Upper Lillooet Hydro Project

Weekly Environmental Monitoring Report #32

Reporting Period: July 27th – August 2, 2014

Upper Lillooet River Hydroelectric Facility (Water File No. 2002561, Water licence No. C130613), Boulder Creek Hydroelectric Facility (Water File No. 2003049, Water licence No. C129969) & Transmission Line (TX Line)

Distribution List		Prepared By
Name	**Organization**	
Trevor Andrews	Fisheries and Oceans Canada	 **J. Alex Sartori, RPBio** Independent Environmental Monitor (IEM)  **J. Stephen Sims, RPBio** Delegated IEM
James Davies	MFLNRO – Water Allocation	
Danielle Cunningham	MFLNRO – Land and Resources	
Frank DeGagne	MFLNRO – Land and Resources	
Nathan Braun	BC Environmental Assessment Office	
George Steeves	True North Energy – Independent Engineer	
Jennifer McCash	True North Energy – Independent Engineer	
Thomas Hicks	Sartori Environmental Services	
Peter Ramsden	Innergex Renewable Energy Inc.	
Oliver Robson	Innergex Renewable Energy Inc.	
Greg Davis	Innergex Renewable Energy Inc.	
Julia Mancinelli	Innergex Renewable Energy Inc.	
Jackie Boruch	Innergex Renewable Energy Inc.	
Liz Scroggins	Innergex Renewable Energy Inc.	
Bas Brusche	Innergex Renewable Energy Inc.	
Matt Kennedy	Innergex Renewable Energy Inc.	
Renaud DeBatz	Innergex Renewable Energy Inc.	
Richard Blanchet	Innergex Renewable Energy Inc.	
Claude Denault	CRT-ebc Construction Inc.	
Jonathan Drapeau	CRT-ebc Construction Inc.	
Éric Ayotte	CRT-ebc Construction Inc.	
Jordan Gagne	CRT-ebc Construction Inc.	
Ian McKeachie	CRT-ebc Construction Inc.	
D'Arcy Soutar	Westpark Electric Ltd.	
Pontus Lindgren	Westpark Electric Ltd.	**Date Prepared:** August 25, 2014
Harriet VanWart	Lil'wat Nation	**Date Submitted:** August 29, 2014

Owner Construction Permits and Approvals

Environmental Assessment Certificate No.E13-01 (Amendment 1, 2, 3 & 4)
Fisheries Act Subsection 35(2)(b) Authorization No. 09-HPAC-PA2-000303 (Amendment 1)
Letter of Advice for the Transmission Line No. 09-HPAC0-PA2-000303
Leave To Commence Construction (ULRHEF) File No. 2002561
Leave To Commence Construction (BDRHEF) File No. 2002453
Leave To Commence Construction (TX Line) File No. 2002561/2002453
Conditional Water Licence (ULRHEF C130613) File No. 2002561
Conditional Water Licence (BDRHEF C129969) File No. 2002453
Conditional Water Licence (BDRHEF C131153) File No. 2003601
Licence of Occupation (ULRHEF #232384) File No. 2409871
Licence of Occupation (BDRHEF #232386) File No. 2409998
Licence of Occupation (TX Line #2423386) File No. 2410654
Occupant Licence to Cut (ULRHEF Amendments 1, 2, 3, 4) No. L49717
Occupant Licence to Cut (BDRHEF – km 38 laydown) No. L49698
Occupant Licence to Cut (BDRHEF Amendments 1, 2) No. L49816
Occupant Licence to Cut (TX Line Amendment 1, 2, 3) No. L49697
General Wildlife Measure Exemption Approval Letter (TX Line & BDRHEF) File No. 78700-35/06 UWR and 39585-20 WHA
Heritage Conservation Act – Alteration Permit (ULRHEF) File No. 11200-03/2014-0033
Road Use Permit No. 6123-13-02 (Lillooet River FSR); 5673-13-01 (Rutherford Creek FSR); 7977-13-01 (Lillooet South FSR); 8015-13-01 (Ryan River); 8188-13-01 (Pemberton Creek FSR); and 9717-13-01 (Miller Bench FSR)
Junction Permit (ULRHEF & BDRHEF) File No. 11250-32/6123 (Amendment 1)
Aeronautical Obstruction Approval (Tx Line - Lillooet River Crossing) File No. 2013-004
Aeronautical Obstruction Approval (Tx Line - Ryan River) File No. 2013-005
Aeronautical Obstruction Approval (Tx Line - North Miller) File No. 2013-006
Aeronautical Obstruction Approval (Tx Line - South Miller) File No. 2013-007
Aeronautical Obstruction Approval (Tx Line - Pemberton Creek) File No. 2013-008
Aeronautical Obstruction Approval (Tx Line - Lillooet River near Pemberton) File No. 2013-009
Aeronautical Obstruction Approval (Tx Line - Lillooet River near Meager Creek) File No. 2013-010
Navigable Water Protection Act (ULRHEF) File No. 8200-2009-500434-001
Navigable Water Protection Act (BDRHEF) File No. 8200-2012-501-032-001
Navigable Water Protection Act (Tx Line – North Creek) File No. 8200-2013-500103-001
Navigable Water Protection Act (Tx Line – Lillooet River) File No. 8200-2013-500101-001
Navigable Water Protection Act (Tx Line – Lillooet River) File No. 8200-2013-500102-01
Navigable Water Protection Act (Tx Line – Ryan River) File No. 8200-2013-500104-001
Navigable Water Protection Act (Tx Line – South Miller River) File No. 8200-2013-500100-001
Navigable Water Protection Act (Tx Line – Boulder Creek) File No. 8200-2013-500099-001
Navigable Water Protection Act – Extension Approval (ULRHEF, BDRHEF, Tx Line)
Navigable Water Protection Act (Bridge – Ryan River) File No. 8200-2013-500381
Navigable Water Protection Act (Bridge – Upper Lillooet Side Channel; Extension Approval) File No. 8200-2013-500383
Section 57 Authorization (ULRHEF) File No. 16660-20/REC202717
SLRD Temporary Use Permit No. 34 – Boulder Creek HEF
SLRD Temporary Use Permit No. 35 – Upper Lillooet River HEF
Works Permit for Construction within FSR Right-of-Way No. 6123-14-01
Section 52(1)(b) FRPA Authorization for Ryan River Wet Crossing File No. FOR-19400-01/2014

