

June 15, 2012

Yukon Government
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Whitehorse, YT
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Ms. Karen Furlong, EIT
Project Manager

Dear Ms. Furlong:

Faro Mine Remediation Project
Piezometer Trigger Levels - Intermediate Dam and Cross Valley Dam

This letter presents our review and recommendations regarding the piezometer trigger levels for the Intermediate Dam and Cross Valley Dam at Faro Mine Complex. As indicated in our 2011 Annual Geotechnical Review report, piezometric levels at both dams either show a downward trend or in a range consistent with historical variations.

Since both dams have performed satisfactorily to date, it appears to be reasonable to select the historical maximum level at each piezometer as the trigger level as shown in Table 1 and 2, respectively for the Intermediate Dam and Cross Valley Dam. However, since piezometric levels usually vary according to the fluctuation of the pond levels upstream and downstream of the dam with some time lags, any deviation of this general trend should be brought to the attention of the geotechnical consultant of the Yukon Government.

As to the Secondary Tailings Dam, it only retains minor pond water along some segments, while the Canal Dyke retains flow along the Rose Creek Diversion Channel all the time. To safe guard these two structures, which also have performed satisfactorily to date, we propose to adopt the above rationale in selecting trigger levels for piezometers installed for these two structures.

At thermistors installed for the Cross Valley Dam, permafrost condition is no longer present. Thus, no trigger level is required. At thermistors installed for the Canal Dyke, current geothermal profiles seem to indicate that the foundation at depth remains frozen at many locations. For these thermistors, the goal of monitoring is to detect whether or when the frozen foundation at depth becomes thawed. In

an event the foundation at depth becomes thawed; inclinometer readings should be taken and processed to check whether any foundation deformation occurs.

Yours truly,

KLOHN CRIPPEN BERGER LTD.



June 15, 2012



Robert C. Lo, P.Eng.
Project Manager

RL:dl

Attach: Tables 1 and 2

Table 1 Historical and Current Intermediate Pond and Measured and Trigger Levels at Intermediate Dam Piezometers

Location	Name	Historical ¹ (m)		Current (2011) (m)		Piezometer Trigger Level (m)	Comments
		Max	Min	Max	Min		
Water Level Readings							
Int. Pond	IP	1047.58	1043.47 ²	1045.59	1043.47	-	Target El. 1043 m
Standpipe Piezometers (Nested piezometers at P01-4, BH96-3 and BH96-4)							
Dam Crest	BH96-1	1031.65	1027.37 ³	1028.67	1027.37	1031.7	-
	BH96-2	1031.94	1028.44	1029.13	1028.89	1031.9	-
	BH94-IDC-1	1035.47	1035.31	dry	dry	1035.5	-
	BKS04-06	1037	1036.5	dry	dry	1037	-
	BKS04-07	1037.72	1037.68	dry	dry	1037.7	-
Dam Toe	P01-3	1030.63	1027.48 ³	1029.64	1027.48	1030.6	-
	P01-4A	1032.24	1029.27	1031.42	1029.68	1032.2	Shallow
	P01-4B	1032.17	1029.06	1030.68	1029.07	1032.2	Deep
	BH96-3A	1031.38	1026.62	1028.67	1027.78	1031.4	-
	BH96-3B	1031.45	1027.48	1028.7	1027.86	1031.5	-
	BH96-4A	1032.04	1027.61	-	-	1032	No readings for 2011
	BH96-4B	1032.28	1028.39	-	-	1032.3	No readings for 2011
	BH96-4C	1031.64	1027.74	-	-	1031.6	No readings for 2011
BH96-4D	1031.75	1027.62 ³	1028.87	1027.62	1031.8	-	
Pneumatic Piezometers (BH91-ID3 to ID6 are nested piezometers with one tip deep and one shallow)							
South Abutment	BH91-ID3	1039.23	1036.82	1037.31	1036.82	1039.2	Shallow
		1038.04	1030.32 ³	1033.87	1029.32	1038	Deep
Dam Toe	BH91-ID4	1035.91	1028.28	1029.68	1028.49	1035.9	Shallow
		1031.85	1026.74	1028.35	1027.02	1031.9	Deep
	BH91-ID6	1040.9	1026.62 ³	1028.09	1026.62	1040.9	Shallow
		1034.96	1020.82	1029.15	1027.82	1035	Deep
	BH91-ID7	1035.2	1028.82 ³	1029.94	1028.82	1035.2	-

- Notes:
1. Historical data taken from Geotechnical 2011 Data Review (Golder, 2011).
 2. Intermediate Pond historical minimum pond level decreased by 0.08 m from 1043.55 to 1043.47 m.
 3. BH96-1 historical minimum level decreased by 0.26 m from 1027.63 m to 1027.37 m.
P01-3 historical minimum level decreased by 0.26 m from 1027.74 m to 1027.48 m.
BH96-4D historical minimum level decreased by 0.11 m from 1027.73 m to 1027.62 m.
BH91-ID3 Deep historical minimum level decreased by 0.47 m from 1030.79 m to 1030.32 m.
BH91-ID6 Shallow historical minimum level decreased by 0.21 m from 1026.83 m to 1026.62 m.
BH91-ID7 historical minimum level decreased by 0.14 m from 1028.96 to 1028.82 m.

Table 2 Historical and Current Polishing Pond and Measured and Trigger Levels at Cross Valley Dam Piezometers

Location	Name	Historical ¹ (m)		Current (2011) (m)		Piezometer Trigger Level (m)	Comments
		Max	Min	Max	Min		
Water Level Readings							
	Polish Pond PP	1030.33	1026.31	1029.35	1026.94	-	Target El. 1027 m
Standpipe Piezometers							
Dam Toe	CVDT-1	1018.57	1017.13	1017.83	1017.78	1018.6	-
	CVDT-2	1019.5	1015.43	1015.66	1015.49	1019.5	-
	P01-02	1018.3	1017.01 ²	1017.21	1017.01	1018.3	Shallow
		1019.73	1017.86	1019.73	1018.86	1019.7	Deep
P01-11	1017.83	1016.61 ²	1016.77	1016.61	1017.8	-	
Dam Crest	CVDC-4	1019.05	1016.72	1018.68	1018.57	1019.1	Deep
	CVDC-7	1017.74	1015.14	1015.36	1015.34	1017.7	Shallow
		1019.21	1015.27	1017.47	1017.33	1019.2	Deep
	94CVDC-1	1024.58	1022.71 ²	1023.18	1022.71	1024.6	-
	CVDC-9	1024.74	1019.91	1020.52	1020.34	1024.7	Shallow
1025.61		1021.18	1023.25	1023.02	1025.6	Deep	
Pneumatic Piezometers							
Dam Toe	CVDP-1	1019.83	1017.38	1018.22	1018.01	1019.8	-
	CVDP-3	1017.65	1016.11	1016.39	1016.11	1017.7	-
	CVDP-5	1022.05	1018.13	1020.30	1020.09	1022.1	-
	CVDP-6	1019.55	1016.99	1017.73	1017.59	1019.6	-

- Notes: 1. Historical data taken from Geotechnical 2011 Data Review (Golder, 2011).
 2. P01-02 historical minimum level decreased by 0.41 m from 1017.42 m to 1017.01 m.
 P01-11 historical minimum level decreased by 0.04 m from 1016.65 m to 1016.61 m.
 94CVDC1 historical minimum level decreased by 0.02 m from 1022.73 m to 1022.71 m.