

July 26, 2016

EDI Project No: 16Y0089

Assessment and Abandoned Mines Branch (AAM) K-149
Department of Energy, Mines and Resources, Yukon Government
Room 2C Royal Center, 4114-4th Avenue
PO 2703, Whitehorse, YT, Y1A 2C6

Attention: Erik Pit, Type II Project Manager

RE: Mount Nansen Water Resources Investigations – Field Memo: May 9-11, 2016 - FINAL

The following memo is a brief field update from EDP's May 2016 trip to Mount Nansen; sampling conducted as part of the 2016/17 Water Resources Investigations. This memo provides a record of site conditions and tasks that were completed at each hydrometric station and water quality site (see tables below). A detailed monthly report on the data collected during the trip will be provided once the water quality lab results are received and all data has been checked for quality assurance/quality control.

Trip Dates:	May 9-11, 2016
EDI Field Staff:	Megan Sandford, Dawn Hansen and Danny Skookum
Weather conditions during monitoring:	Conditions for the three days included air temperatures from 0 to 12°C, with clear skies to light snow and calm winds.
Any changes to project scope, schedule or budget:	None; all sampling and monitoring was conducted within scope.
Additional Comments:	Site conditions were representative of mid-spring. Water levels remain high but have receded since the April 2016 freshet trips. A few small, isolated patches of snow and ice remain around the Mount Nansen site and all watercourses were flowing.
Wildlife Sightings:	A wolf was observed crossing the road between Victoria and Dome Creek on May 9, 2016.
Site concerns (safety):	None



Table 1. Summary of hydrometric program tasks completed and station conditions during the May 2016 sampling event.

HYDROLOGY

Station	Hydrometric Measurement Type	Notes & Comments
ATM-VC5	None	Barometric logger downloaded.
H-DC-DX+105	Volumetric	Volumetric discharge measurement collected.
H-DC-D1b	None	Thick ice persists at station. Water flowing on top of ice and through ice layers – not suitable for discharge measurement.
H-DC-B	Salt Tracer	Salt tracer discharge measurement was collected. Stilling well, staff gauge and continuous logger installed downstream of bridge.
H-DC-M-WP	Salt Tracer	Salt tracer discharge measurement collected. Logger successfully downloaded. Small amount of water flowing around right downstream side of weir pond.
H-DC-R	Salt Tracer	Salt tracer measurement collected. All flowing water contained in typical single channel.
H-VC-U	ADV	Velocity-area discharge measurement completed using an ADV. Logger downloaded successfully.
H-BC	ADV	Velocity-area discharge measurement completed using an ADV. Logger downloaded successfully.
H-VC-DBC	ADV	Velocity-area discharge measurement completed using an ADV. Logger downloaded successfully.
H-VC-UMN	ADV	Velocity-area discharge measurement completed using an ADV. Logger downloaded successfully.
H-VC-R	ADV	Velocity-area discharge measurement completed using an ADV. Logger downloaded successfully. Concurrent velocity-area discharge measurement with H-VC-R+290 collected. Station removed after measurement.
H-VC-R+290	ADV	Velocity-area discharge measurement completed using an ADV. Channel free of ice and snow. Logger downloaded successfully.
H-SEEP	Volumetric	Volumetric measurement collected in addition to reading the flow meter in the seepage pond shack. Water flows freely from pipe outlet.
H-TP	None	Water level remains low. Thawed earth at bottom of staff gauges.
H-PC-DSP	Volumetric	Volumetric discharge measurement completed at culvert outlet.



Table 2. Summary of water quality program tasks completed and site conditions during the May 2016 sampling event.

WATER QUALITY

Site	Sampled? (Yes/No)	Notes / Explanations
WQ-SEEP	Yes	Moderate flow rate from pipe.
WQ-TP	Yes	Low water level in pond with clear water.
WQ-DC-DX	Yes	Low flowrate with clear water. Small amount of ice and snow remaining along channel banks.
WQ-DC-DX+105	Yes	Moderate water level with lightly turbid water.
WQ-DC-D1b	Yes	Low flowrate with clear water. Water flowing on top of ice concentrated along right downstream bank.
WQ-DC-B	Yes	Channel free of ice and snow. Moderate flow with clear water.
WQ-DC-U	Yes	Moderate flow with lightly turbid water. Channel free of ice and snow.
WQ-DC-R	Yes	Moderate flow with lightly turbid water. Minor anchor ice in vicinity of sample site.
WQ-CH-P-13-01	Yes	Low, steady flow with clear water.
WQ-LW-SEEP-01	No	Site dry; no sample collected.
WQ-BC	Yes	Moderate flow with moderately turbid water.
WQ-VC-U	Yes	Moderate flow with lightly turbid water. Channel free of ice and snow.
WQ-VC-DBC	Yes	Moderate flow with lightly turbid water. Channel free of ice and snow.
WQ-VC-UMN	Yes	Moderate flow with lightly turbid water. Channel free of ice and snow.
WQ-VC-R	Yes	Moderate flow in channel with lightly turbid water.
WQ-PW	Yes	Low flow with clear water.
WQ-DESS-01	Yes	Low flow with clear water. Water flows along access road downstream of site.
WQ-DESS-02	Yes	Minimal flow with clear water.
WQ-DESS-03	Yes	Low, steady flow with clear water.
WQ-ADIT-SEEP	No	No visible seepage or evidence of recent flows.
WQ-PC-U	Yes	Moderate flow with lightly turbid water.
WQ-PC-D	Yes	Moderate flow with moderately turbid water.
WQ-MS-S-08	No	Site dry; no sample collected.
WQ-MS-S-03	Yes	Moderate flow, lightly turbid water.
WQ-MS-S-09	Yes	Small seep located around mill site; minimal flow with clear water. This seep was identified during this site visit, and sampling was conducted as per the contingency fund for mill seeps.
WQ-NW-SEEP-02	No	Site dry; no sample collected.
WQ-MS-S-10	Yes	Small seep located around mill site. Minimal flow with clear water. This seep was identified during this site visit, and sampling was conducted as per the contingency fund for mill seeps.
WQ-MS-S-A	Yes	Small seep located around mill site. Minimal flow with clear water. This



WATER QUALITY

Site	Sampled? (Yes/No)	Notes / Explanations
		seep was identified during this site visit, and sampling was conducted as per the contingency fund for mill seeps.
Quality Assurance/Quality Control Samples		
Field Replicate 1	Yes	Collected at WQ-VC-DBC.
Field Replicate 2	Yes	Collected at WQ-DC-B.
Field Blank	Yes	Sample bottles filled with deionized water supplied by ALS; samples were filtered and preserved as instructed. Collected at WQ-SEEP.
Travel Blank	Yes	Samples were provided by the lab and were transported to and from site.