018.30	1029.805	
26-Aug-04	0.26	1018.31	1029.930	
09-Sep-04	0.36	1018.21	1029.930	
22-Feb-05	0.37	1018.20	1030.176	Frozen
24-Feb-05	0.35	1018.22	1029.854	Frozen
26-May-05	0.29	1018.28	1028.310	
14-Sep-05	0.59	1017.99	1027.540	
09-Mar-06	0.54	1018.03	1027.180	no beep
14-Jun-06	0.60	1017.97	1027.522	
02-Oct-06	0.70	1017.87	1027.320	
09-May-07	0.33	1018.25	1029.295	
24-Sep-07	0.69	1017.89	1027.755	
25-Sep-07	0.32	1018.26	1027.755	
09-Apr-08	0.75	1017.82	1030.211	
14-Apr-08	0.75	1017.82	1029.930	
21-Apr-08	0.76	1017.82	1029.625	
28-Apr-08	0.76	1017.82	1029.250	
05-May-08	0.76	1017.82	1029.433	
12-May-08	0.76	1017.82	1029.362	
20-May-08	0.75	1017.82	1029.340	
26-May-08	0.75	1017.82	1029.276	
24-Jun-08	0.75	1017.82	1028.638	
24-Sep-08	0.72	1017.85	1028.582	
31-Mar-09	0.69	1017.89	1029.596	
13-Apr-09	0.73	1017.85	1028.164	
16-Apr-09	0.00	1018.57	1027.744	
20-Apr-09	0.76	1017.81	1027.716	
23-Apr-09	0.00	1018.57	1027.487	
27-Apr-09	0.79	1017.78	1027.273	
30-Apr-09	0.00	1018.57	1027.159	
05-May-09	0.78	1017.79	1027.229	
19-May-09	0.75	1017.83	1027.831	
29-Jun-09	0.70	1017.87	1027.668	
15-Sep-09	0.68	1017.89	1028.360	
19-May-10	0.64	1017.93	1028.894	

Cross Valley Dam - Piezometric Monitoring CVDT-1

Date	Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
03-Jun-10	0.65	1017.92	1028.542	
07-Sep-10	0.76	1017.82	1027.410	
10-May-11	0.75	1017.82	1028.417	
17-May-11	0.74	1017.83	1028.126	
24-May-11	0.74	1017.83	1027.964	
02-Jun-11	0.77	1017.80	1027.767	
13-Jun-11	0.79	1017.78	1027.511	

Cross Valley Dam - Piezometric Monitoring CVDT-2



CVDT-2		Location:	Cross Valley Dam Toe black PVC adj. to W3 channel	Stick up:	1.52m/ 0.38m
		Coordinates:	N/A	Ground Elevation (m amsl):	1019.50
Surface Protector:	N/A	Date Installed:	1994	Tip Elevation (m amsl):	1006.20
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments	
31-May-94	4.86	1016.16			
15-Sep-94	4.81	1016.21			
21-Sep-95	4.65	1016.37			
15-Oct-96	4.84	1016.18	1029.92		
20-Nov-97	4.78	1016.24			
26-May-98	4.73	1016.29	1031.20		
13-Nov-98	4.79	1016.23	1029.80		
03-Jun-99	4.78	1016.24	1031.40		
18-Sep-99	4.81	1016.21	~1029.2		
08-Jun-00	4.70	1016.32	~1030.2		
14-Aug-00	4.65	1016.37			
24-Aug-00	4.57	1016.45			
31-Aug-00	4.62	1016.40			
07-Sep-00	4.60	1016.42			
14-Sep-00	4.61	1016.41			
21-Sep-00	4.65	1016.37			
28-Sep-00	4.60	1016.42			
06-Oct-00	4.53	1016.49			
12-Oct-00	4.59	1016.43			
20-Oct-00	4.61	1016.41			
27-Oct-00	4.66	1016.36			
10-Jun-01	4.85	1016.17			
14-Sep-01	4.71	1016.31			
16-Oct-01	4.83	1016.19			
18-Oct-01	4.85	1016.17			
19-Oct-01	4.86	1016.16			
20-Oct-01	4.86	1016.16			
21-Oct-01	4.86	1016.16			
22-Oct-01	4.86	1016.16			
25-Oct-01	4.87	1016.15			
29-Oct-01	4.87	1016.15			
01-Nov-01	4.88	1016.15			
05-Nov-01	4.88	1016.14			
06-Nov-01	3.74	1016.14		New stick-up of 0.38 m	
08-Nov-01	3.74	1016.14			
12-Nov-01	3.76	1016.12			
15-Nov-01	3.76	1016.12			
19-Nov-01	3.76	1016.13			
21-Nov-01	3.75	1016.13			
23-Nov-01	3.75	1016.13		pond elev approx - 8 ft.	
26-Nov-01	3.75	1016.13		daytime temp -34 C	
28-Nov-01	3.76	1016.12			
30-Nov-01	3.76	1016.12			
03-Dec-01	3.76	1016.12			
05-Dec-01	3.78	1016.11			
12-Dec-01	3.78	1016.11			
14-Dec-01	3.78	1016.11			
15-Dec-01	3.80	1016.08			
16-Dec-01	3.79	1016.09			
17-Dec-01	3.81	1016.07			
18-Dec-01	3.82	1016.07			
19-Dec-01	3.82	1016.06			
26-Dec-01	3.84	1016.04			
02-Jan-02	3.84	1016.04			
09-Jan-02	3.84	1016.05			

Cross Valley Dam - Piezometric Monitoring CVD2-2

Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
16-Jan-02	3.84	1016.04		
23-Jan-02	3.83	1016.05		
30-Jan-02	3.84	1016.04		
06-Feb-02	3.84	1016.04		
13-Feb-02	3.83	1016.05		
20-Feb-02	3.84	1016.04		
01-May-02	3.83	1016.05		
12-Jun-02	3.64	1016.24		
17-Jul-02	3.55	1016.34		
07-Aug-02	0.00			not read
09-Sep-02	3.52	1016.36		
04-Nov-02	3.67	1016.21		
10-Nov-02	3.68	1016.20		
30-Jan-03	3.66	1016.23		
09-Feb-03	3.66	1016.22	1058.60	start siphon
11-Feb-03	3.67	1016.22	1058.50	
13-Feb-03	3.68	1016.21	1058.50	
18-Feb-03	3.69	1016.19		
21-Feb-03	3.70	1016.19	1026.18	
23-Apr-03	3.76	1016.12	997.84	
07-May-03	3.78	1016.11		
16-May-03	3.78	1016.11		
11-Jun-03	3.64	1016.24		
15-Jul-03	3.57	1016.31		
10-Sep-03	3.76	1016.12		
04-Mar-04	3.90	1015.98	1030.038	
08-Mar-04	3.77	1016.11	1029.715	
26-Apr-04	3.75	1016.13	1030.150	
19-Jul-04	3.67	1016.22	1029.805	
26-Aug-04	3.66	1016.23	1029.930	
09-Sep-04	3.72	1016.16	1029.930	
22-Feb-05	3.74	1016.15	1030.176	
24-Feb-05	3.75	1016.14	1029.854	
26-May-05	3.71	1016.17	1028.310	
14-Sep-05	3.99	1015.89	1027.540	
09-Mar-06	4.17	1015.33	1027.180	
14-Jun-06	3.97	1015.54	1027.522	
02-Oct-06	3.99	1015.51	1027.320	
09-May-07	3.95	1015.56	1029.295	
24-Sep-07	3.91	1015.60	1027.755	
09-Apr-08	3.82	1015.68	1030.211	
14-Apr-08	3.84	1015.66	1029.930	
21-Apr-08	3.88	1015.63	1029.625	
28-Apr-08	3.89	1015.61	1029.250	
05-May-08	3.87	1015.63	1029.433	
12-May-08	3.85	1015.65	1029.362	
20-May-08	3.88	1015.62	1029.340	
26-May-08	3.88	1015.62	1029.276	
24-Jun-08	3.68	1015.82	1028.638	
24-Sep-08	3.70	1015.81	1028.582	
31-Mar-09	3.84	1015.66	1029.596	
13-Apr-09	3.85	1015.65	1028.164	
16-Apr-09	0.00	1019.50	1027.744	
20-Apr-09	4.01	1015.49	1027.716	
23-Apr-09	0.00	1019.50	1027.487	
27-Apr-09	4.07	1015.43	1027.273	
30-Apr-09	0.00	1019.50	1027.159	
05-May-09	4.05	1015.45	1027.229	
19-May-09	4.03	1015.47	1027.831	
29-Jun-09	3.81	1015.69	1027.668	
09-Aug-09	3.88	1015.63	1027.966	
19-May-10	3.91	1015.59	1028.894	

Cross Valley Dam - Piezometric Monitoring CVDT-2

Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
03-Jun-10	3.82	1015.68	1028.542	
07-Sep-10	3.96	1015.54	1027.410	
10-May-11	3.963	1015.537	1028.417	
17-May-11	3.964	1015.536	1028.126	
24-May-11	3.964	1015.536	1027.964	
02-Jun-11	4.011	1015.489	1027.767	
13-Jun-11	3.836	1015.664	1027.511	

CVDC-9		Location:	Cross Valley Dam Crest St.0+565	2004 Ground Elevation (m amsl):	1033.28		
		Coordinates:	8V580096 6913998	2004 Shallow Tip Elevation (m amsl)	1007.70	2004 Shallow Stick-up (m):	0.27
Surface Protector:	Yes	Date Installed:	1981	2004 Deep Tip Elevation (m amsl):	1000.70	2004 Deep Stick- up (m):	0.19
Date	Water Level below top of pipe (m)		Water Level below top of pipe (m)	Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
	Shallow	Deep		Shallow	Deep		
Aug-82	8.80	8.85		1024.74	1024.61		
Dec-82	11.04	9.00		1022.50	1024.46		
Apr-83	11.38	9.81		1022.16	1023.65	1029.33	
Jun-83	12.58	10.74		1020.96	1022.72	1025.88	
Aug-83	13.63	11.90		1019.91	1021.56		
Oct-83	13.36	11.13		1020.18	1022.33		
Feb-84	12.24	10.67		1021.30	1022.79		
Mar-84						1030.60	
Apr-84	12.87	11.65		1020.67	1021.81		
Jun-84	10.75	12.28		1022.79	1021.18	1026.80	
Aug-84	12.41	11.05		1021.13	1022.41		
Jun-85	10.80	8.98		1022.74	1024.48	1031.20	
Oct-85	11.45	8.25		1022.09	1025.21		
May-86	9.65	11.18		1023.89	1022.28	1030.70	
Oct-86	10.51	8.79		1023.03	1024.67	1030.90	
Oct-87	10.85	9.10		1022.69	1024.36		
Jun-88	9.74	9.42		1023.90	1024.11		
Sep-89	11.01	9.07		1022.63	1024.46		
Oct-90	10.54	8.83		1023.10	1024.70		
May-91	10.79	9.14		1022.85	1024.39		
Sep-91	10.56			1023.08			
Jun-92	9.79	7.92		1023.85	1025.61		
Sep-92	10.27	8.29		1023.37	1025.24		
May-94	11.68	9.49		1021.94	1024.06		
Sep-94	11.93	9.82		1021.69	1023.73		
Sep-95	11.42	8.86		1022.20	1024.69		
13-Sep-96	11.84	9.52		1021.78	1024.03	1029.915	
7-May-97	13.15	11.57		1020.48	1021.99		
20-Nov-97	11.74	9.58		1021.88	1023.97		
26-May-98	11.57	9.11		1022.05	1024.44	1031.2	
13-Nov-98	12.19	9.90		1021.43	1023.65	1029.8	
03-Jun-99	10.56	8.87		1023.06	1024.68	1031.4	
18-Sep-99	11.50	10.25		1022.12	1023.30	~1029.2	
08-Jun-00	11.60	8.90		1022.02	1024.65	~1030.2	
14-Aug-00	11.73	9.19		1021.89	1024.36		
31-Aug-00	11.77	9.30		1021.85	1024.25		
07-Sep-00	11.66	9.12		1021.96	1024.43		
14-Sep-00	11.65	9.30		1021.97	1024.25		
19-Sep-00	11.83	9.34		1021.79	1024.21		
21-Sep-00	11.78	9.28		1021.84	1024.27		
28-Sep-00	11.61	9.40		1022.01	1024.15		
06-Oct-00	11.46	8.89		1022.16	1024.66		
12-Oct-00	11.57	9.00		1022.05	1024.55		
20-Oct-00	11.53	8.91		1022.09	1024.64		
27-Oct-00	11.62	9.03		1022.00	1024.52		
10-Jun-01	12.09	9.63		1021.53	1023.92		
14-Sep-01	11.75	9.67		1021.87	1023.88		
16-Oct-01	12.24	10.20		1021.38	1023.35		
18-Oct-01	12.35	10.33		1021.27	1023.22		
19-Oct-01	12.37	10.36		1021.25	1023.19		
20-Oct-01	12.38	10.37		1021.24	1023.18		
21-Oct-01	12.39	10.38		1021.23	1023.17		
22-Oct-01	12.40	10.39		1021.22	1023.16		
25-Oct-01	12.42	10.39		1021.20	1023.16		
29-Oct-01	12.41	10.34		1021.22	1023.21		
01-Nov-01	12.40	10.32		1021.23	1023.24		
05-Nov-01	12.41	10.31		1021.21	1023.24		
06-Nov-01	12.41	10.31		1021.21	1023.24		
08-Nov-01	12.41	10.30		1021.21	1023.25		
12-Nov-01	12.42	10.30		1021.20	1023.26		
15-Nov-01	12.42	10.29		1021.20	1023.27		
19-Nov-01	12.39	10.22		1021.23	1023.33		
21-Nov-01	12.37	10.19		1021.25	1023.36		
23-Nov-01	12.37	10.17		1021.25	1023.38		pond elev approx - 8 ft.
26-Nov-01	12.37	10.17		1021.25	1023.38		daytime temp -34 C
28-Nov-01	12.38	10.16		1021.24	1023.39		
30-Nov-01	12.39	10.17		1021.24	1023.38		
03-Dec-01	12.40	10.19		1021.22	1023.36		

CVDC-9		Location:	Cross Valley Dam Crest St.0+565	2004 Ground Elevation (m amsl):	1033.28		
		Coordinates:	8V580096 6913998	2004 Shallow Tip Elevation (m amsl)	1007.70	2004 Shallow Stick-up (m):	0.27
Surface Protector:	Yes	Date Installed:	1981	2004 Deep Tip Elevation (m amsl):	1000.70	2004 Deep Stick- up (m):	0.19
Date	Water Level below top of pipe (m)		Water Level below top of pipe (m)	Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
				Shallow	Deep		
05-Dec-01	12.42		10.20	1021.20	1023.35		
12-Dec-01	12.44		10.20	1021.19	1023.35		
14-Dec-01	12.47		10.25	1021.15	1023.30		
15-Dec-01	12.52		10.31	1021.10	1023.24		
16-Dec-01	12.57		10.38	1021.05	1023.17		
17-Dec-01	12.62		10.43	1021.00	1023.12		
18-Dec-01	12.66		10.48	1020.96	1023.07		
19-Dec-01	12.68		10.51	1020.94	1023.04		
26-Dec-01	12.72		10.53	1020.90	1023.02		
02-Jan-02	12.70		10.49	1020.92	1023.06		
09-Jan-02	12.68		10.45	1020.94	1023.10		
16-Jan-02	12.65		10.41	1020.97	1023.14		
23-Jan-02	12.62		10.36	1021.00	1023.19		
30-Jan-02	12.60		10.33	1021.02	1023.22		
06-Feb-02	12.59		10.31	1021.04	1023.24		
13-Feb-02	12.55		10.26	1021.07	1023.29		
20-Feb-02	12.55		10.25	1021.07	1023.30		
01-May-02	12.55		10.27	1021.07	1023.28		
12-Jun-02	12.16		9.77	1021.47	1023.78		
17-Jul-02	11.91		9.47	1021.71	1024.09		
07-Aug-02	12.10		9.71	1021.52	1023.85		
09-Sep-02	11.75		9.24	1021.87	1024.31		
04-Nov-02	11.85		9.64	1021.77	1023.91		
10-Nov-02	11.86		9.67	1021.76	1023.89		
30-Jan-03	11.81		9.40	1021.82	1024.16		
09-Feb-03	11.84		9.42	1021.78	1024.13		start siphon
11-Feb-03	11.87		9.46	1021.75	1024.10		
13-Feb-03	11.91		9.50	1021.71	1024.05		
18-Feb-03	11.96		9.55	1021.66	1024.00		
21-Feb-03	11.97		9.56	1021.65	1023.99	1026.18	
23-Apr-03	12.06		9.57	1021.57	1023.99		
07-May-03	12.21		9.78	1021.41	1023.77		
16-May-03	12.18		9.70	1021.45	1023.85		
11-Jun-03	11.99		9.46	1021.63	1024.09		
15-Jul-03	11.74		9.13	1021.88	1024.42		
10-Sep-03	12.36		9.95	1021.27	1023.60		
04-Mar-04	12.01		9.52	1021.54	1023.95	1030.038	2004 Survey data used from here on
08-Mar-04	12.11		9.65	1021.44	1023.82	1029.715	
26-Apr-04	12.45		9.50	1021.10	1023.97	1030.150	
19-Jul-04	11.87		9.28	1021.68	1024.19	1029.805	
26-Aug-04	11.88		9.28	1021.67	1024.19	1029.930	
09-Sep-04	12.15		9.64	1021.40	1023.83	1029.930	
22-Feb-05	12.02		9.44	1021.53	1024.03	1030.176	
23-Feb-05	12.06		9.49	1021.49	1023.99	1030.045	
24-Feb-05	12.11		9.56	1021.44	1023.92	1029.854	
26-May-05	12.43		9.95	1021.12	1023.52	1028.310	
14-Sep-05	12.83		10.39	1020.72	1023.09	1027.540	
09-Mar-06	13.27		10.93	1020.28	1022.54	1027.180	
14-Jun-06	12.86		10.40	1020.69	1023.07	1027.522	
04-Oct-06	12.94		10.46	1020.62	1023.02	1027.468	
09-May-07	12.52		9.83	1021.03	1023.64	1029.295	
24-Sep-07	12.76		10.15	1020.79	1023.32	1027.755	
09-Apr-08	12.10		9.18	1021.45	1024.29	1030.211	
14-Apr-08	12.19		9.33	1021.36	1024.15	1029.930	
21-Apr-08	12.37		9.57	1021.18	1023.90	1029.625	
28-Apr-08	12.49		9.73	1021.06	1023.75	1029.250	
5-May-08	12.44		9.66	1021.11	1023.81	1029.433	
12-May-08	12.44		9.74	1021.12	1023.73	1029.362	
20-May-08	12.45		9.64	1021.11	1023.84	1029.340	
26-May-08	12.44		9.59	1021.11	1023.89	1029.276	
24-Jun-08	12.26		9.46	1021.29	1024.02	1028.638	
24-Sep-08	12.26		9.44	1021.29	1024.04	1028.582	
31-Mar-09	12.39		9.50	1021.17	1023.97	1029.596	
13-Apr-09	12.90		10.23	1020.65	1023.25	1028.164	
16-Apr-09	13.02		10.38	1020.54	1023.10	1027.744	
20-Apr-09	13.14		10.55	1020.42	1022.92	1027.716	
23-Apr-09	13.22		10.64	1020.33	1022.83	1027.487	