Contractor Construction Permits and Approvals

Magazine Licence File No. UL76018
Section 8 Approval – Short Term Use of Water File (Lillooet River and Tributaries) No.A2006123 (Amendment 1)
Waste Discharge under the Code of Practice for the Concrete and Concrete Products Industry under the Environmental Management Act (Authorization No. 107204) Tracking No. 326969
Wildlife Act Permits – Pacific Tailed Frog Salvage Permit # SU14-95304 &SU13-90538, Fish Salvage Permit # SU14-95329
Section 52 of the Fisheries (General) Regulations – Fish Salvage Licence #XR 139 2014
BC Safety Authority – Temporary Construction Electrical Service Permit EL-140698-2014
Municipal Wastewater Regulation - Authorization # 107032
Water Supply System Construction Permits –VCH-14-613 for Main Camp
Water Supply System Permit to Operate Issued July 30th, 2014 for Main Camp
Section 6(3) and Schedule 3 Wildfire Regulations Fire Exemption for Ryan River Bridge File No. 14350-07

ACRONYMS:

AMBNS	Active Migratory Bird Nesting Survey	**IEM**	Independent Environmental Monitor
ASMP	Archaeological Sites Management Plan	**Innergex**	Innergex Renewable Energy Inc.
ARD/ML	Acid Rock Drainage and Metal Leaching	**ITM**	Environmental Issue Tracking Matrix
BCEAO	British Columbia Environmental Assessment Office	**JEM**	JEM Energy Ltd. (Delegate Independent Engineer)
BVWQG	British Columbia Water Quality Guidelines	**LTC**	Leave to Construct
BDRHEF	Boulder Creek Hydroelectric Facility	**MFLNRO**	Ministry of Forests, Lands and Natural Resource Operations
BG	Background	**MOE**	Ministry of Environment
BKL	BKL Consultants Ltd.	**NCD**	Non Classified Drainage
CRT-ebc	CRT-ebc Construction Inc.	**OLTC**	Occupational License to Cut
DFO	Fisheries and Oceans Canada	**PAG**	Potentially Acid Generating
DS	Downstream	**RVMA**	Riparian Vegetation Management Area
Ecofish	Ecofish Research Ltd.	**SES**	Sartori Environmental Services
Ecologic	Ecologic Consulting	**TX Line**	Transmission Line
EDI	Environmental Dynamics Inc.	**ULRHEF**	Upper Lillooet River Hydroelectric Facility
EIR	Environmental Incident Report	**UWR**	Ungulate Winter Range
ESC	Erosion and Sediment Control	**VC**	Valued Component
FAM	Field Advice Memorandum	**WQ**	Water Quality
FSR	Forest Service Road	**WEL**	Westpark Electric Ltd.
GWR	Mountain Goat Winter Range	**WEMR**	Weekly Environmental Monitoring Report
Hedberg	Hedberg and Associates Ltd.		
IE	Independent Engineer (True North Energy)		