CVDC-9		Location:	Cross Valley Dam Crest St.0+565	2004 Ground Elevation (m amsl):	1033.28		
		Coordinates:	8V580096 6913998	2004 Shallow Tip Elevation (m amsl)	1007.70	2004 Shallow Stick-up (m):	0.27
Surface Protector:	Yes	Date Installed:	1981	2004 Deep Tip Elevation (m amsl):	1000.70	2004 Deep Stick- up (m):	0.19
Date	Water Level below top of pipe (m)		Water Level below top of pipe (m)	Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
				Shallow	Deep		
27-Apr-09	13.34		10.77	1020.22	1022.70	1027.273	
30-Apr-09	13.39		10.85	1020.16	1022.63	1027.159	
05-May-09	13.36		10.82	1020.19	1022.66	1027.229	
19-May-09	13.16		10.48	1020.39	1022.99	1027.831	
29-Jun-09	12.75		10.70	1020.81	1022.77	1027.668	
15-Sep-09	12.66		9.85	1020.89	1023.62	1028.360	
19-May-10	12.73		9.83	1020.82	1023.64	1028.894	
03-Jun-10	12.77		9.80	1020.78	1023.67	1028.542	
07-Sep-10	13.17		10.40	1020.39	1023.07	1027.410	
27-Apr-11	13.20		10.34	1020.35	1023.14	1028.349	
03-May-11	13.18		10.36	1020.37	1023.11	1028.413	
09-May-11	13.12		10.26	1020.43	1023.22	1028.417	
17-May-11	13.15		10.35	1020.40	1023.13	1028.126	
24-May-11	13.13		10.29	1020.42	1023.18	1027.964	
30-May-11	13.18		10.30	1020.37	1023.17	1027.767	
13-Jun-11	13.04		10.22	1020.52	1023.25	1027.511	

Cross Valley Dam - Piezometric Monitoring CVD-1



CVD-1		Location:	20m u/s of CL, Stn.0+450		
		Coordinates:	8V580128 6914135	2004 Ground Elevation (m amsl):	1016.86
Surface Protector:	Yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.51
Date	Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments	
Aug-82	6.60	1019.13			
Dec-82	6.26	1018.89			
Apr-83	5.80	1018.57	1029.33		
Jun-83	4.80	1017.87	1025.88		
Aug-83	4.10	1017.38			
Dec-83	4.50	1017.66			
Mar-84	4.40	1017.59	1029.71		
Jun-84	4.50	1017.66	1026.80		
Oct-84	4.40	1017.59			
May-86	6.70	1019.20	1030.70		
Oct-86	6.90	1019.34	1030.90		
Oct-88	6.10	1018.78			
Sep-89	6.20	1018.85			
Oct-90	6.10	1018.78			
May-91	6.00	1018.71			
Sep-91	6.30	1018.92			
Sep-92	7.20	1019.55			
May-94	6.50	1019.06			
Sep-94	6.00	1018.71			
Sep-95	6.50	1019.06			
Sep-96	6.60	1019.13	1029.92		
06-May-97	5.30	1018.22			
21-Nov-97	6.50	1019.06			
27-May-98	6.70	1019.20	1031.20		
12-Nov-98				no air bubbles returned	
04-Dec-98	6.00	1018.71	1029.80		
16-Dec-98			1029.80	black tube broken at connector	
11-Jun-03	6.10	1018.78		new piezometer	
15-Jul-03	6.20	1018.85			
10-Sep-03	5.70	1018.50			
04-Mar-04	6.20	1018.85	1030.038	2004 Survey data used from here on	
08-Mar-04	5.90	1018.64	1029.715		
26-Apr-04	6.00	1018.71	1030.150		
26-Aug-04	6.20	1018.85	1029.930		
09-Sep-04	6.00	1018.71	1029.930		
22-Feb-05	6.10	1018.78	1030.176		
24-Feb-05	3.50		1029.854		
26-May-05	5.80	1018.57	1028.310		
14-Sep-05	5.20	1018.15	1027.540		
09-Mar-06	4.80	1017.87	1027.180		
14-Jun-06	5.10	1018.08	1027.522		
02-Oct-06	5.10	1018.08	1027.320		
09-May-07	5.60	1018.43	1029.295	Good return	
24-Sep-07	4.30	1017.52	1027.755		
09-Apr-08	6.00	1018.71	1030.211		
14-Apr-08	5.90	1018.64	1029.930		
21-Apr-08	5.70	1018.50	1029.625		
28-Apr-08	5.70	1018.50	1029.250		
05-May-08	5.80	1018.57	1029.433		
12-May-08	5.70	1018.50	1029.362		
20-May-08	5.60	1018.43	1029.340		
26-May-08	5.70	1018.50	1029.276		
24-Jun-08	5.70	1018.50	1028.638		
24-Sep-08	5.80	1018.57	1028.582		
31-Mar-09	5.80	1018.57	1029.596		

Cross Valley Dam - Piezometric Monitoring CVDP-1

Date	Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
13-Apr-09	5.30	1018.22	1028.164	
16-Apr-09			1027.744	
20-Apr-09	5.20	1018.15	1027.716	
23-Apr-09			1027.487	
27-Apr-09	5.00	1018.01	1027.273	
30-Apr-09			1027.159	
05-May-09	5.00	1018.01	1027.229	
19-May-09	5.10	1018.08	1027.831	
29-Jun-09	5.20	1018.15	1027.668	
15-Sep-09	5.70	1018.50	1028.360	
19-May-10	5.50	1018.36	1028.894	
03-Jun-10	7.60	1019.83	1028.542	
07-Sep-10	5.00	1018.01	1027.410	
27-Apr-11	5.20	1018.15	1028.349	
03-May-11	5.20	1018.15	1028.413	
09-May-11	5.30	1018.22	1028.417	
17-May-11	5.20	1018.15	1028.126	
24-May-11	5.10	1018.08	1027.964	
30-May-11	5.10	1018.08	1027.767	
13-Jun-11	5.20	1018.15	1027.511	

Cross Valley Dam - Piezometric Monitoring

CVD-3



CVD-3		Location:	Cross Valley Dam St.0+450 7m d/s of CL.		
		Coordinates:	8V580128 6914135	2004 Ground Elevation (m amsl):	1016.86
Surface Protector:	Yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.71
Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments	
Aug-82	3.70	1017.30			
Dec-82	3.60	1017.23			
Apr-83	3.40	1017.09	1029.33		
Jun-83	2.80	1016.67	1025.88		
Aug-83	2.40	1016.39			
Dec-83	2.40	1016.39			
Mar-84	2.70	1016.60	1029.71		
Jun-84	2.30	1016.32	1026.80		
Oct-84	2.40	1016.39			
May-86	4.00	1017.51	1030.70		
Oct-86	4.00	1017.51	1030.90		
Oct-87	3.80	1017.37			
Oct-88	3.50	1017.16			
Sep-89	3.30	1017.02			
Oct-90	3.20	1016.95			
May-91	4.80	1018.07			
Sep-91	3.30	1017.02			
Sep-92	0.40			likely erroneous reading	
May-94	3.00	1016.81			
Sep-94	3.30	1017.02			
Sep-95	3.00	1016.81			
Sep-96	3.25	1016.99	1029.92		
06-May-97	3.10	1016.88			
21-Nov-97	3.48	1017.15			
27-May-98	3.44	1017.12	1031.20		
12-Nov-98	n.r.			no air bubbles returned	
4-Dec-98	n.r.			no air bubbles returned	
3-Jun-99	3.22	1016.96			
18-Sep-99	3.10	1016.88	1029.20	very slow	
14-Jun-00	3.31	1017.03	1030.20		
14-Aug-00	3.40	1017.09			
31-Aug-00	3.40	1017.09			
07-Sep-00	3.40	1017.09			
14-Sep-00	3.50	1017.16			
21-Sep-00	3.50	1017.16			
28-Sep-00	3.50	1017.16			
06-Oct-00	3.60	1017.23			
12-Oct-00	3.60	1017.23			
20-Oct-00	3.50	1017.16			
27-Oct-00	3.50	1017.16			
10-Jun-01	3.20	1016.95			
14-Sep-01	3.40	1017.09			
16-Oct-01	3.20	1016.95			
18-Oct-01	3.20	1016.95			
19-Oct-01	3.20	1016.95			
20-Oct-01	3.22	1016.96			
21-Oct-01	3.21	1016.96			
22-Oct-01	3.20	1016.95			
25-Oct-01	3.20	1016.95			
29-Oct-01	3.10	1016.88			
01-Nov-01	3.20	1016.95			
05-Nov-01	3.10	1016.88			
06-Nov-01	3.10	1016.88			
08-Nov-01	3.20	1016.95			

Cross Valley Dam - Piezometric Monitoring

CVDP-3



Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
12-Nov-01	3.20	1016.95		
15-Nov-01	3.20	1016.95		
19-Nov-01	3.20	1016.95		
21-Nov-01	3.20	1016.95		
23-Nov-01	3.20	1016.95		pond elev approx - 8 ft.
26-Nov-01	3.20	1016.95		daytime temp -34 C
28-Nov-01				not read, low pressure in box
30-Nov-01				instrument broken from Nov 01 to Feb 02
01-May-02	3.20	1016.95		instrument fixed
12-Jun-02	3.30	1017.02		
17-Jul-02	3.30	1017.02		
07-Aug-02				not read
09-Sep-02	3.40	1017.09		
04-Nov-02	3.30	1017.02		
10-Nov-02	3.20	1016.95		
30-Jan-03	3.30	1017.02		
09-Feb-03	3.30	1017.02		start siphon
11-Feb-03	3.30	1017.02		
13-Feb-03	3.30	1017.02		
18-Feb-03	3.20	1016.95		
21-Feb-03	3.20	1016.95	1026.18	
23-Apr-03	3.20	1016.95		
07-May-03	3.10	1016.88		
16-May-03	3.10	1016.88		
11-Jun-03	3.10	1016.88		*new piezometer readout
15-Jul-03	3.20	1016.95		
10-Sep-03	2.90	1016.74		
04-Mar-04	3.10	1016.88	1030.038	2004 Survey data used from here on
08-Mar-04	3.00	1016.81	1029.715	
26-Apr-04	3.00	1016.81	1030.150	
19-Jul-04	3.10	1016.88	1029.805	
26-Aug-04	3.10	1016.88	1029.930	
09-Sep-04	3.10	1016.88	1029.930	
22-Feb-05	14.00		1030.176	no bubbles, keeps rising
24-Feb-05	16.00		1029.854	no bubbles, keeps rising
26-May-05	2.70	1016.60	1028.310	
14-Sep-05	2.30	1016.32	1027.540	
09-Mar-06	2.20	1016.25	1027.180	
14-Jun-06	2.30	1016.32	1027.522	
02-Oct-06	2.30	1016.32	1027.320	
09-May-07	2.40	1016.39	1029.295	Good Return
24-Sep-07	2.00	1016.11	1027.755	
09-Apr-08	2.70	1016.60	1030.211	
14-Apr-08	2.70	1016.60	1029.930	
21-Apr-08	2.60	1016.53	1029.625	
28-Apr-08	2.60	1016.53	1029.250	
05-May-08	2.60	1016.53	1029.433	
12-May-08	2.70	1016.60	1029.362	
20-May-08	2.60	1016.53	1029.340	
26-May-08	2.60	1016.53	1029.276	
24-Jun-08	2.70	1016.60	1028.638	
24-Sep-08	2.80	1016.67	1028.582	
31-Mar-09	20.20		1029.596	likely erroneous reading (LNW)
13-Apr-09	20.60		1028.164	likely erroneous reading (LNW)
16-Apr-09			1027.744	
20-Apr-09	20.20		1027.716	likely erroneous reading (LNW)
23-Apr-09			1027.487	
27-Apr-09	n/r		1027.273	
30-Apr-09			1027.159	
05-May-09	2.20	1016.25	1027.229	
19-May-09	2.30	1016.32	1027.831	
29-Jun-09	2.30	1016.32	1027.668	
15-Sep-09	n/r		1028.360	no bubbles

Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
19-May-10	2.40	1016.39	1028.894	
03-Jun-10	4.20	1017.65	1028.542	
07-Sep-10	2.40	1016.39	1027.410	
27-Apr-11	2.40	1016.39	1028.349	
03-May-11	2.30	1016.32	1028.413	
09-May-11	2.30	1016.32	1028.417	
17-May-11	2.10	1016.18	1028.126	
24-May-11	2.00	1016.11	1027.964	
30-May-11	2.10	1016.18	1027.767	
13-Jun-11	2.40	1016.39	1027.511	

Cross Valley Dam - Piezometric Monitoring CVD-5

CVD-5		Location:	Cross Valley Dam St.0+210 9m u/s of CL.		
		Coordinates:	8V580239 6914346	2004 Ground Elevation (m amsl):	1019.18
Surface Protector:	Yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.28
Date	Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments	
Aug-82	8.20	1020.02			
Dec-82	8.50	1020.23			
Apr-83	7.60	1019.60	1029.33		
Jun-83	6.50	1018.83	1025.88		
Aug-83	5.50	1018.13			
Dec-83	5.80	1018.34			
Mar-84	5.80	1018.34	1029.71		
Jun-84	5.80	1018.34	1026.80		
May-86			1030.70		
Oct-86			1030.90		
Sep-92	9.90	1021.21			
May-94	9.70	1021.07			
Sep-94	9.20	1020.72			
Sep-95	9.50	1020.93			
Sep-96	9.45	1020.90	1029.92		
06-May-97	8.10	1019.95			
21-Nov-97	9.33	1020.81			
27-May-98	9.60	1021.00			
12-Nov-98				black air tube broken at connector	
10-Sep-03	8.50	1020.23			
04-Mar-04	9.20	1020.72	1030.038	2004 Survey data used from here on	
08-Mar-04	9.00	1020.58	1029.715		
26-Apr-04	9.10	1020.65	1030.150		
26-Aug-04	9.20	1020.72	1029.930		
09-Sep-04	8.90	1020.51	1029.930		
22-Feb-05	9.10	1020.65	1030.176		
24-Feb-05	8.70	1020.37	1029.854		
26-May-05	9.70	1021.07	1028.310		
14-Sep-05	8.20	1020.02	1027.540		
09-Mar-06	8.00	1019.88	1027.180		
14-Jun-06	8.40	1020.16	1027.522		
02-Oct-06	8.10	1019.95	1027.320		
09-May-07	9.20	1020.72	1029.295	Good Return	
24-Sep-07	7.50	1019.53	1027.755		
09-Apr-08	9.50	1020.93	1030.211		
14-Apr-08	9.40	1020.86	1029.930		
21-Apr-08	9.30	1020.79	1029.625		
28-Apr-08	9.10	1020.65	1029.250		
05-May-08	9.20	1020.72	1029.433		
12-May-08	9.20	1020.72	1029.362		
20-May-08	9.20	1020.72	1029.340		
26-May-08	9.20	1020.72	1029.276		
24-Jun-08	9.00	1020.58	1028.638		
24-Sep-08	9.00	1020.58	1028.582		
31-Mar-09	9.50	1020.93	1029.596		
13-Apr-09	8.90	1020.51	1028.164		
16-Apr-09			1027.744		
20-Apr-09	8.30	1020.09	1027.716		
23-Apr-09			1027.487		
27-Apr-09	8.10	1019.95	1027.273		
30-Apr-09			1027.159		
05-May-09	8.10	1019.95	1027.229		
19-May-09	8.50	1020.23	1027.831		
29-Jun-09	8.40	1020.16	1027.668		
15-Sep-09	9.10	1020.65	1028.360		
19-May-10	9.60	1021.00	1028.894		

Date	Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
03-Jun-10	11.10	1022.05	1028.542	
07-Sep-10	8.20	1020.02	1027.410	
09-May-11	8.60	1020.30	1028.417	
17-May-11	8.40	1020.16	1028.126	
24-May-11	8.50	1020.23	1027.964	
30-May-11	8.40	1020.16	1027.767	
13-Jun-11	8.40	1020.16	1027.511	

Cross Valley Dam - Piezometric Monitoring

CVDP-6

CVDP-6		Location:	Cross Valley Dam St.0+210 5m d/s of CL.		
		Coordinates:	8V580239 6914346	2004 Ground Elevation (m amsl):	1019.18
Surface Protector:	Yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.37
Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments	
Aug-82	5.60	1018.29			
Dec-82	5.50	1018.22			
Apr-83	5.00	1017.87	1029.33		
Jun-83	5.70	1018.36	1025.88		
Aug-83	3.90	1017.10			
Dec-83	4.10	1017.24			
Mar-84	4.20	1017.31	1029.71		
Jun-84	4.10	1017.24	1026.80		
Oct-84	4.20	1017.31			
May-86	5.80	1018.43	1030.70		
Oct-86	6.00	1018.57	1030.90		
Oct-87	5.40	1018.15			
Oct-88	4.70	1017.66			
Sep-89	5.00	1017.87			
Oct-90	5.50	1018.22			
Sep-92	6.60	1018.99			
May-94	6.10	1018.64			
Sep-94	5.20	1018.01			
Sep-95	5.50	1018.22			
Sep-96	6.25	1018.75	1029.92		
06-May-97	5.40	1018.15			
21-Nov-97	4.45	1017.49			
27-May-98	3.74	1016.99	1031.20		
12-Nov-98	4.50	1017.52	1029.80		
03-Jun-99	4.90	1017.80	1031.40		
18-Sep-99	4.50	1017.52			
14-Jun-00	4.80	1017.73	1030.20		
14-Aug-00	4.80	1017.73			
31-Aug-00	5.00	1017.87		return bubbles "sputtering"	
07-Sep-00	5.00	1017.87			
14-Sep-00	5.00	1017.87			
21-Sep-00	4.70	1017.66			
28-Sep-00	4.90	1017.80			
06-Oct-00	5.00	1017.87			
12-Oct-00	4.90	1017.80			
20-Oct-00	5.20	1018.01			
27-Oct-00	5.10	1017.94			
10-Jun-01	4.90	1017.80			
14-Sep-01	4.90	1017.80			
16-Oct-01	4.80	1017.73			
18-Oct-01	4.72	1017.67			
19-Oct-01	4.70	1017.66			
20-Oct-01	4.70	1017.66			
21-Oct-01	4.70	1017.66			
22-Oct-01	4.70	1017.66			
25-Oct-01	4.70	1017.66			
29-Oct-01	4.70	1017.66			
01-Nov-01	4.70	1017.66			
05-Nov-01	4.60	1017.59			
06-Nov-01	4.60	1017.59			
08-Nov-01	4.70	1017.66			
12-Nov-01	4.70	1017.66			
15-Nov-01	4.70	1017.66			
19-Nov-01	4.80	1017.73			
21-Nov-01	4.70	1017.66			

Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
23-Nov-01	4.70	1017.66		pond elev approx - 8 ft.
26-Nov-01	-			not read
28-Nov-01	-			not read, low pressure in box
30-Nov-01	4.90	1017.80		
03-Dec-01	4.70	1017.66		
05-Dec-01	4.70	1017.66		
12-Dec-01	4.70	1017.66		
14-Dec-01	4.80	1017.73		
15-Dec-01	4.40	1017.45		
16-Dec-01	4.80	1017.73		
17-Dec-01	4.80	1017.73		
18-Dec-01	4.50	1017.52		
19-Dec-01	4.80	1017.73		
26-Dec-01	4.60	1017.59		
02-Jan-02	4.80	1017.73		
09-Jan-02	4.60	1017.59		
16-Jan-02	4.60	1017.59		
23-Jan-02	4.80	1017.73		
30-Jan-02	4.80	1017.73		
06-Feb-02	4.80	1017.73		
13-Feb-02	4.80	1017.73		
20-Feb-02	4.80	1017.73		
01-May-02	5.20	1018.01		
12-Jun-02	5.00	1017.87		
17-Jul-02	4.90	1017.80		
07-Aug-02				not read
09-Sep-02	5.10	1017.94		
04-Nov-02	5.20	1018.01		
10-Nov-02	5.10	1017.94		
30-Jan-03	5.30	1018.08		
09-Feb-03	5.20	1018.01		start siphon
11-Feb-03	5.20	1018.01		
13-Feb-03	5.00	1017.87		
18-Feb-03				*Piezometer tip broken (-35 oC)
21-Feb-03			1026.18	
23-Apr-03				
07-May-03				
16-May-03	4.80	1017.73		*piezometer tip repaired
11-Jun-03	4.70	1017.66		*new piezometer readout
15-Jul-03	4.80	1017.73		
10-Sep-03	4.70	1017.66		
04-Mar-04	5.00	1017.87	1030.038	2004 Survey data used from here on
08-Mar-04	4.80	1017.73	1029.715	
26-Apr-04	4.80	1017.73	1030.150	
19-Jul-04	4.80	1017.73	1029.805	
26-Aug-04	4.90	1017.80	1029.930	
09-Sep-04	4.80	1017.73	1029.930	
22-Feb-05	4.80	1017.73	1030.176	
24-Feb-05	4.60	1017.59	1029.854	
24-Feb-05	4.60	1017.59	1029.854	
26-May-05	4.80	1017.73	1028.310	
14-Sep-05	4.50	1017.52	1027.540	
09-Mar-06	4.50	1017.52	1027.180	
14-Jun-06	4.40	1017.45	1027.522	
02-Oct-06	4.30	1017.38	1027.320	
09-May-07	4.80	1017.73	1029.295	Good Return
24-Sep-07	4.30	1017.38	1027.755	
09-Apr-08	4.90	1017.80	1030.211	
14-Apr-08	5.10	1017.94	1029.930	
21-Apr-08	5.10	1017.94	1029.625	
28-Apr-08	4.90	1017.80	1029.250	
05-May-08	5.00	1017.87	1029.433	

Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
12-May-08	5.10	1017.94	1029.362	
20-May-08	5.00	1017.87	1029.340	
26-May-08	5.00	1017.87	1029.276	
24-Jun-08	4.90	1017.80	1028.638	
24-Sep-08	5.10	1017.94	1028.582	
31-Mar-09	5.10	1017.94	1029.596	
13-Apr-09	4.80	1017.73	1028.164	
16-Apr-09			1027.744	
20-Apr-09	4.80	1017.73	1027.716	
23-Apr-09			1027.487	
27-Apr-09	4.50	1017.52	1027.273	
30-Apr-09			1027.159	
05-May-09	4.60	1017.59	1027.229	
19-May-09	4.70	1017.66	1027.831	
29-Jun-09	4.60	1017.59	1027.668	
15-Sep-09	4.90	1017.80	1028.360	
19-May-10	5.20	1018.01	1028.894	
03-Jun-10	7.40	1019.55	1028.542	
07-Sep-10	4.60	1017.59	1027.410	
09-May-11	4.80	1017.73	1028.417	
17-May-11	4.70	1017.66	1028.126	
24-May-11	4.80	1017.73	1027.964	
30-May-11	4.60	1017.59	1027.767	
13-Jun-11	4.80	1017.73	1027.511	

Cross Valley Dam - Piezometric Monitoring

P01-11

P01-11		Location:	Cross Valley Dam Toe	2004 Stick-Up (m):	0.66
		Coordinates:	8V580208 6914301	2004 Surface Elevation (m amsl):	1017.21
Surface Protector:	Yes	Date Installed:	2001	Tip Elevation (m amsl):	1006.61
				Screened Interval (m bgs):	9.15 - 10.67
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments	
Sep-01	0.65	1017.18			
Sep-02	0.45	1017.38			
Sep-02	0.45	1017.38			
Jul-03	0.00	1017.83		*whole casing filled with water	
Sep-03	0.52	1017.31		* Rhonda noted: 'water in casing'	
Sep-03	0.63	1017.20			
Jul-04	0.505	1017.37	1029.805	2004 survey data used from here on	
Aug-04	0.51	1017.36	1029.740		
Sep-04	0.65	1017.22	1029.930	Ice in tubing, sulphur smell	
24-Feb-05	0.6	1017.27	1029.854	Frozen	
26-May-05	0.5	1017.37	1028.310		
14-Sep-05	1.06	1016.81	1027.540		
09-Mar-06	1.16	1016.71	1027.180		
14-Jun-06	1.05	1016.82	1027.522	Water in casing	
02-Oct-06	1.12	1016.75	1027.320		
09-May-07	1.03	1016.84	1029.295	Good Return	
24-Sep-07	1.035	1016.84	1027.755		
09-Apr-08	0.92	1016.95	1030.211	frozen	
14-Apr-08	0.66	1017.21	1029.930	frozen	
21-Apr-08	0.91	1016.96	1029.625	frozen	
28-Apr-08	0.91	1016.96	1029.250	frozen	
05-May-08	0.91	1016.96	1029.433	frozen	
12-May-08	0.81	1017.06	1029.362		
20-May-08	0.815	1017.06	1029.340		
26-May-08	0.81	1017.06	1029.276		
24-Jun-08	0.82	1017.05	1028.638		
24-Sep-08	0.81	1017.06	1028.582		
31-Mar-09	0.95	1016.92	1029.596	Frozen	
13-Apr-09	0.955	1016.92	1028.164	Frozen	
16-Apr-09			1027.744		
20-Apr-09	0.955	1016.92	1027.716	Frozen	
23-Apr-09			1027.487		
27-Apr-09	0.955	1016.92	1027.273	Frozen	
30-Apr-09			1027.159		
05-May-09	0.955	1016.92	1027.229	Frozen	
19-May-09	1.055	1016.82	1027.831		
29-Jun-09	1.05	1016.82	1027.668		
15-Sep-09	1.081	1016.79	1028.360		
19-May-10	0.916	1016.95	1028.894		
03-Jun-10	0.912	1016.96	1028.542		
07-Sep-10	1.225	1016.65	1027.410		
27-Apr-11	1.103	1016.77	1028.349	Frozen	
17-May-11	1.239	1016.63	1028.126	Frozen	
24-May-11	1.167	1016.70	1027.964	Frozen	
30-May-11	1.2	1016.67	1027.767	Frozen	
13-Jun-11	1.21	1016.66	1027.511		

Cross Valley Dam- Piezometric Monitoring P01-02

P01-02		Location:	Cross Valley Dam Toe	Surface Elevation: (m amsl)	1019.027	Surface Elevation: (m advpd)	1051.33
		Coordinates:	Unknown	Tip Elevation (A): (m amsl)	1005.14	Tip Elevation (A) (m advpd)	1037.44
Surface Protector:	Yes	Date Installed:	2001	Tip Elevation (B): (m amsl)	991.33	Tip Elevation (B) (m advpd)	1023.63
				Screened Interval (A): (m bgs)	12.37 - 13.89	Stick Up (A): (m)	0.68
				Screened Interval (B): (m bgs)	26.21 - 27.70	Stick Up (B): (m)	0.70
Date	Water level from top of pipe (m)		Comments	Piezometric Elevation (m amsl)	Piezometric Elevation (m amsl)	Piezometric Elevation (m advpd)	Piezometric Elevation (m advpd)
	A	B		A	B	A	B
10-Sep-01	1.58	Artesian		1018.13		1050.43	
06-Jun-02	1.72	1.49		1017.99	1018.24	1050.29	1050.5
03-Sep-02	1.41			1018.30	1019.73	1050.60	1052.0
23-Sep-02	1.45	1.87		1018.26	1017.86	1050.56	1050.2
29-Sep-05	2.29	0.795		1017.42	1018.93	1049.72	1051.2
27-Apr-11	2.725	0.642	B Frozen	1016.98	1019.09	1049.28	1051.4
03-May-11	2.7		B Frozen	1017.01	1019.73	1049.31	1052.0
09-May-11	2.582	0.794		1017.13	1018.93	1049.43	1051.2
17-May-11	2.523	0.845		1017.18	1018.88	1049.48	1051.2
24-May-11	2.497	0.869		1017.21	1018.86	1049.51	1051.2
30-May-11	2.541	0.861		1017.17	1018.87	1049.47	1051.2
01-Jun-11	2.549	0.841		1017.16	1018.89	1049.46	1051.2

Diversion Canal (Canal Dyke) - Piezometric Monitoring BGC05-02

BGC05-02		Location:	Canal Dike St.1+900		
		Coordinates:	8V580881 6913412	Ground Elevation (m amsl):	1054.10
Surface Protector:	Yes	Date Installed:	2005	Tip Elevation (m amsl):	1044.65
Date		Reading (psi) (#030137)		Piezometric Elevation (m amsl)	Comments
14-Jun-06		1.9		1045.98	
2-Oct-06		1.7		1045.84	
06-Jun-07		2		1046.05	Good flow
24-Sep-07		0.8		1045.21	
24-Jun-08		2.5		1046.40	
24-Sep-08		3		1046.75	
30-Jun-09		n/r			
17-Sep-09		1.8		1045.91	
20-May-10		1.6		1045.77	
02-Jun-10		2.7		1046.54	
10-Sep-10		0.1		1044.72	
27-May-11		0.6		1045.07	
15-Jun-11		0.9		1045.28	

Diversion Canal (Canal Dyke) - Piezometric Monitoring BGC05-03

BGC05-03		Location:	Canal Dike St.1+900		
		Coordinates:	8V580868 6913418	Ground Elevation (m amsl):	1054.68
Surface Protector:	Yes	Date Installed:	2005	Tip Elevation (m amsl):	1050.64
Date		Reading (psi) (#030139)		Piezometric Elevation (m amsl)	Comments
14-Jun-06		0.3		1050.85	
2-Oct-06		0.5		1050.99	
6-Jun-07		0.5		1050.99	good flow
24-Sep-07		0		1050.64	
24-Jun-08		0.4		1050.92	
24-Sep-08		0.5		1050.99	
30-Jun-09		0.3		1050.85	
17-Sep-09		0.3		1050.85	
20-May-10		0.4		1050.92	
2-Jun-10		1.4		1051.62	
10-Sep-10		0.4		1050.92	
27-May-11		0.4		1050.92	
15-Jun-11		0.4		1050.92	

Diversion Canal (Canal Dyke) - Piezometric Monitoring BGC05-06



BGC05-06		Location:	Canal Dike St. 2+160 (approx)	Ground Elevation (m amsl):	1050.31
		Coordinates:	8V580715 6913517	Shallow Tip Elevation (m amsl):	1046.78
Surface Protector:	Yes	Date Installed:	2005	Deep Tip Elevation (m amsl):	1041.50
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#030138)	Deep PP (#030136)	Shallow (#030138)	Deep (#030136)	
14-Sep-05	0.2	0.3	1046.92	1041.71	
14-Jun-06	0.2	0.3	1046.92	1041.71	
2-Oct-06	0.2	0.3	1046.92	1041.71	
06-Jun-07	0.3	0.4	1046.99	1041.78	good flow
24-Sep-07	0	0	1046.777	1041.50	
24-Jun-08	0.3	0.2	1046.987	1041.64	
24-Sep-08	0.3	0.2	1046.99	1041.64	
30-Jun-09	0.1	0.2	1046.85	1041.64	
17-Sep-09	0.3	0.3	1046.99	1041.71	
19-May-10	0.2	0.3	1046.92	1041.71	
02-Jun-10	1.2	1	1047.62	1042.20	
10-Sep-10	0.1	0.1	1046.85	1041.57	
27-May-11	0.3	0.2	1046.99	1041.64	
15-Jun-11	0.4	0.3	1047.06	1041.71	

Diversion Canal (Backslope) - Piezometric Monitoring BS-5

BS-5		Location:	Canal Dyke Backslope	Date Installed:	1981
			St.0+960	Ground Elevation (m amsl):	1060.20
Surface Protector:	Yes	Coordinates:	953.2N, 1534.6E	Tip Elevation (m amsl):	1053.00
Date		Reading (psi)	Piezometric Elevation (m amsl)		Comments
Nov-81		1.20	1053.84		
Dec-81		0.80	1053.56		
Mar-82		0.55	1053.385		
May-82		5.40	1056.78		
Aug-82		2.10	1054.47		
Apr-83		0.70	1053.49		
Sep-83		2.50	1054.75		
Mar-84		0.90	1053.63		
Oct-84		0.80	1053.56		
Oct-85		3.30	1055.31		
Oct-86		3.30	1055.31		
Oct-88		1.80	1054.26		
Oct-90			1053.00		
Sep-92		2.50	1054.75		
May-94		6.70	1057.69		
Sep-94		1.70	1054.19		
Sep-95		3.50	1055.45		
Jul-01		3.60	1055.52		
Aug-01		1.30	1053.91		
02-Jun-02		3.10	1055.17		
29-Sep-02		2.80	1054.96		
07-Jul-04		2.10	1054.47		
23-Sep-04		1.60	1054.12		
06-Jun-06		1.30	1053.91		
20-Sep-06		0.40	1053.28		
20-Jun-08		3.40	1055.38		
16-Jul-09		1.90	1054.33		
23-Sep-09		3.20	1055.24		
01-Jul-11		5.00	1056.5		