1.0 Summary of Site Inspections for Reporting Period

The table presented below summarizes the IEM team site presence, weather and monitoring locations by component:

Date	IEM Team Personnel	Weather Conditions	Monitoring Locations & Key On-site Environmental Information
Sunday July 27	MS	Sun and Cloud	***Construction Camp*** • Camp facility installation • Application of dust suppression (Lignosulfonate) ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation commenced following pre-work meeting **BDRHEF Intake Access Road & Crane Pad** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Installation of gravity feed water extraction system • Tunnel portal overburden excavation, drilling and blasting, and mesh installation for protection against falling rocks. ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds ***TX-Line*** • No activities
Monday July 28	MS,VD	Sun and Cloud	***Construction Camp*** • Camp facility installation ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation continued **BDRHEF Intake Access Road** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Tunnel portal overburden excavation, drilling and blasting ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds; additional 10” pump was added. ***TX-Line*** • Segment 4 – installing pole liners and poles • Segment 5 – Spider hoe preparing pole foundations • Segment 7 – road works; hand falling and feller buncher clearing • Segment 10 – timber management and road works

Date	IEM Team Personnel	Weather Conditions	Monitoring Locations & Key On-site Environmental Information
Tuesday July 29	AS,MS,TH VD	Sun and Cloud	***Construction Camp*** • Camp facility installation ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation continued, drilling commenced **BDRHEF Intake Access Road** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Tunnel portal overburden excavation, drilling and blasting ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds; Sediment ponds discharging to vegetated area ***TX-Line*** • Segment 4 – installing pole liners and poles; timber management • Segment 5 – Spider hoe preparing pole foundations • Segment 7 – road works; hand falling and feller buncher clearing; timber management • Segment 10 – timber management and road works outside of 15m from the Ryan river RVMA
Wednesday July 30	MS,VD	Sun and Cloud	***Construction Camp*** • Camp facility installation ***Truckwash Creek Bypass Road*** • CTF salvage and rock armouring of culvert outlet. ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation and drilling continued **BDRHEF Intake Access Road** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Tunnel portal overburden excavation, drilling and blasting ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds – sediment ponds discharging to vegetated area ***TX-Line*** • Segment 4 – installing pole liners and poles; timber management • Segment 5 – Spider hoe preparing pole foundations • Segment 7 – road works; hand falling and feller buncher clearing; timber management • Segment 10 – road works and drilling within 30m of the Ryan River

Date	IEM Team Personnel	Weather Conditions	Monitoring Locations & Key On-site Environmental Information
Thursday July 31	MS,TH,VD	Sun and Cloud	***Construction Camp*** • Camp facility installation ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation – drilling and first blast at powerhouse **BDRHEF Intake Access Road** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Tunnel portal overburden excavation, drilling and blasting ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds. Sediment ponds discharging to vegetated area and discharging to Lillooet River • Additional sediment pond construction and sump excavation ***TX-Line*** • Segment 4 – installing pole liners and poles; timber management • Segment 5 – Spider hoe preparing pole foundations • Segment 7 – road works; hand falling and feller buncher clearing; timber management • Segment 10 – road works; drilling within 30m of the Ryan River
Friday August 1	TH,VD	Overcast	***Construction Camp*** • Camp facility installation ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation – drilling and blasting continued **BDRHEF Intake Access Road** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Installation of slope protection (wire mesh) ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds. Sediment ponds discharging to vegetated area • Additional sediment pond construction completed and in use. • Drilling and blasting continued once water levels were actively controlled (pumps) ***TX-Line*** • Segment 4 – installing pole liners and poles; timber management • Segment 5 – Spider hoe preparing pole foundations • Segment 7 – road works; hand falling and feller buncher clearing; timber management • Segment 10 – road works; drilling and blasting within 30m of the Ryan River

Date	IEM Team Personnel	Weather Conditions	Monitoring Locations & Key On-site Environmental Information
Saturday August 2	TH	Overcast, light rain	***Construction Camp*** • Electric fence testing ***BDRHEF Tunnel Portal & Powerhouse*** • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into sediment ponds • Powerhouse excavation – drilling and blasting continued **BDRHEF Intake Access Road** • No activities – IE issued Stop Work Order remained in effect ***ULRHEF Intake Diversion Channel*** • Closed due to landslide risk ***ULRHEF Downstream Portal*** • Installation of slope protection (wire mesh). ***ULRHEF Powerhouse*** • Seepage water in excavation pumped to sediment ponds – sediment ponds discharging to vegetated area and discharging to Lillooet River • Drilling, blasting and excavation to facilitate sump installation ***TX-Line*** • Segment 4 – installing pole liners and poles; timber management • Segment 5 – Spider hoe preparing pole foundations • Segment 10 – road works within 30m of the Ryan River