Diversion Canal (Backslope) - Piezometric Monitoring BS-9



BS-9		Location:	Canal Dyke Backslope	Date Installed:	1981
			St.1+530	Ground Elevation (m amsl):	1056.00
Surface Protector:	Yes	Coordinates:	1200N, 1018.4E	Tip Elevation (m amsl):	1045.00
Date		Reading (psi)	Piezometric Elevation (m amsl)		Comments
Nov-81		8.80	1051.16		
Dec-81		8.80	1051.16		
Mar-82		5.05	1048.535		
May-82		3.90	1047.73		
Aug-82		8.60	1051.02		
Apr-83		8.00	1050.6		
Sep-83		9.00	1051.3		
Mar-84		7.60	1050.32		
Oct-84		8.50	1050.95		
Oct-85		9.40	1051.58		
Oct-86		9.50	1051.65		
Oct-88		8.90	1051.23		
Oct-90		9.50	1051.65		
Sep-92		7.30	1050.11		
May-94		9.40	1051.58		
Sep-94		6.10	1049.27		
Sep-95		7.00	1049.9		
Jul-04		6.80	1049.76		
Sep-04		6.30	1049.41		
Jun-06		7.30	1050.11		
Sep-06		4.90	1048.43		
Jun-08		8.50	1050.95		
Jul-09		8.60	1051.02		
Sep-09		6.80	1049.76		
Jul-11		9.10	1051.37		

Diversion Canal (Canal Dyke) - Piezometric Monitoring CD-13

CD-13		Location:	Canal Dyke St.1+350	Ground Elevation (m amsl):	1055.214
		Coordinates:	8V581400 6913185	Shallow Tip Elevation (m amsl):	1048.70
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1044.70
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP	Deep PP	Shallow	Deep	
	(#350)	(#381)	(#350)	(#381)	
Nov-81	3.2	7.9	1050.94	1050.23	
Dec-81	2.8	7.5	1050.63	1049.95	
Mar-82	0.9	5.0	1049.33	1048.20	
May-82	0.4	4.1	1048.98	1047.57	
Aug-82	3.4	7.9	1051.08	1050.23	
Apr-83	2.7	7.3	1050.59	1049.81	
Sep-83	3.3	7.9	1051.01	1050.23	
Mar-84	2.4	7.0	1050.38	1049.60	
Jun-84	3.6	8.6	1051.22	1050.72	
Sep-84	2.8	7.7	1050.66	1050.09	
Oct-85	3.7	8.6	1051.29	1050.72	
Oct-86	3.3	8.2	1051.01	1050.44	
Oct-87	3.4	8.2	1051.08	1050.44	
Oct-88	3.2	8.0	1050.94	1050.30	
Sep-89	2.0	7.7	1050.10	1050.09	
Oct-90	3.7	8.5	1051.29	1050.65	
Sep-91	2.8	7.9	1050.66	1050.23	
Sep-92	3.5		1051.12		
May-94	2.8	7.7	1050.66	1050.09	
Sep-94	2.0	7.5	1050.10	1049.95	
Sep-95	0.5	7.5	1049.05	1049.95	
Sep-96	3.4	8.3	1051.08	1050.48	
08-May-97	2.0	7.9	1050.10	1050.23	
07-Nov-97	2.5	7.5	1050.45	1049.95	
26-May-98	3.4	8.3	1051.06	1050.51	
15-Nov-98	2.7	7.7	1050.59	1050.09	
28-May-99	3.3	8.1	1051.01	1050.37	
11-Sep-99	3.1	8.0	1050.87	1050.30	
14-Jun-00	4.2	9.1	1051.64	1051.07	
09-Sep-00	3.8	8.7	1051.36	1050.79	
06-Jun-01	4.2	8.8	1051.64	1050.86	
19-Sep-01	3.0	7.9	1050.80	1050.23	
13-Jun-02	2.1	8.6	1050.17	1050.72	
12-Sep-02	2.2	8.4	1050.24	1050.58	
17-Jun-03	0.1	8.6		1050.72	(#350 very wet)
12-Sep-03	0.1	7.8		1050.16	(#350 very wet)
06-Jul-04	1.3	8.0	1049.61	1050.30	(#350 kept rising); value questionable
16-Sep-04	1.8	7.7	1049.96	1050.09	(#350 kept rising); value questionable
31-May-05	2.5	9.1	1050.45	1051.07	(#350 kept rising); value questionable
14-Sep-05	1.4	8.0	1049.68	1050.30	#350 Bubbles stop then numbers start rising; value questionable
14-Jun-06	2.3	8.7	1050.31	1050.79	#350 Keeps Climbing; value questionable
2-Oct-06	0.9	7.7	1049.33	1050.09	Ice in casing and on cable; value questionable
06-Jun-07	3.9	9.5	1051.43	1051.35	read three times, was very noisy; value questionable
24-Sep-07	1.9	8.3	1050.03	1050.51	#350 stopped then keeps rising; value questionable

Diversion Canal (Canal Dyke) - Piezometric Monitoring CD-13

Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP	Deep PP	Shallow	Deep	
	(#350)	(#381)	(#350)	(#381)	
24-Jun-08	3.2	8.7	1050.94	1050.79	#350 stopped then keeps rising; value questionable
24-Sep-08	3.6	8.6	1051.22	1050.72	
30-Jun-09	3.4	8.4	1051.08	1050.58	
29-Sep-09	4.0	8.4	1051.50	1050.58	
16-May-10	2.1	8.0	1050.17	1050.30	
02-Jun-10	2.7	7.3	1050.59	1049.81	
10-Sep-10	3.1	7.9	1050.87	1050.23	
27-May-11	4.4	8.8	1051.78	1050.86	
15-Jun-11	4.2	9.0	1051.64	1051.00	

CD-15		Location:	Canal Dike St.1+530	Ground Elevation (m amsl):	1054.882
		Coordinates:	1233.7N, 1028.7E 8V581245 6913275	Shallow Tip Elevation (m amsl):	1048.10
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1043.30
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#353)	Deep PP (#362)	Shallow (#353)	Deep (#362)	
Nov-81	0.0	0.1	1048.1	1043.37	
Dec-81	0.0	0.0	1048.1	1043.314	
Mar-82	1.0	0.1	1048.8	1043.37	
May-82	0.1		1048.17		
Aug-82	2.7		1049.99		
Apr-83	2.0		1049.5		
Sep-83	2.7		1049.99		
Mar-84	1.4		1049.08		
Jun-84	3.1		1050.27		
Oct-85	4.5		1051.25		
Oct-86	3.6		1050.62		
Oct-87	3.3		1050.41		
Oct-88	3.0		1050.2		
Sep-89	2.8		1050.06		
Jan-90	0.8		1048.66		
Oct-90	4.0		1050.9		
Sep-91	3.0		1050.2		
Sep-92	2.4		1049.78		
May-94	2.3	10.4	1049.71	1050.58	
Sep-94	0.7	8.0	1048.59	1048.9	
Sep-95	1.0	9.0	1048.8	1049.6	
Sep-96	2.4	9.1	1049.745	1049.67	
08-May-97	0.6	7.0	1048.52	1048.2	
06-Nov-97	1.2	3.4	1048.919	1045.645	
26-May-98	1.9	9.2	1049.43	1049.74	
15-Nov-98	1.3		1049.01		No return in deep piezo
04-Dec-98	0.7	7.3	1048.59	1048.41	
16-Dec-98	0.4	6.9	1048.38	1048.13	
28-May-99	0.3	7.4	1048.31	1048.494	
11-Sep-99	0.5	8.5	1048.45	1049.25	
14-Jun-00	0.5	9.9	1048.45	1050.23	
09-Sep-00	0.6		1048.52		No return in deep piezo
19-Sep-00	0.5	11.0	1048.45	1050.965	
06-Jun-01	0.6	5.9	1048.52	1047.43	
19-Sep-01	0.0	8.0	1048.1	1048.9	Shallow tip is "dry"
13-Jun-02	0.7	2.8	1048.59	1045.26	
12-Sep-02	0.6	9.8	1048.52	1050.16	
17-Jun-03	0.0	9.1	1048.1	1049.67	*readings recorded with
12-Sep-03	0.5	8.1	1048.45	1048.97	new piezometer
06-Jul-04	0.0	8.6	1048.128	1049.32	
16-Sep-04	0.5	7.8	1048.45	1048.76	
31-May-05	1.2	10.0	1048.94	1050.3	
14-Sep-05	0.6	8.0	1048.52	1048.9	
14-Jun-06	0.7	9.0	1048.59	1049.6	
2-Oct-06	0.6	7.7	1048.52	1048.69	
06-Jun-07	0.1	7.2	1048.17	1048.34	good flow
24-Sep-07	dry	3.9		1046.03	#353 Dropping - #362 No Bubbles
24-Jun-08	1.0	0.2	1048.8	1043.44	
24-Sep-08	1.2	9.8	1048.94	1050.16	
30-Jun-09	1.7	9.1	1049.29	1049.67	
17-Sep-09	0.8	8.0	1048.66	1048.9	
16-May-10	0.8	0.9	1048.66	1043.93	

Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP	Deep PP	Shallow	Deep	
	(#353)	(#362)	(#353)	(#362)	
02-Jun-10	2.7	9.6	1049.99	1050.02	
10-Sep-10	0.5	7.9	1048.45	1048.83	
27-May-11	0.4	8.4	1048.38	1049.18	
15-Jun-11	1.3	1.9	1049.01	1044.63	

CD-21		Location:	Canal Dike St.2+100	Ground Elevation (m amsl):	1053.447
		Coordinates:	1455.9N, 509.5E 8V580724 6913495	Shallow Tip Elevation (m amsl):	1047.50
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#345)	Deep PP (#366)	Shallow (#345)	Deep (#366)	
Nov-81	1.2	0.4	1048.34	1042.28	
Dec-81	1.1	0.8	1048.27	1042.55	
Mar-82	1.0	0.6	1048.20	1042.42	
May-82	0.7	0.4	1047.99	1042.28	
Aug-82	0.7	0.4	1047.99	1042.28	
Apr-83	0.9	0.4	1048.13	1042.28	
Sep-83	0.8	0.4	1048.06	1042.28	
Mar-84	1.0	0.7	1048.20	1042.49	
Jun-84	1.3	1.3	1048.41	1042.91	
Sep-84	1.5	0.6	1048.55	1042.42	
Oct-85	4.4	4.3	1050.58	1045.01	
Oct-86	6.8	6.3	1052.26	1046.41	
Oct-87	2.0	6.5	1048.90	1046.55	
Oct-88	2.9	5.3	1049.53	1045.71	
Jun-89	3.2	4.9	1049.74	1045.43	
Aug-89	3.5	4.9	1049.95	1045.43	
Sep-89	3.4	4.7	1049.88	1045.29	
Jan-90	1.1	4.8	1048.27	1045.36	
Feb-90	0.9	4.4	1048.13	1045.08	
Mar-90	0.9	4.5	1048.13	1045.15	
Apr-90	1.0	4.6	1048.20	1045.22	
May-90	1.3	4.7	1048.41	1045.29	
Jun-90	2.6	4.4	1049.32	1045.08	
Jul-90	3.6	4.3	1050.02	1045.01	
Oct-90	3.4	4.5	1049.88	1045.15	
Feb-91	0.9	4.1	1048.13	1044.87	
Mar-91	2.8	4.4	1049.46	1045.08	
Apr-91	0.6	4.2	1047.92	1044.94	
May-91	0.9	4.3	1048.13	1045.01	
Jun-91	4.7	4.0	1050.79	1044.80	
Jul-91	4.1	4.1	1050.37	1044.87	
Sep-91	3.8	3.9	1050.16	1044.73	
Apr-92	4.7	5.0	1050.76	1045.47	
Jun-92	6.8	7.9	1052.26	1047.51	
Sep-92	4.2	4.3	1050.44	1045.01	
May-94	4.2	4.1	1050.44	1044.87	
Sep-94	4.0	1.6	1050.30	1043.12	
Sep-95	3.5	0.5	1049.95	1042.35	
Sep-96	4.3	1.3	1050.51	1042.88	
08-May-97	5.8	1.6	1051.56	1043.12	
10-Nov-97	3.7	1.1	1050.09	1042.77	
26-May-98	5.2	0.7	1051.11	1042.49	
15-Nov-98	3.5	n.r.	1049.95		
04-Dec-98	3.8	0.9	1050.16	1042.63	
28-May-99	3.5	1.1	1049.94	1042.77	
11-Sep-99	4.1	1.1	1050.37	1042.77	
14-Jun-00	4.0	1.1	1050.30	1042.77	
09-Sep-00	4.3	1.2	1050.51	1042.84	
06-Jun-01	3.6	1.1	1049.99	1042.77	

CD-21		Location:	Canal Dike St.2+100	Ground Elevation (m amsl):	1053.447
		Coordinates:	1455.9N, 509.5E 8V580724 6913495	Shallow Tip Elevation (m amsl):	1047.50
Surface Protector:	Yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP	Deep PP	Shallow	Deep	
	(#345)	(#366)	(#345)	(#366)	
19-Sep-01	3.7	1.3	1050.09	1042.91	
13-Jun-02	2.3	1.2	1049.11	1042.84	
12-Sep-02	2.8	1.2	1049.46	1042.84	
17-Jun-03	0.9	0.9	1048.13	1042.63	*readings recorded with new piezometer
12-Sep-03	1.1	0.9	1048.27	1042.63	
06-Jul-04	1.0	0.9	1048.20	1042.63	#366 Bubbles stopped at 1.7Psi
16-Sep-04	1.0	1.0	1048.20	1042.70	
31-May-05	0.9	1.0	1048.13	1042.70	casing full of water, lots of air over 35 psi
14-Sep-05	1.3	-	1048.41		#366 - gone
14-Jun-06	0.9	-	1048.13		#366 - gone
2-Oct-06	1.1	-	1048.27		#366 - gone
06-Jun-07	1.1	-	1048.27		#366 - gone
24-Sep-07	1.7	-	1048.69		#366 - gone (No Cable)
24-Jun-08	1.2	-	1048.34		#366 - gone
24-Sep-08	2.0	-	1048.90		#366 - gone
30-Jun-09	1.0	-	1048.20		#366 - gone
17-Sep-09	1.7	-	1048.69		#366 - gone
18-May-10	1.0	-	1048.20		#366 - gone
02-Jun-10	1.5	-	1048.55		#366 - gone
10-Sep-10	1.1	-	1048.27		#366 - gone
26-May-11	1.1	-	1048.27		#366 - gone
15-Jun-11	1.1	-	1048.27		#366 - gone
26-Jun-11	1.1	-	1048.27		#366 - gone

Secondary Tailings Dam - Piezometric Monitoring P03-01

P03-01		Location:	Secondary Impoundment Tailings	2004 Stick-Up (m):	0.53
		Coordinates:		2004 Surface Elevation (masl):	1060.581
Surface Protector:	?	Date Installed:	2003	Tip Elevation (m amsl):	?
				Screened Interval (m bgs):	?
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elev. (m amsl)	Comments
20-Jun-05		6.055	1055.06		
16-Sep-05		6.395	1054.72		
2-Oct-06		6.56	1054.55		
6-Jun-07		6.455	1054.66		Gartner Lee did the wells ahead
26-Sep-07		6.57	1054.54		Beep
25-Jun-08		6.215	1054.90		
25-Sep-08		6.285	1054.83		
30-Sep-09		5.858	1055.25		
20-May-10		1.808	1059.30		frozen, blocked
5-Jun-10		6.414	1054.70		
10-Sep-10		6.112	1055.00		
27-May-11		5.514	1055.60		
21-Jun-11		5.915	1055.20		

Note: Data until end of 2009 as compiled in BGC, 2010 data compiled by DES

Secondary Tailings Dam - Piezometric Monitoring P03-02

P03-02		Location:	Secondary Impoundment Tailings	2004 Stick-Up (m):	0.69
		Coordinates:		2004 Surface Elevation (m amsl):	1059.9
Surface Protector:	?	Date Installed:	2003	Tip Elevation (m amsl):	?
				Screened Interval (m bgs):	?
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elev. (m amsl)	Comments	
20-Jun-05	5.745	1054.85			
16-Sep-05	5.77	1054.82			
2-Oct-06	5.87	1054.72			
6-Jun-07	2.24	1058.35		No beep, bottom	
26-Sep-07	5.955	1054.64		Beep	
25-Jun-08	5.89	1054.70			
25-Sep-08	5.755	1054.84			
30-Sep-09	6.875	1053.72			
20-May-10	6.162	1054.43			
5-Jun-10	6.025	1054.57			
10-Sep-10	5.986	1054.60			
27-May-11	6.109	1054.48			
21-Jun-11	6.06	1054.53			

Note: Data until end of 2009 as compiled in BGC, 2010 data compiled by DES

Secondary Tailings Dam - Piezometric Monitoring P03-03

P03-03		Location:	Secondary Impoundment Tailings	2004 Stick-Up (m):	0.82
		Coordinates:		2004 Surface Elevation (m amsl):	1060.67
Surface Protector:	?	Date Installed:	2003	Tip Elevation (m amsl):	?
				Screened Interval (m bgs):	?
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments	
20-Jun-05	4.01	1057.48			
16-Sep-05	4.125	1057.37			
2-Oct-06	4.2	1057.29			
6-Jun-07	1.22	1060.27			
26-Sep-07	1.22	1060.27		No Beep - Bottom	
25-Jun-08	6.95	1054.54			
25-Sep-08	5.475	1056.02			
30-Sep-09	6.875	1054.62		No Beep - Bottom	
20-May-10	6.901	1054.59			
5-Jun-10	6.910	1054.58			
10-Sep-10	6.855	1054.64			
27-May-11	7.084	1054.41			
21-Jun-11	1.133	1060.36		Frozen, blocked	

Note: Data until end of 2009 as compiled in BGC, 2010 data compiled by DES

Secondary Tailings Dam - Piezometric Monitoring P81-06

P81-06		Location:	Secondary Dam	2004 Stick-Up (m):	0.13
		Coordinates:	8V582791 6912684	2004 Surface Elevation (m amsl):	1060.74
Surface Protector:	N/A	Date Installed:	1981	Tip Elevation (m amsl):	1054.71
				Screened Interval (m bgs):	Unknown
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elev. (m amsl)	Comments
20-Jun-05		6.81	1054.72		
1-Aug-05		6.16	1054.71		
14-Sep-05		6.81	1054.72		
2-Oct-06		6.805	1054.73		
6-Jun-07		6.79	1054.74		no beep, bottom
26-Sep-07		6.79	1054.74		no beep, bottom
25-Jun-08		6.79	1054.74		no beep, bottom
25-Sep-08		6.805	1054.73		
30-Sep-09		6.815	1054.72		
20-May-10		6.802	1054.73		All Measurements To Top Of Well - Plastic Casing Broken
5-Jun-10		6.812	1054.72		
10-Sep-10		6.800	1054.73		
27-May-11		6.807	1054.72		Frozen
15-Jun-11		6.821	1054.71		Dry

Note: Water levels should be read from top of lower section of pipe (5" stick-up), not from the 26" broken piece on top.

Note: Data until end of 2009 as compiled in BGC, 2010 data compiled by DES

Secondary Tailings Dam - Piezometric Monitoring P81-07

P81-07		Location:	Secondary Dam	2004 Stick-Up (m):	0.77
		Coordinates:	8V583222 6912420	2004 Surface Elevation (m amsl):	1063.31
Surface Protector:	N/A	Date Installed:	1981	Tip Elevation (m amsl):	1057.17
				Screened Interval (m bgs):	Unknown
Date	Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elev. (m amsl)	Comments	
20-Jun-05	6.95	1057.13			
1-Aug-05	6.91	1057.17			
14-Sep-05	6.91	1057.17			
2-Oct-06	6.91	1057.17			
6-Jun-07	6.91	1057.17			
26-Sep-07	6.9	1057.18		Beep	
25-Jun-08	6.905	1057.18			
25-Sep-08	6.91	1057.17			
30-Sep-09	6.908	1057.17			
20-May-10	6.905	1057.18			
5-Jun-10	6.909	1057.17			
10-Sep-10	6.925	1057.16			
27-May-11	6.901	1057.18		Water present at bottom of well.	
15-Jun-11	6.993	1057.09		Dry	

Note: Data until end of 2009 as compiled in BGC, 2010 data compiled by DES

Secondary Tailings Dam - Piezometric Monitoring P81-08

P81-08		Location:	Secondary Dam	2004 Stick-Up (m):	0.74
		Coordinates:	8V583322 6912403	2004 Surface Elevation (m amsl):	1063.26
Surface Protector:	N/A	Date Installed:	1981	Tip Elevation (m amsl):	1055.80
				Screened Interval (m bgs):	Unknown
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elev. (m amsl)	Comments
20-Jun-05		8.19	1055.81		
1-Aug-05		8.2	1055.80		Dry
14-Sep-05		8.19	1055.81		
2-Oct-06		8.195	1055.81		Dry
6-Jun-07		8.2	1055.80		no beep, bottom
26-Sep-07		8.2	1055.80		no beep, bottom
25-Jun-08		8.195	1055.81		no beep, bottom
25-Sep-08		8.195	1055.81		no beep, bottom
30-Sep-09		8.192	1055.81		no beep, bottom
20-May-10		8.193	1055.81		no beep, assumed dry
5-Jun-10		8.210	1055.79		
10-Sep-10		8.210	1055.79		
27-May-11		8.163	1055.84		Frozen
15-Jun-11		8.206	1055.79		Dry

Note: Data until end of 2009 as compiled in BGC, 2010 data compiled by DES

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
	(m)	30-Jun-09	16-May-10	02-Jun-10	10-Sep-10	27-May-11	15-Jun-11
1.0	6.13	-0.91	-0.91	4.91	7.54	-0.53	-4.27
2.0	-2.1	1.55	-1.27	-0.98	7.09	-1.34	-0.91
3.0	-3.1		-8.27			-8.18	
4.0	-4.1	-4.07	-4.29	-4.21	1.95	-4.08	-4.11
5.0	-5.1	-0.35	-0.67	-0.51	5.32	-0.31	-0.31
6.0	-6.1	-3.06	-4.34	-4.20	0.82	-4.21	-4.34
7.0	-7.1	0.45	0.14	0.26	4.64	0.84	0.75
8.0	-8.1	0.63	0.38	0.46	3.32	1.09	0.69
9.0	-9.1	-0.63	-1.71	-1.79	-0.12	-2.58	-2.89
10.0	-10.1						

Historic Source Data: As compiled by BGC in 2009 Annual Geotechnical Inspection; Revised as of 2011 by Denison Environmental Services (DES).

**Table H-2: Diversion Canal (Canal Dyke)
Thermistor CD-21**



CD-21		Location:	Canal Dyke St.2+100				Elevation (m amsl):	1053.34	Coordinates:	1455.9 mN 509.5 mE	8V580708 6913505											
		Thermistor String #12	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Not Applied	Surface Protector:	Yes												
Depth Correction:	0.0																					
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-82	29-May-94	14-Sep-94	20-Sep-95	13-Sep-96	17-Oct-97	12-Nov-98	13-Sep-99	07-Jun-00	05-Sep-00	25-May-01	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	18-Sep-04	31-May-05	
3.0	-3.0	16.58	16.80	11.91	13.12	14.12	14.18	14.78	13.47	16.92	13.27	16.96	16.84	12.55	17.13	13.29	16.92	12.87	16.69	12.32	16.63	
5.0	-5.0	16.56	16.45	14.61	15.04	16.56	15.29	14.65	15.78	16.42	15.15	16.34	16.40	14.56	16.42	15.13	16.37	14.93	16.20	14.08	15.81	
8.0	-8.0	16.89	16.51	16.72	16.68	16.63	16.48	15.79	16.43	16.26	16.23	16.11	16.22	15.99	16.07	15.97	16.13	15.85	15.69	15.39	15.43	
11.0	-11.0	16.87	16.31	16.27	16.31	16.40	16.48	nr	16.13	15.67	15.79	15.53	15.43	15.54	15.38	14.97	15.49	14.41	14.99	14.12	14.67	
13.0	-13.0	16.84	16.69	16.84	16.84	16.83	16.81	16.77	16.59	16.25	16.37	16.00	16.12	16.17	15.93	15.60	16.18	14.53	16.06	13.93	15.69	

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-82	29-May-94	14-Sep-94	20-Sep-95	13-Sep-96	17-Oct-97	12-Nov-98	13-Sep-99	07-Jun-00	05-Sep-00	25-May-01	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	18-Sep-04	31-May-05
3.0	-3.0	-0.30	-0.55	6.29	4.34	2.87	2.79	1.96	3.81	-0.69	4.11	-0.74	-0.60	5.23	-0.93	4.08	-0.69	4.73	-0.42	5.61	-0.35
5.0	-5.0	-0.30	-0.17	2.16	1.59	-0.30	1.26	2.11	0.64	-0.14	1.45	-0.04	-0.11	2.23	-0.14	1.47	-0.08	1.73	0.13	2.90	0.61
8.0	-8.0	-0.70	-0.25	-0.50	-0.45	-0.39	-0.22	0.62	-0.16	0.05	0.08	0.23	0.09	0.37	0.28	0.40	0.20	0.55	0.75	1.13	1.07
11.0	-11.0	-0.60	0.06	0.10	0.06	-0.05	-0.15		0.27	0.84	0.69	1.02	1.14	1.00	1.21	1.74	1.07	2.50	1.72	2.90	2.14
13.0	-13.0	-0.60	-0.42	-0.60	-0.60	-0.59	-0.56	-0.52	-0.31	0.10	-0.05	0.40	0.25	0.19	0.49	0.90	0.18	2.30	0.33	3.14	0.79

Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	01-Jun-05	14-Sep-05	14-Jun-06	02-Oct-06	06-Jun-07	24-Sep-07	30-May-08	23-Jun-08	25-Sep-08	30-Jun-09	17-Sep-09	18-May-10	02-Jun-10	10-Sep-10	26-May-11	15-Jun-11
3.0	-3.0	16.75	12.62	17.07	13.82	17.31	13.89	17.11	16.96	13.63	17.01	13.56	16.91	16.89	12.80	17.40	17.08
5.0	-5.0	15.94	14.20	16.31	15.01	16.47	15.74	16.33	16.39	14.89	16.48	15.38	16.09	16.21	14.70	16.23	16.20
8.0	-8.0	15.52	15.26	15.85	15.57	15.90	16.03	15.84	15.99	15.61	16.08	15.92	15.65	15.79	15.60	15.42	15.58
11.0	-11.0	14.94	14.09	14.94	14.24	14.50	14.20		15.03	14.57	15.32	15.03	15.17	15.06	14.20	14.64	14.56
13.0	-13.0	15.83	14.39	15.98	14.29	15.89	14.87	15.91	15.99	14.77	16.02	14.85	15.78	15.87	14.90	15.67	15.69

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	01-Jun-05	14-Sep-05	14-Jun-06	02-Oct-06	06-Jun-07	24-Sep-07	30-May-08	23-Jun-08	25-Sep-08	30-Jun-09	17-Sep-09	18-May-10	02-Jun-10	10-Sep-10	26-May-11	15-Jun-11
3.0	-3.0	-0.49	5.12	-0.86	3.30	-1.14	3.20	-0.91	-0.74	3.58	-0.79	3.68	-0.68	-0.66	4.83	-1.25	-0.88
5.0	-5.0	0.45	2.73	0.00	1.63	-0.20	0.69	-0.03	-0.10	1.79	-0.21	1.15	0.26	0.11	2.04	0.09	0.12
8.0	-8.0	0.96	1.29	0.55	0.90	0.48	0.32	0.56	0.37	0.85	0.26	0.46	0.81	0.63	0.87	1.10	0.89
11.0	-11.0	1.78	2.94	1.78	2.73	2.37	2.79		1.66	2.28	1.29	1.66	1.48	1.62	2.78	2.18	2.29
13.0	-13.0	0.61	2.49	0.43	2.63	0.54	1.84	0.51	0.41	1.98	0.38	1.87	0.67	0.56	1.80	0.81	0.79

*Tip #4 is suspect

The node is malfunctioning. Numbers are not included in the graphs.

Historic Source Data: As compiled by BGC in 2009 Annual Geotechnical Inspection; Revised as of 2011 by Denison Environmental Services (DES).

**Table H-3: Diversion Canal (Canal Dyke)
Thermistor CD-26**

CD-26		Location:	Canal Dyke St.2+600			Elevation (m amsl):	1053.10	Coordinates:	1674.7 mN, 71.7 mE	8V580269 6913720						
		Thermistor String #17	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:	Yes						
Depth Correction:	-0.4															
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-81	01-Jun-94	14-Sep-94	21-Sep-95	13-Sep-96	14-Sep-99	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	18-Sep-04	01-Jun-05	12-Oct-05	14-Jun-06
1.0	-0.6	22.70	13.14	11.87	11.54	11.98	11.51	14.85	15.64	17.85	17.34	12.28	17.76	16.40	19.82	13.91
2.0	-1.6	16.32	16.38	11.07	11.52	11.97	11.63	16.08	11.97	15.52	11.55	10.93	11.99	16.67	13.17	16.68
3.0	-2.6	16.20	16.76	11.14	12.01	12.77	12.40	17.06	12.99	16.99	12.38	14.03	12.01	17.00	12.75	17.22
4.0	-3.6	16.17		11.94	12.60	13.59	13.26	16.60	13.83	16.54	13.15	16.46	12.45		12.46	
5.0	-4.6	16.24	15.88	12.88	13.36	14.58	14.38	16.99	15.33	17.13	14.74	17.20	13.88	16.96	13.10	17.40
6.0	-5.6	16.28	17.71	15.80	18.08	22.69	27.08	35.50	34.25	37.50	35.00	40.20	34.00	44.20	38.00	
7.0	-6.6	16.43	15.73	14.56	14.73	15.61	15.69	16.51	16.23	16.63	15.92	16.68	15.11	16.30	14.41	16.65
8.0	-7.6	16.50	15.19	16.25	14.73	15.35	15.42	15.70	15.73	15.83	15.56	15.86	14.99	15.43	14.24	15.73
9.0	-8.6	16.46	15.33	15.60	15.38	15.80	16.10	16.90	17.17	17.38	17.43	17.99	17.62	18.31	18.06	19.84
10.0	-9.6	16.24	14.68	15.07	14.91	15.01	15.04	15.11	15.34	15.26	15.34	15.29	15.21	14.85	14.57	15.12

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	01-Jun-94	14-Sep-94	21-Sep-95	13-Sep-96	14-Sep-99	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	18-Sep-04	01-Jun-05	12-Oct-05	14-Jun-06
1.0	-0.6	-6.40	4.23	6.28	6.86	6.10	6.91	1.79	0.77	-1.81	-1.25	5.59	-1.71	-0.16	-3.82	3.09
2.0	-1.6	-0.20	-0.27	7.58	6.76	5.98	6.57	0.09	5.98	0.79	6.71	7.84	5.95	-0.61	4.05	-0.62
3.0	-2.6	0.00	-0.67	7.50	5.97	4.72	5.32	-1.01	4.38	-0.93	5.35	2.84	5.97	-0.94	4.76	-1.19
4.0	-3.6	0.00		6.05	4.96	3.45	3.94	-0.51	3.10	-0.44	4.10	-0.34	5.21		5.19	
5.0	-4.6	-0.10	0.34	4.50	3.77	2.02	2.30	-0.98	1.03	-1.14	1.81	-1.22	3.00	-0.95	4.16	-1.45
6.0	-5.6	-0.10														
7.0	-6.6	-0.30	0.56	2.08	1.85	0.71	0.61	-0.39	-0.06	-0.53	0.32	-0.59	1.35	-0.14	2.29	-0.56
8.0	-7.6	-0.40	1.22	-0.10	1.83	1.02	0.93	0.57	0.54	0.41	0.75	0.37	1.49	0.91	2.50	0.54
9.0	-8.6	-0.35														
10.0	-9.6	-0.10	1.89	1.37	1.58	1.45	1.41	1.32	1.02	1.12	1.02	1.08	1.19	1.66	2.04	1.30

Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	02-Oct-06	06-Jun-07	24-Sep-07	30-Jun-09	17-Sep-09	18-May-10	02-Jun-10	10-Sep-10	26-May-11	15-Jun-11					
1.0	-0.6	18.27	15.43	18.84	15.08	18.32	22.28	16.19	15.20	22.72	16.60					
2.0	-1.6	12.72	16.75	12.44	13.28	12.36	17.30	16.99	11.10	17.53	16.33					
3.0	-2.6	12.92	17.26	12.92	16.68	12.79	17.38	17.34	11.80	17.62	17.62					
4.0	-3.6	13.03	16.67	13.55	16.51	13.11	16.45	12.40	16.61	16.91						
5.0	-4.6	14.53	16.67	15.42	17.96	15.25	17.96	18.15	14.80	18.10	18.47					
6.0	-5.6	42.30	48.30	44.06	54.40	50.60	54.90	55.90	48.20	57.60	58.00					
7.0	-6.6	15.37	16.82	16.25	16.95	15.88	16.70	16.88	15.80	16.71	17.08					
8.0	-7.6	15.08	15.87	16.06	15.97	15.46	15.74	15.90	15.50	15.66	16.02					
9.0	-8.6	19.38	19.85	20.78	22.42	22.53	23.49	23.73	26.20	30.63	31.49					
10.0	-9.6	15.13	15.21	15.93	15.37	15.39	15.10		15.60	14.99	15.36					

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	02-Oct-06	06-Jun-07	24-Sep-07	30-Jun-09	17-Sep-09	18-May-10	02-Jun-10	10-Sep-10	26-May-11	15-Jun-11	
1.0	-0.6	-2.26	1.03	-2.85	1.49	-2.31	-6.15	0.14	1.39	-6.53	-0.35	
2.0	-1.6	4.75	-0.70	5.20	3.89	5.33	-1.38	-1.02	7.48	-1.64	-0.23	
3.0	-2.6	4.49	-1.24	4.49	-0.57	4.69	-1.39	-1.34	6.31	-1.66	-1.66	
4.0	-3.6	4.32	-0.56	3.53	-0.37	4.20	-0.27		5.33	-0.47	-0.82	
5.0	-4.6	2.14	-0.56	0.97	-2.01	1.19	-2.06	-2.27	1.75	-2.22	-2.62	
6.0	-5.6											
7.0	-6.6	1.03	-0.74	-0.06	-0.89	0.39	-0.62	-0.83	0.47	-0.63	-1.06	
8.0	-7.6	1.41	0.40	0.17	0.28	0.92	0.54	0.34	0.84	0.64	0.19	
9.0	-8.6											
10.0	-9.6	1.34	1.24	0.33	1.03	1.01	1.34		0.71	1.48	1.01	

The node is malfunctioning. Numbers are not included in the graphs.

Historic Source Data: As compiled by BGC in 2009 Annual Geotechnical Inspection; Revised as of 2011 by Denison Environmental Services (DES).

**Table H-1: Diversion Canal (Canal Dyke)
Thermistor BGC05-04**



BGC05-04		Location:				Elevation (m amsl):	1054.1 amsl	Coordinates:	580864.7E 6913420.2N	
		Thermistor String #	Date Installed:	03-Aug-05	Thermistor Type:	YSI 44007	Ice Bath Calibration:	Applied	Surface Protector:	
Depth Correction:	0.09									
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	30-May-08	19-Jun-08	30-Jun-09	17-Sep-09	18-May-10	02-Jun-10	10-Sep-10	27-May-11	15-Jun-11
0.5	-0.4	11.31	9.92			o/l	o/l	o/l	o/l	o/l
0.8	-0.7	11.98	10.75			o/l	o/l	o/l	o/l	o/l
1.0	-0.9	13.48	11.79			o/l	o/l	o/l	o/l	o/l
1.5	-1.4	16.32	13.79			o/l	o/l	o/l	o/l	o/l
2.0	-1.9	16.83	15.89			o/l	o/l	o/l	o/l	o/l
3.0	-2.9	16.77	16.61	16.52	12.12	o/l	o/l	o/l	16.89	16.74
4.0	-3.9	16.40	16.39	16.41	13.22	o/l	o/l	o/l	16.42	16.44
6.0	-5.9	16.07	16.12			o/l	o/l	o/l	o/l	o/l
10.0	-9.9	15.72	15.95			o/l	o/l	o/l	o/l	o/l
12.0	-11.9	15.51	15.79			o/l	o/l	o/l	o/l	o/l

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	30-May-08	19-Jun-08	30-Jun-09	17-Sep-09	18-May-10	02-Jun-10	10-Sep-10	27-May-11	15-Jun-11
0.5	-0.4	7.30	10.00							
0.8	-0.7	6.13	8.34							
1.0	-0.9	3.79	6.49							
2.0	-1.4	0.00	3.33							
2.0	-1.9	-0.60	0.53							
3.0	-2.9	-0.51	-0.32	-0.21	5.95				-0.64	-0.47
4.0	-3.9	-0.08	-0.07	-0.09	4.19				-0.11	-0.13
6.0	-5.9	0.27	0.20							
10.0	-9.9	0.71	0.42							

The node is malfunctioning. Numbers are not included in the graphs.

Historic Source Data: As compiled by BGC in 2009 Annual Geotechnical Inspection; Revised as of 2010 by Denison Environmental Services (DES).

**Figure H-8: Diversion Canal (Backslope)
Thermistor BS-5**

BS-5		Location:	Diversion Canal - Back Slope St.0+960			Surface Elevation (m advd):	1092.5 m	Coordinates:				
		Thermistor String #3	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:			
Depth Correction:	-0.5											
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	29-Sep-02	07-Jul-04	23-Sep-04	20-Jun-08	16-Jul-09	23-Sep-09	11-Jul-11
1.0	-0.5		14.56	12.33	13.50		Data too noisy	14.56			14.30	14.90
2.0	-1.5	16.28	16.11	12.55	13.80	14.94		15.77			17.17	17.29
3.0	-2.5	16.25	16.39	13.39	14.85	16.13		14.70		19.08	17.73	19.50
4.0	-3.5	16.18	16.26	14.06	15.34	15.23		15.30			15.92	20.00
5.0	-4.5	16.10	16.36	14.81	16.21	15.87		15.48		16.14	15.91	17.10
6.0	-5.5	16.10	16.27	15.27	16.12	16.02		17.42			16.82	16.20
7.0	-6.5	16.05	17.05	16.56	17.20	17.49		16.51	17.02		16.84	18.35
8.0	-7.5	16.01	16.44	16.11	16.40	16.66		16.43			16.71	16.95
9.0	-8.5	16.04	16.24	16.04	16.20	16.49		16.71			16.73	16.81
10.0	-9.5	16.03	16.37	16.23	16.37	16.75		16.71			16.94	17.01
Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	29-Sep-02	07-Jul-04	23-Sep-04	20-Jun-08	16-Jul-09	23-Sep-09	11-Jul-11
1.0	-0.5		2.05	5.38	3.56							1.59
2.0	-1.5	-0.10	0.11	5.07	3.17	1.59		2.10			2.43	-1.31
3.0	-2.5	-0.10	-0.27	3.73	1.67	0.04		0.49			-1.17	-3.70
4.0	-3.5	0.00	-0.09	2.78	1.05	1.19		1.89		-3.21	-1.79	-4.15
5.0	-4.5	0.10	-0.21	1.74	-0.03	0.38		1.10			0.31	-1.08
6.0	-5.5	0.10	-0.11	1.14	0.07	0.20		0.87		0.04	0.32	-0.02
7.0	-6.5	0.20	-0.98	-0.41	-1.15	-1.48		-1.40			2.07	-2.39
8.0	-7.5	0.20	-0.32	0.08	-0.27	-0.58		-0.40	-1.00	-0.77	-0.79	-0.92
9.0	-8.5	0.20	-0.04	0.20	0.01	-0.34		-0.27		-0.64	-0.66	-0.75
10.0	-9.5	0.20	-0.21	-0.04	-0.21	-0.65		-0.61			-0.90	-0.98

* The 6.5 metre depth tip is suspect *Data is too noisy

**Figure H-xx: Diversion Canal (Backslope)
Thermistor BS-9**



BS-9		Location:	Diversion Canal Back Slope St.1+530			Surface Elevation (m advd):	1088.30	Coordinates:	1200.0 m N 1018.4 m E	
		Thermistor String #5	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:	Yes
Depth Correction:	-0.5									
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	07-Jul-04	23-Sep-04	16-Jul-09	23-Sep-09	11-Jul-11
1.0	-0.5	16.14	16.71	12.96	14.86	No readings, nothing registered				
2.0	-1.5	15.74	16.46	13.40	14.66					
3.0	-2.5	15.62	16.65	14.18	14.97					
4.0	-3.5	15.46		17.54	18.51					33.30
5.0	-4.5	15.76	16.63	14.92	15.72		18.50	16.93	18.74	19.44
6.0	-5.5	15.56	16.06	14.66	15.54				15.94	
7.0	-6.5	15.57	15.93	14.72	15.62		15.31		15.60	
8.0	-7.5	15.64	15.98	14.92	15.71					
9.0	-8.5	15.61	15.88	14.85	15.49		15.30	16.02	16.69	21.17
10.0	-9.5	15.67	15.79	14.82	15.29			18.88		
Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	07-Jul-04	23-Sep-04	16-Jul-09	23-Sep-09	11-Jul-11
1.0	-0.5	0.00	-0.68	4.36	1.63					
2.0	-1.5	0.50	-0.37	3.70	1.91					
3.0	-2.5	0.70	-0.55	2.62	1.54					
4.0	-3.5	0.90		-1.57	-2.61		-2.60			-14.08
5.0	-4.5	0.50	-0.55	1.58	0.55			-0.85	-2.86	-3.57
6.0	-5.5	0.80	0.18	1.98	0.82		1.03		0.25	
7.0	-6.5	0.70	0.25	1.81	0.63				0.70	
8.0	-7.5	0.70	0.28	1.63	0.61		1.09			
9.0	-8.5	0.70	0.36	1.68	0.85			0.18	-0.56	-5.17
10.0	-9.5	0.60	0.45	1.70	1.08			-2.49		

The 4 metre depth tip is suspect

* An initial reading (Nov 15, 1981) is excluded from the dataset because post-installation temperature equilibrium may not have been complete.

**Figure H-10: Diversion Canal (Backslope)
Thermistor BS-10**

BS-10		Location:	Diversion Canal-Back Slope St.1+900				Surface Elevation (m advd):	1098.20	Coordinates:	1310.5 m N 657.3 m E								
		Thermistor String #5	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:	Yes								
Depth Correction:	-0.5																	
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	10-Nov-97	13-Nov-98	03-Dec-99	29-Aug-01	29-Sep-02	07-Jul-04	23-Sep-04	06-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09	11-Jul-11
1.0	-0.5	16.64	16.54	12.62	14.37	16.45	16.42	16.72	13.36	14.81	16.11	14.69	16.84	14.40	16.75	16.11	13.70	16.65
2.0	-1.5	16.35	16.65	12.67	14.58	16.17	15.84	16.51	14.20	14.84	16.90	14.62	17.36	14.37	16.69	16.90	14.00	17.07
3.0	-2.5	16.45	16.44	13.01	14.91	15.71	15.33	16.10	15.15	14.79	17.05	14.47	16.98	23.24	16.48	16.32	15.28	16.60
4.0	-3.5	16.55	16.45	13.75	15.43	15.63	15.27	16.04	15.41	15.16	16.57	14.82	17.03	14.97	16.25	16.43	14.73	16.68
5.0	-4.5	16.59	16.45	14.58	16.57	15.75	15.48	16.23	16.18	15.87	16.89	15.57	17.47	15.88	17.06	17.25	16.27	19.38
6.0	-5.5	16.65	16.49	15.41	17.10	15.94	15.69	16.22	16.36	16.09	16.67	15.78	17.09	15.91	16.40	16.61	15.76	16.66
7.0	-6.5	16.62	16.41	16.10	17.54	16.19	16.01	16.34	16.61	16.48	16.79	16.23	17.28	16.35	16.17	16.85	16.31	16.90
8.0	-7.5	16.58	17.50	17.50	19.11	18.06	18.01	18.26	18.65	18.93	19.60	19.34	20.56	19.77	17.63	20.39	20.04	20.51
9.0	-8.5	16.62	16.80	16.77	18.34	17.18	17.27	17.38	17.68	17.90	17.82	17.69	18.37	17.75	17.60	18.12	17.99	18.28
10.0	-9.5	16.58	16.89	16.95	18.69	17.27	17.31	17.63	17.88	18.19	18.06	18.10	18.78	18.20	18.21	18.44	18.43	18.63

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	10-Nov-97	13-Nov-98	03-Dec-99	29-Aug-01	29-Sep-02	07-Jul-04	23-Sep-04	06-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09	11-Jul-11
1.0	-0.5	-0.50	-0.38	4.99	2.39	-0.27	-0.24	-0.59	3.85	1.79	0.14	1.96	-0.73	2.35	-0.62	0.14	3.34	-0.50
2.0	-1.5	-0.20	-0.56	4.86	2.05	0.01	0.42	-0.39	2.63	1.75	-0.80	2.05	-1.32	2.39	-0.55	-0.80	2.91	-1.02
3.0	-2.5	-0.30	-0.29	4.35	1.63	0.60	1.08	0.12	1.35	1.82	-0.97	2.25	-0.89		-0.31	-0.12	1.18	-0.47
4.0	-3.5	-0.50	-0.38	3.16	0.87	0.62	1.08	0.11	1.01	1.33	-0.41	1.78	-0.95	1.58	-0.03	-0.25	1.90	-0.60
5.0	-4.5	-0.50	-0.33	2.04	-0.47	0.52	0.86	-0.07	0.05	0.43	-0.79	0.81	-1.44	0.42	-0.98	-1.20	-0.06	
6.0	-5.5	-0.60	-0.41	0.92	-1.12	0.26	0.57	-0.09	-0.16	0.16	-0.53	0.54	-1.02	0.38	-0.21	-0.46	0.57	-0.55
7.0	-6.5	-0.50	-0.25	0.12	-1.55	0.01	0.23	-0.17	-0.46	-0.31	-0.67	-0.01	-1.23	-0.15	0.06	-0.74	-0.10	-0.80
8.0	-7.5	-0.50	-1.55	-1.55	-3.25	-2.16	-2.10	-2.37	-2.71	-2.99	-3.66	-3.41	-4.57	-3.83	-1.62	-4.42	-4.09	-4.53
9.0	-8.5	-0.50	-0.71	-0.68	-2.41	-1.15	-1.25	-1.37	-1.68	-1.91	-1.83	-1.69	-2.42	-1.75	-1.59	-2.15	-2.01	-2.33
10.0	-9.5	-0.50	-0.86	-0.93	-2.82	-1.29	-1.34	-1.69	-1.89	-2.23	-2.09	-2.13	-2.84	-2.24	-2.25	-2.49	-2.48	-2.69

The 8 metre depth tip is suspect

**Figure H-11 Diversion Canal (Backslope)
Thermistor BS-12**



BS-12		Location:	Diversion Canal - Back Slope St.2+260			Elevation (m advd):	1094.6	Coordinates:	1463.6 m N 343.1 m E					
		Thermistor String #10	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:	Yes				
Depth Correction:	-0.5													
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	07-Jul-04	23-Sep-04	06-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09	11-Jul-11	
1.0	-0.5	16.34	16.00	12.88	14.30	15.91	15.21	17.47	14.55	16.57	15.96	15.89	15.66	
2.0	-1.5	16.28	16.33	12.87	14.57	16.34	15.93	16.99	16.06	17.09	16.42	16.21	17.20	
3.0	-2.5	16.27	16.07	13.13	14.50	15.92	14.80	16.14	14.59	16.13	15.61	15.57	16.00	
4.0	-3.5	16.20			14.62	16.08	14.96	16.12	14.84	16.12	15.82	15.47	16.07	
5.0	-4.5	16.24				16.08	15.24	16.01	15.26	15.96	15.84	15.72	16.32	
6.0	-5.5	16.23	15.73	14.74	15.14	16.75	16.19	16.68	15.99	16.76	16.78	16.91	19.58	
7.0	-6.5	16.21	15.60	15.03	15.32	16.05	15.79	16.16	15.73	16.21	16.38	16.77	16.59	
8.0	-7.5	16.21				15.80	15.77	Noisy	15.39	15.60	15.65	16.24	15.69	
9.0	-8.5	16.19	15.49	15.46	15.74	16.03	16.17	15.87	15.78	15.85	16.94	16.65	15.99	
10.0	-9.5	16.17	15.36	15.45	15.73	15.71	15.95	15.54	15.55	15.55	16.63	16.17	15.66	

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	02-Jun-94	15-Sep-94	21-Sep-95	07-Jul-04	23-Sep-04	06-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09	11-Jul-11	
1.0	-0.5	-0.20	0.21	4.52	2.43	0.32	1.21	-1.50	2.09	-0.47	0.26	0.35	0.65	
2.0	-1.5	-0.10	-0.16	4.57	2.09	-0.17	0.33	-0.93		-1.05	-0.27	-0.01	-1.18	
3.0	-2.5	-0.10	0.15	4.16	2.17	0.33	1.77	0.06	2.05	0.07	0.72	0.77	0.23	
4.0	-3.5	0.00			2.02	0.14	1.57	0.09	1.72	0.09	0.46	0.90	0.15	
5.0	-4.5	-0.10				0.09	1.15	0.18	1.12	0.24	0.39	0.54	-0.19	
6.0	-5.5	-0.10	0.52	1.80	1.27	-0.71	-0.05			-0.73	-0.75	-0.90		
7.0	-6.5	0.00	0.75	1.48	1.11	0.19	0.51	0.06	0.59	0.00	-0.21	-0.67	-0.46	
8.0	-7.5	0.00				0.50	0.54			0.75	0.69	-0.04	0.64	
9.0	-8.5	0.00	0.87	0.91	0.55	0.19	0.02	0.39	0.50	0.42	-0.88	-0.55	0.25	
10.0	-9.5	0.00	1.01	0.90	0.55	0.57	0.27	0.78	0.77	0.77	-0.54	0.00	0.62	

* The initial reading (Nov 15/81) is excluded from the data set because post-installation temperature equilibrium may not have been complete.

**Table H-5: Diversion Canal (Spoil Pile)
Thermistor SP-5**

SP-5		Location:	N. of canal dyke St.2+950				Surface Elevation (m amsl):	1045.57	Coordinates:	1898.2 m N & 183.1 m W	8V580012 6913942												
		Thermistor String #24	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:	Yes													
Depth Correction:	0.1																						
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-81	30-May-94	14-Sep-94	21-Sep-95	13-Sep-96	10-Nov-97	12-Nov-98	14-Sep-99	07-Jun-00	05-Sep-00	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	28-Oct-03	06-Jul-04	18-Sep-04	06-Jun-07	24-Sep-07	23-Jun-08	
1.0	-1.1	18.19	14.47	11.96	12.37	12.66	16.43	16.51	11.82	14.67	12.23	12.84	12.29	12.93	12.20	13.37	15.44	9.59	12.47	13.68	12.58	11.18	
2.0	-2.1	16.21	16.68	11.68	12.28	13.37		15.19	12.49	16.88	12.55	17.03	12.37	16.72	11.76	16.79	14.27	12.06	12.06	17.04	12.51	13.53	
3.0	-3.1	16.38	16.70	12.39	13.08	14.38	15.39	14.85	13.51	16.95	13.52	16.87	13.76	16.86	16.07	16.93	14.01	14.18	12.54	17.01		14.96	
4.0	-4.1	16.32	16.79	13.37	14.02	15.46				17.23	14.72	17.23	14.94	17.21		17.35			13.59	17.61		16.50	
5.0	-5.1	16.38	16.48	14.21	14.48	15.78	15.24	14.64	14.99	16.58	14.97	16.51	15.19	16.40	13.84	16.46	14.04	15.87	13.59	16.24		15.60	
6.0	-6.1	16.33	16.76	15.76	15.81	17.04		15.89	16.65	17.69	16.75	17.76	17.17	17.77	15.87	18.04	15.92		16.10	19.24		21.00	
7.0	-7.1	16.36	16.73	17.00	16.78	17.51				18.12	17.62	18.16	18.22	18.19		18.47	16.75	18.49	16.99	18.32		18.11	
8.0	-8.1	16.40	16.48	16.72	16.48	16.68				16.68	16.38	16.50		16.40		16.40	15.31	16.36	15.59	15.81			
9.0	-9.1	16.54	16.72	17.14	16.74	16.91	17.63			16.81	16.92	16.86	16.85		16.80	16.61	16.80	16.17	16.77	16.44	16.12	15.91	
10.0	-10.1	16.40	16.64	17.06	16.67	16.85		16.73	16.72	16.75	16.77	16.77		16.75	16.82	16.78	16.54	16.72	16.68	15.89		15.68	

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	30-May-94	14-Sep-94	21-Sep-95	13-Sep-96	10-Nov-97	12-Nov-98	14-Sep-99	07-Jun-00	05-Sep-00	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	28-Oct-03	06-Jul-04	18-Sep-04	06-Jun-07	24-Sep-07	23-Jun-08
1.0	-1.1	-2.20	2.28	6.11	5.43	4.96	-0.22	-0.31	6.35	2.01	5.66	4.67	5.56	4.53	5.71	3.86	1.00	10.65	5.26	3.40	5.09	7.48
2.0	-2.1	0.00	-0.56	6.54	5.52	3.81		1.27	5.18	-0.80	5.08	-0.97	5.38	-0.61	6.40	-0.69	2.51	5.89	5.89	-0.98	5.15	3.57
3.0	-3.1	-0.30	-0.68	5.25	4.16	2.27	0.93	1.63	3.51	-0.97	3.50	-0.87	3.15	-0.86	0.08	-0.94	2.79	2.55	5.01	-1.03		1.49
4.0	-4.1	-0.20	-0.75	3.75	2.80	0.87				-1.25	1.84	-1.25	1.54	-1.23					3.43	-1.68		-0.41
5.0	-5.1	-0.30	-0.42	2.51	2.13	0.43	1.12	1.91	1.45	-0.54	1.47	-0.45	1.18	-0.32	3.03	-0.39	2.74	0.32	3.40	-0.13		0.66
6.0	-6.1	-0.20	-0.71	0.50	0.44	-1.03		0.34	-0.58	-1.76	-0.69	-1.83	-1.18	-1.84	0.36	-2.14	0.30		0.08	-3.38		-5.05
7.0	-7.1	-0.20	-0.64	-0.95	-0.70	-1.53				-2.19	-1.65	-2.23	-2.30	-2.27			-0.66	-2.58	-0.94	-2.40		-2.18
8.0	-8.1	-0.30	-0.40	-0.68	-0.40	-0.63				-0.63	-0.28	-0.42		-0.30			1.05	-0.25	0.69	0.42		
9.0	-9.1	-0.40	-0.61	-1.09	-0.63	-0.83	-1.64		-0.71	-0.84	-0.77	-0.76		-0.70	-0.48	-0.70	0.04	-0.67	-0.28	0.10		0.36
10.0	-10.1	-0.30	-0.59	-1.07	-0.62	-0.83		-0.69	-0.68	-0.71	-0.74	-0.74		-0.71	-0.80	-0.75	-0.47	-0.68	-0.63	0.32		0.58

Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	24-Sep-08	30-Jun-09	20-May-10	02-Jun-10	10-Sep-10	15-Jun-11
1.0	-1.1	12.50	10.98	16.86	13.92	10.70	12.75
2.0	-2.1	12.09	12.80	17.48	16.64	11.10	15.21
3.0	-3.1	12.46	14.29	17.27	16.55	11.80	16.21
4.0	-4.1	13.62	16.09	18.60	17.32	13.30	17.36
5.0	-5.1	13.14	17.70	17.00	15.77	12.90	15.80
6.0	-6.1	16.90	19.34	21.60	19.79	17.40	20.15
7.0	-7.1	16.43	17.89	19.79	17.93	16.40	17.99
8.0	-8.1	14.67	15.38	17.04	15.32	14.50	15.29
9.0	-9.1	15.45	15.74	17.47	15.64	15.30	15.61
10.0	-10.1	15.47	15.48	17.29	15.38	15.20	15.33

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	24-Sep-08	30-Jun-09	20-May-10	02-Jun-10	10-Sep-10	15-Jun-11
1.0	-1.1	5.22	7.85	-0.77	3.07	8.34	4.83
2.0	-2.1	5.84	4.69	-1.48	-0.51	7.54	1.28
3.0	-3.1	5.14	2.39	-1.35	-0.51	6.19	-0.10
4.0	-4.1	3.38	0.08	-2.77	-1.36	3.85	-1.41
5.0	-5.1	4.07	-1.81	-1.04	0.44	4.41	0.40
6.0	-6.1	-0.87	-3.48	-5.61	-3.92	-1.42	-4.27
7.0	-7.1	-0.29	-1.94	-3.90	-1.98	-0.25	-2.05
8.0	-8.1	1.94	1.01	-1.06	1.06	2.16	1.10
9.0	-9.1	0.94	0.57	-1.47	0.69	1.12	0.73
10.0	-10.1	0.84	0.83	-1.34	0.96	1.19	1.02

* The initial reading (Nov 15/81) is excluded from the data set because post-installation equilibrium may not have been complete.

BH 88-4		Location:		0+450, Cross Valley Dam Crest		Elevation (m amsl):		1033.40		Coordinates:		2018.3 m N, 76.6 m W		8V580127 6914054									
		Date Installed:	1988	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Not Applied	Surface Protector:	Yes														
Depth Correction:	0																						
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	10-Dec-91	24-Jan-92	30-May-94	15-Sep-94	22-Sep-95	13-Sep-96	05-May-97	20-Nov-97	26-May-98	12-Nov-98	28-May-99	20-Sep-99	07-Jun-00	05-Sep-00	26-Jun-01	14-Sep-01	18-Oct-01	01-May-02	12-Jun-02	17-Jul-02	09-Sep-02	
0.6	-0.6	19.03	20.60	13.87	11.01	11.17	11.28	16.59	16.64	14.19	18.18	14.78	11.07	12.95	11.74	11.86	11.27	14.42	17.61	12.21	9.99	10.82	
1.4	-1.4	16.72	18.54	15.54	10.52	11.32	11.43	17.14	15.88	16.51	15.71	16.52	11.25	15.73	11.74	13.71	11.26	13.61	18.17	14.42	11.52	11.18	
2.0	-2.0	16.81	17.93	18.04	11.27	12.45	13.01	19.84	17.50	19.19	17.30	19.78	13.61	19.90	14.13	19.22	13.49	15.59	21.52	19.89	15.78	13.85	
2.5	-2.5	15.25	16.14	16.60	10.37	11.54	11.91	17.47	14.86	16.70	14.19	16.76	11.64	16.73	12.05	16.67	11.50	12.85	17.89	17.08	15.04	12.16	
3.3	-3.3	14.45	15.36	16.31	10.79	11.91	12.48	17.17	14.25	16.40	13.47	16.53	12.09	16.51	12.59	16.33	11.87	12.50	16.54	16.55	16.51	12.42	
4.2	-4.2	13.82	14.69	15.87	11.52	12.41	13.19	16.52	13.82	15.98	13.03	16.11	12.72	16.14	13.30	16.03	12.60	12.59	16.04	16.19	16.17	13.12	

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	10-Dec-91	24-Jan-92	30-May-94	15-Sep-94	22-Sep-95	13-Sep-96	05-May-97	20-Nov-97	26-May-98	12-Nov-98	28-May-99	20-Sep-99	07-Jun-00	05-Sep-00	26-Jun-01	14-Sep-01	18-Oct-01	01-May-02	12-Jun-02	17-Jul-02	09-Sep-02	
0.6	-0.6	-3.10	-4.61	3.10	7.77	7.47	7.27	-0.44	-0.50	2.64	-2.22	1.83	7.66	4.47	6.46	6.25	7.29	2.32	-1.60	5.66	9.77	8.13	
1.4	-1.4	-0.67	-2.67	0.76	8.62	7.12	6.92	-1.15	0.34	-0.42	0.55	-0.43	7.25	0.53	6.38	3.25	7.23	3.40	-2.28	2.24	6.76	7.37	
2.0	-2.0	-0.70	-1.96	-2.08	7.28	5.26	4.37	-3.97	-1.56	-3.34	-1.33	-3.92	3.40	-4.03	2.65	-3.37	3.57	0.70	-5.52	-4.02	0.46	3.05	
2.5	-2.5	1.15	0.03	-0.52	8.93	6.74	6.09	-1.52	1.65	-0.65	2.56	-0.72	6.55	-0.68	5.85	-0.61	6.80	4.55	-1.98	-1.08	1.41	5.66	
3.3	-3.3	2.22	1.01	-0.16	8.12	6.10	5.16	-1.19	2.48	-0.29	3.60	-0.45	5.78	-0.42	4.96	-0.21	6.15	5.11	-0.46	-0.47	-0.42	5.24	
4.2	-4.2	3.07	1.86	0.33	6.74	5.23	4.00	-0.43	3.09	0.22	4.27	0.06	4.75	0.02	3.86	0.15	4.94	4.96	0.14	-0.04	-0.02	4.13	

Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	23-Apr-03	07-May-03	11-Jun-03	15-Jul-03	10-Sep-03	29-Apr-04	19-Jul-04	26-Aug-04	09-Sep-04	26-May-05	12-Oct-05	14-Jun-06	04-Oct-06	09-May-07	24-Sep-07	24-Jun-08	24-Sep-08	13-Apr-09	20-Apr-09	27-Apr-09	05-May-09	
0.6	-0.6	17.63	16.47	12.73	9.80	10.73	16.91	8.96	9.06	11.06	13.44	13.30	10.79	12.74	16.41	12.54	11.39	12.16	20.13	19.33	18.84	2.26	
1.4	-1.4	17.86	16.91	14.83	11.60	10.90	17.18	10.03	9.33	10.59	15.84	12.76	13.83	12.39	17.01	11.99	13.19	11.92	19.79	19.27	18.82	2.27	
2.0	-2.0	21.06	20.35	19.94	16.22	13.38	20.44	13.37	11.88	12.67	20.04	14.92	20.09	14.82	20.83	14.37	18.38	14.47	23.14	22.79	22.35	2.32	
2.5	-2.5	17.73	17.47	17.29	15.75	11.87	17.56	12.57	10.92	11.19	17.54	12.84	12.97	18.33	12.72	17.66	12.74	19.57	19.39	19.15	2.29		
3.3	-3.3	16.34	16.38	16.40	16.35	11.97	16.23	13.22	11.27	11.10	16.24	11.92	16.58	12.33	16.97	12.40	16.42	12.25	17.16	17.18	17.13	2.26	
4.2	-4.2	15.90	15.98	16.08	16.05	12.74	15.82	14.34	12.27	11.86	15.82	12.08	16.23	12.72	16.50		16.13	12.76	16.29	16.36	16.37	2.25	

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	23-Apr-03	07-May-03	11-Jun-03	15-Jul-03	10-Sep-03	29-Apr-04	19-Jul-04	26-Aug-04	09-Sep-04	26-May-05	12-Oct-05	14-Jun-06	04-Oct-06	09-May-07	24-Sep-07	24-Jun-08	24-Sep-08	13-Apr-09	20-Apr-09	27-Apr-09	05-May-09	
0.6	-0.6	-1.62	-0.30	4.82	10.17	8.30	-0.81	12.04	11.81	7.68	3.73	3.94	8.18	4.80	-0.22	5.12	7.07	5.74	-4.17	-3.40	-2.90	43.31	
1.4	-1.4	-1.95	-0.89	1.69	6.62	7.89	-1.20	9.61	11.12	8.49	0.39	4.69	3.08	5.28	-1.00	5.95	4.02	6.07	-3.93	-3.42	-2.96	43.07	
2.0	-2.0	-5.11	-4.46	-4.07	-0.08	3.74	-4.54	3.75	6.14	4.83	-4.17	1.57	-4.21	1.70	-4.90	2.31	-2.51	2.17	-6.89	-6.60	-6.23	42.55	
2.5	-2.5	-1.81	-1.52	-1.32	0.50	6.15	-1.62	4.99	7.86	7.36	-1.60	4.56	-1.89	4.36	-2.45	4.75	-1.73	4.72	-3.71	-3.53	-3.30	42.85	
3.3	-3.3	-0.22	-0.27	-0.29	-0.23	5.98	-0.09	3.98	7.21	7.52	-0.10	6.07	-0.51	5.38	-0.96	5.27	-0.32	5.51	-1.18	-1.20	-1.14	43.20	
4.2	-4.2	0.31	0.22	0.09	0.13	4.72	0.41	2.35	5.48	6.17	0.41	5.80	-0.09	4.75	-0.41		0.03	4.69	-0.16	-0.24	-0.26	43.35	

Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	19-May-09	29-Jun-09	15-Sep-09	18-May-10	03-Jun-10	10-Sep-10	26-May-11	13-Jun-11	
0.6	-0.6	15.81	11.10	10.90	15.15	12.01	10.40	14.45	12.32	
1.4	-1.4	16.84	12.55	11.12	17.30	14.74	10.70	16.66	14.20	
2.0	-2.0	20.67	17.41	13.78	20.77	20.28	14.40	20.53	20.06	
2.5	-2.5	18.21	17.18	12.35	18.25	17.86	12.90	17.98	17.82	
3.3	-3.3	16.87	16.65	12.20	16.94	16.64	12.80	16.68	16.64	
4.2	-4.2	16.44	16.43	12.98	16.55	16.31	13.60	16.27	16.29	

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	19-May-09	29-Jun-09	15-Sep-09	18-May-10	03-Jun-10	10-Sep-10	26-May-11	13-Jun-11
0.6	-0.6	0.51	7.60	7.97	1.28	6.21	9.27	2.29	5.67
1.4	-1.4	-0.81	5.02	7.48	-1.62	1.79	8.62	-0.82	2.59
2.0	-2.0	-4.76	-1.46	3.15	-5.16	-4.66	2.58	-4.92	-4.43
2.5	-2.5	-2.33	-1.20	5.35	-2.65	-2.19	4.75	-2.33	-2.14
3.3	-3.3	-0.84	-0.59	5.60	-1.18	-0.79	4.87	-0.84	-0.79
4.2	-4.2	-0.34	-0.33	4.35	-0.71	-0.39	3.57	-0.34	-0.36

05-May-09 results are suspect

**Table H-24: Cross Valley Dam
Thermistor CVDC-6**

CVDC-6		Location:	Stn 0+340, Cross Valley Dam Crest			Elevation (m amsl):	1033.30	Coordinates:	2182.1 m N 4.7 m E	8V580210 6914218														
		Thermistor String #32	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	Applied	Surface Protector:	Yes														
Depth Correction:	0																							
Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	09-Dec-81	30-May-94	15-Sep-94	22-Sep-95	13-Sep-96	20-Sep-99	07-Jun-00	05-Sep-00	26-Jun-01	14-Sep-01	16-Oct-01	18-Oct-01	01-May-02	12-Jun-02	17-Jul-02	09-Sep-02	23-Apr-03	07-May-03	11-Jun-03	15-Jul-03	10-Sep-03	29-Apr-04	19-Jul-04
15.0	-15.0	11.05	13.87	14.23	15.64	All readings fluctuating	14.22	14.27	14.55	14.61	14.63	16.26	14.11	14.26	14.35	14.37	14.30	14.03	13.98	14.19	14.08	14.21	13.99	14.15
17.0	-17.0	11.70	13.95	15.22	15.74		14.54	14.79	14.82	14.91	16.48	14.94	14.54	14.59	14.57	14.47	14.31	14.24	14.41	14.28	14.38	14.30	14.40	
19.0	-19.0	12.59	13.81	14.63	15.59		14.01	14.29	14.50	14.49	14.60	16.12	14.57	14.18	14.20	14.14	14.06	13.96	13.89	14.05	13.91	13.99	14.02	14.08
21.0	-21.0	13.48	18.73	19.53	20.59		21.25	22.11	22.55	22.63	22.75	24.31	22.82	22.39	22.43	22.43	22.44	22.74	22.70	22.29	22.98	23.29	24.02	24.55
23.0	-23.0	14.16	13.80	14.26	14.97		14.00	14.31	14.54	14.16	14.18	15.02	14.17	13.69	13.75	13.72	13.66	13.55	13.49	13.68	13.57	13.69	13.70	13.77
25.0	-25.0	15.37	13.96	14.42	14.97		14.21	14.45	14.62	14.19	14.27	15.09	14.28	13.70	13.84	13.85	13.79	13.60	13.56	13.79	13.71	13.84	13.74	13.84
27.0	-27.0	15.42	14.26	14.91	15.29		14.55	14.80	14.96	14.96	14.97	15.81	15.00	14.69	14.74	14.67	14.57	14.56	14.49	14.65	14.51	14.55	14.61	14.65
29.0	-29.0	15.35	14.46	14.14	15.44		14.86	15.12	15.22	16.01	16.15	17.05	16.25	16.33	16.37	16.28	16.16	17.97	18.01	18.44	18.53	19.06	20.24	20.55

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	09-Dec-81	30-May-94	15-Sep-94	22-Sep-95	13-Sep-96	20-Sep-99	07-Jun-00	05-Sep-00	26-Jun-01	14-Sep-01	16-Oct-01	18-Oct-01	01-May-02	12-Jun-02	17-Jul-02	09-Sep-02	23-Apr-03	07-May-03	11-Jun-03	15-Jul-03	10-Sep-03	29-Apr-04	19-Jul-04
15.0	-15.0	7.60	3.01	2.50	0.63		2.51	2.44	2.06	1.97	1.95	-0.13	2.67	2.46	2.33	2.30	2.40	2.78	2.85	2.55	2.71	2.53	2.84	2.61
17.0	-17.0	6.40	2.85	1.12	0.46		2.03	2.03	1.69	1.65	1.53	-0.44	1.49	2.03	1.96	1.99	2.12	2.35	2.44	2.21	2.39	2.25	2.36	2.22
19.0	-19.0	4.90	3.04	1.90	0.64		2.76	2.36	2.07	2.09	1.94	-0.02	1.98	2.52	2.49	2.57	2.69	2.83	2.93	2.70	2.90	2.79	2.74	2.66
21.0	-21.0																							
23.0	-23.0	2.60	3.11	2.46	1.49		2.82	2.39	2.07	2.60	2.57	1.43	2.58	3.27	3.18	3.22	3.31	3.47	3.56	3.28	3.44	3.27	3.25	3.15
25.0	-25.0	1.00	2.91	2.26	1.52		2.56	2.22	1.99	2.58	2.47	1.36	2.46	3.28	3.08	3.07	3.15	3.43	3.49	3.15	3.27	3.08	3.23	3.08
27.0	-27.0	0.90	2.45	1.56	1.06		2.05	1.71	1.50	1.50	1.48	0.41	1.44	1.86	1.79	1.88	2.02	2.03	2.13	1.91	2.10	2.05	1.96	1.91
29.0	-29.0																							

Depth on String	Actual Depth	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
(m)	(m)	26-Aug-04	09-Sep-04	26-May-05	12-Oct-05	14-Jun-06	04-Oct-06	09-May-07	24-Sep-07	24-Jun-08	24-Sep-08	21-Mar-09	13-Apr-09	20-Apr-09	27-Apr-09	05-May-09	19-May-09	29-Jun-09	15-Sep-09	19-May-10	03-Jun-10	10-Sep-10	26-May-11	13-Jun-11
15.0	-15.0	14.41	14.30	14.02	14.08	14.03	14.42	14.04	14.03	14.11	14.29	13.97	13.96	13.93	13.92	2.19	13.93	14.08	14.36	13.92	14.44	14.00	13.90	13.80
17.0	-17.0	14.64	14.43	14.27	14.35	14.32	14.69	14.31	14.47	14.35	14.88	14.61	14.24	14.23	14.21	2.20	14.20	14.30	14.53	14.17	14.16	14.20	14.14	14.07
19.0	-19.0	14.31	14.09	14.03	14.03	14.14	14.71	14.02	14.10	14.05	14.22	14.09	14.01	13.99	13.97	2.19	13.95	14.02	14.18	13.93	13.91	13.90	13.86	13.80
21.0	-21.0	24.98	24.81	26.06	26.70	28.20	30.07	33.33	36.10	41.10	42.50	52.70	43.60	43.50	43.50		43.60	43.90	44.80	45.80	46.00	46.55	47.00	
23.0	-23.0	14.03	13.78	13.74	13.69	13.83	13.97	13.55	13.60	13.54	13.60	22.63	13.45	13.44	13.42	2.18	13.40	13.46	13.53	13.36	13.33	13.30	13.21	21.87
25.0	-25.0	14.13	13.86	13.77	13.73	13.85	14.07	13.52	13.60	13.52	13.58	22.97	13.41	13.40	13.38	2.18	13.36	13.42	13.49	o/l	13.30	13.30	13.18	21.78
27.0	-27.0	14.91	14.62	14.69	14.56	14.79	14.91	14.53	14.48	14.49	14.50	37.09	14.46	14.45	14.43	2.21	14.41	14.48	14.51	14.38	o/l	14.30	14.32	22.97
29.0	-29.0	20.93	20.69	21.77	21.15	23.59	24.08	25.11	25.75	27.17	27.57		28.52	28.54	28.55	2.39	28.55	28.79	29.42	31.64	o/l	32.90	35.20	35.24

Depth on String	Actual Depth	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)	Temperature (°C)
(m)	(m)	26-Aug-04	09-Sep-04	26-May-05	12-Oct-05	14-Jun-06	04-Oct-06	09-May-07	24-Sep-07	24-Jun-08	24-Sep-08	21-Mar-09	13-Apr-09	20-Apr-09	27-Apr-09	05-May-09	19-May-09	29-Jun-09	15-Sep-09	20-May-10	02-Jun-10	10-Sep-10	26-May-11	13-Jun-11
15.0	-15.0	2.25	2.40	2.79	2.71	2.78	2.23	2.76	2.78	2.67	2.41	2.86	2.88	2.92	2.94	43.96	2.92	2.71	2.32	2.98	2.17	2.85	3.01	3.17
17.0	-17.0	1.89	2.18	2.40	2.29	2.33	1.83	2.35	2.12	2.29	1.57	1.93	2.44	2.46	2.49	43.83	2.50	2.36	2.04	2.59	2.61	2.55	2.64	2.75
19.0	-19.0	2.34	2.64	2.73	2.73	2.57	1.79	2.74	2.63	2.70	2.46	2.64	2.76	2.79	2.81	43.90	2.84	2.74	2.52	2.92	2.95	2.96	3.03	3.12
21.0	-21.0																							
23.0	-23.0	2.78	3.14	3.20	3.27	3.07	2.86	3.47	3.40	3.49	3.40	-6.48	3.62	3.64	3.67	44.14	3.70	3.61	3.50	3.87	3.92	3.97	4.12	
25.0	-25.0	2.67	3.05	3.18	3.24	3.07	2.75	3.55	3.43	3.55	3.46	-6.73	3.71	3.73	3.76	44.17	3.79	3.70	3.59		4.01	4.01	4.21	
27.0	-27.0	1.56	1.95	1.86	2.03	1.72	1.56	2.07	2.14	2.13	2.11	-15.50	2.17	2.18	2.21	43.79	2.24	2.14	2.10	2.40		2.52	2.49	
29.0	-29.0																							

* The initial reading (Nov 15/81) is excluded from data set because post-installation equilibrium may not have been complete.

09-Dec-81 results removed from figure as post installation equilibrium may not be complete

The -21 and -29 metre depth tips are suspect

05-May-09 results are suspect

APPENDIX B

**Golder Doc No. 004, Faro Mine Complex – Spring Dam
Inspection, Daily Field Report, dated May 25 & 26, 2011**



FARO MINE COMPLEX – SPRING DAM INSPECTION

DAILY FIELD REPORT – Page 1 of 6



TO: Jay Cherian, Environmental Coordinator
Denison Environmental Services

CC: Jon Bronson, DES
Jeff Bailey, Keyeh Nejeh Golder
John Hull, Golder Associates Ltd.

DATE: May 25 & 26, 2011	GOLDER: 10-1427-0032
CLIENT: Denison Environmental Services (DES)	
LOCATION: Faro, Yukon	
CONTRACTOR: DES	OWNER: YTG
WEATHER: Mainly sunny with some cloud.	AIR TEMP: Low: 4°C High: 18°C
GOLDER PERSONNEL ON SITE: Bill Purdy	

FARO MINE COMPLEX, FARO, YUKON

DOC No.: 004

HEALTH AND SAFETY:

- Bill Purdy (WJP) of Golder arrived at site office by 08:00 hours on Wednesday morning and carried out site induction training.

SITE ACTIVITIES:

- Preliminary meeting with Jay Cherian of DES to confirm Golder agenda for the current spring dam inspection.
- Conducted a site tour of the following tailings dam and drainage control structures:
 - Faro Creek Diversion Channel (FCDC),
 - North Fork Rock Drain (NFRD),
 - K8 Rock Drain (K8RD),
 - North Wall Interceptor Ditch (NWID),
 - Rose Creek Diversion Channel (RCDC),
 - Secondary Dam (SD),
 - Intermediate Dam (ID), and
 - Cross Valley Dam (CVD).
- It is understood from discussions with DES, the mine site experienced a normal level of snow pack over the winter and a late spring melt period, resulting in high flow conditions observed during the current spring site inspection.
- In general, the winter snow pack had melted at the time of the spring dam inspection and the drainage control structures appeared to be functioning satisfactorily at or near their operating limits.
- A summary of site observations of the drainage control structures, tailings dam structures and open pit; client discussions and geotechnical comments and recommendations are provided below.
- Returned to Whitehorse on Thursday at 12:00 hours.

SITE OBSERVATIONS - DRAINAGE CONTROL STRUCTURES:

- High flow conditions along the FCDC with water levels within 1 to 2 m of the diversion berm crest (Photos 1 and 2). Rip rap performing satisfactorily.
- Above normal ponding level and stable slope conditions upstream of the NFRD, with high flow, channelized slope drainage and stable rip rap conditions observed downstream (Photos 3 and 4).
- Stable slope and flow conditions upstream and downstream at K8RD (Photos 5 and 6).

Date: June 27, 2011

Signature: **ORIGINAL SIGNED**

W.J. (Bill) Purdy
Geotechnical Engineer

FARO MINE COMPLEX – SPRING DAM INSPECTION

DAILY FIELD REPORT – Page 2 of 6

- Stable slope and flow conditions observed along length of NWID. One of three culverts at service road crossing is blocked with ice and sediment, reshaping of service road and shoulder ditches is required during drier site conditions and clean-out of downstream culvert required (Photos 7, 8 and 9).
- The flow conditions down gradient of the NWID were high, at or above the staff gauges either side of the Main Access Road (NFRC-23 and NF2). Discharge from the large diameter road culvert was eroding the berm conditions opposite the culvert, this berm should be inspected again at low flow conditions for possible erosion repairs.
- A tension crack was observed along the lower bench upstream of the tailings facility near the start of the RCDC (Photo 10). The tension crack should be regraded to minimize further seepage ingress and monitored for potential future movements.
- The unobstructed flow conditions in the RCDC were considered high, swift and within about 2 to 3 m of the berm crest. The native cut slopes and rock armoured berm slopes appeared to be functioning satisfactorily (Photos 11 and 12).



Photo 1: Upper portion of FCDC looking downstream.



Photo 2: Lower portion of FCDC looking downstream.



Photo 3: Upstream impoundment at NFRD.



Photo 4: Downstream discharge at NFRD.

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W.J. (Bill) Purdy
Geotechnical Engineer

FARO MINE COMPLEX – SPRING DAM INSPECTION

DAILY FIELD REPORT – Page 3 of 6



Photo 5: Upstream impoundment at K8RD.



Photo 6: Downstream discharge at K8RD.



Photo 7: Blocked culvert discharge at service road crossing looking downstream along NWID.



Photo 9: Blocked culvert at downstream end of NWID.



Photo 11: Channel condition looking downstream RCDC.



Photo 8: Service road crossing conditions looking north from NWID towards fresh water supply well.



Photo 10: Tension crack along lower bench upstream of the tailings facility near start of RCDC.



Photo 12: Channel condition looking downstream RCDC.

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Geotechnical Engineer

FARO MINE COMPLEX – SPRING DAM INSPECTION

DAILY FIELD REPORT – Page 4 of 6

SITE OBSERVATIONS - TAILINGS DAM STRUCTURES:

- Based on DES monitoring results, the pond water level upstream of the ID was at about El. 1045.45 m, which is about 2 m above the minimum operating pond level observed in September 2010. The water level was above the base of upstream rip rap material and the rip rap armour layer appeared in good condition (Photo 13).
- Soil erosion conditions were observed along the lower portion of the ID downstream slope, consistent with soil erosion conditions observed in September 2010 (Photos 14 and 18).
- The ID crest was in good condition with no evidence of dam distress or ground movements.
- Based on DES monitoring results, the polishing pond water level upstream of the CVD was at about El. 1028.42 m, which is about 1.4 m above the minimum operating pond level observed in September 2010. The water level was above the base of upstream rip rap material and the rip rap armour layer appeared in good condition (Photo 15).
- The CVD downstream slope was in good condition with no evidence of dam distress or ground movements (Photo 16).
- Longitudinal tension cracks were observed along the south end of the CVD crest, consistent with crest conditions observed in September 2010 (Photo 17). The tension cracks should be regraded to minimize further seepage ingress and monitored for potential future movements.
- Dust erosion was observed from the dry tailings surfaces at the tailings facility (Photo 19).



Photo 13: ID upstream slope conditions.



Photo 14: ID downstream stream slope conditions.



Photo 15: CVD upstream slope conditions.



Photo 16: CVD downstream stream slope conditions.

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FARO MINE COMPLEX – SPRING DAM INSPECTION

DAILY FIELD REPORT – Page 5 of 6



Photo 17: CVD longitudinal tension cracks on dam crest.



Photo 18: ID downstream slope erosion conditions.



Photo 19: Secondary tailings wind blown dust condition.

SITE OBSERVATIONS - OPEN PIT:

- Surface water runoff appeared to be discharging into the northwest corner of the Faro Pit, below the FCDC (Photo 20).



Photo 20: Faro Pit looking northwest.

CLIENT DISCUSSIONS:

- A wrap up meeting was held with Jay Cherian of DES prior to departure from site to review Golder's site observations and to plan for conference call with YG and DES representatives.
- A post-inspection conference call was held with YG, DES and Golder representatives on May 31, 2011. The spring site inspection results and preliminary geotechnical recommendations were provided, as summarized below.

GEOTECHNICAL COMMENTS AND RECOMMENDATIONS:

- In general, the drainage control structures appear to be functioning satisfactorily under high and rapid flow conditions.

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FARO MINE COMPLEX – SPRING DAM INSPECTION

DAILY FIELD REPORT – Page 6 of 6

- It is recommended that DES conduct a follow-up inspection of the drainage control structures and repair or replace any rip rap materials that were disturbed or eroded during the high spring flow and runoff conditions.
- Tension cracks, as observed upstream of the tailings impoundment (Photo 10) and along the Cross Valley Dam crest I (Photo 17), should be regraded and monitored for future ground movements.
- Training berm bank erosion from NFRC high flow conditions as observed down gradient of the large diameter culvert beneath the Main Access Road should be inspected during low flow conditions and repaired, if necessary.
- DES should inspect and repair the access road crossing of the NWID during low flow conditions to improve the flow conditions through the three small diameter culverts, regrade the access road and shoulder ditches, place a cover layer of small sized rip rap material and hydro-seed the graded slopes to minimize future sediment erosion.
- DES should inspect and repair the entry and exit conditions for the NWID large diameter culvert (Photo 9).
- DES should continue to monitor soil erosion conditions observed on the downstream slope of the ID (Photos 14 and 18). Subject to observing a significant change to the observed erosion conditions, additional geotechnical recommendations may be required to repair the downstream slope conditions.
- DES should consider alternative treatment methods to minimize wind blown dust erosion of the dry tailings surfaces observed at the tailings facility (Photo 19).
- It is understood that DES is planning to lower the operating pond levels upstream of the ID and CVD again in 2011 to the minimum operating levels as previously achieved in 2010. It is recommended that DES should monitor the upstream slope conditions, namely the rip rap and underling dam fill materials for potential ground movement and/or soil erosion, and report any change in slope conditions to the 'Engineer of Record'.
- It is understood that as part of future closure planning activities, YTG will consider the long term repairs that may be required for the CVD and ID, instrumentation upgrades and/or replacements and modifications to the existing instrumentation monitoring program. These additional items should be considered by the 'Engineer of Record' so direction can be given to the existing care and maintenance monitoring program supplied by DES.

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Date: June 27, 2011

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