IEM Team Personnel: *AS – Alex Sartori; MS – Mandala Smulders; TH – Tom Hicks; VD – Vanessa Dan*

2.0 Administrative Summary

Key communications and meetings the IEM team had with the licensees, contractors and/or environmental authorities:

Date	Communication Type	Participants	Issues Discussed	ITM ID No.
July 27	*Pre-work meeting*	*SES, CRT-ebc Innergex,*	Pre-work meeting to discuss the BDR powerhouse excavation work plan. Topics discussed included blasting in proximity to Boulder Creek and the dewatering plan for pumping any infiltrating water in the excavation to the existing sediment ponds currently being used for tunnel seepage treatment.	*N/A*
July 29	*Site inspection and follow-up meeting*	*SES, JEM, CRT-ebc Innergex,*	Monthly IE site inspection and BDR intake access road inspection in follow-up to the IE and Owner issued Stop Work orders. Discussed slope and road stabilization measures, the timeline for the assessment of impacts outside of permitted boundaries, and the remediation of unauthorized impacts outside of the OLTC.	*ULR#18*
July 30	*Office meeting*	*SES, JEM, CRT-ebc Innergex,*	Clarified expectations and discussed strategies to rectify and resolve improper construction procedures and communication deficiencies. The contractor presented draft versions of a communication strategy, a Work Plan to repair	*ULR#18*

Date	Communication Type	Participants	Issues Discussed	ITM ID No.
			and complete the BDR intake access road, and a summary of ARD testing results and stockpile locations.	
July 30	*Email*	*SES, Innergex,*	The results of water quality lab analysis for water samples collected from standing water in contact with temporarily stockpiled PAG material. Results will be tracked according to conditions of the ARD management plan.	*N/A*
	Email	*SES, WEL, Innergex,*	Discussed the current nesting activity level and upcoming end (August 1st) of the requirement to conduct AMBNS prior to clearing. Based on the results of recent surveys and the opinions of the contractor's QP, the requirement to conduct AMBNS prior to clearing will end on August 1st as outlined in the CEMP.	*N/A*
July 31	*Email*	*SES, JEM, CRT-ebc Innergex,*	Submission of *EIR#010* related to the culvert installation on the BDR intake access road without IEM notification, or presence. Details of the incident are included in the appended *EIR#010*. The issue has been updated in the ITM.	*ULR#16*
Aug 1	*Pre-work meeting*	*SES, WEL, Mumleqs, Hedberg, Innergex,*	Pre-activity planning meeting to discuss necessary road and crossing structure upgrades/installations for the Miller Bench FSR.	*N/A*
	Email	*SES, JEM, CRT-ebc Innergex,*	Submission of *EIR#011* related to the damage to standing timber, impacts outside of the clearing boundary, and use of felled timber in the base of road fil. Details of the incident are included in the appended *EIR#011*. The issue has been updated in the ITM.	*ULR#17*
Aug 2	*Email*	*SES, CRT-ebc Innergex,*	Submission of a revised communications plan as outlined in *EIR#010 and EIR#011*. The communication plan will provide the IEM with daily schedule updates for works planned within the next 96hrs highlighting where IEM presence is requested.	*ULR#16 , & 17*

3.0 Current Work Restrictions and Timing Windows

The table presented below outlines work restrictions applicable during the reporting period for each active Project component location:

Component	Location	Wildlife/Archeology Concern	Construction/Timing Restrictions & Mitigations
ULRHEF, BDRHEF, and Tx Line	All ULRHEF BDRHEF, and Tx Line areas	Nesting Birds	Vegetation clearing must take place outside of the breeding bird season (May 1 – July 31) to prevent disturbance of bird nests. If not feasible, nest surveys must be conducted by qualified professionals following the Active Migratory Bird Nest Surveys prior to clearing and protective buffers surrounding discovered nests will be maintained until young are fledged and approval has been obtained from the IEM or designate.
Tx-Line	*Segments 1 – 7, & 9-10*	*Suitable Raptor Nesting Habitat*	*IEM presence is required when clearing within suitable Northern Goshawk (NOGO), Spotted Owl (SPOW), and* Western Screech-Owl (*WESO) nesting habitat during the breeding period. A nest survey is required by WEL QPs prior to clearing within 600m of suitable Peregrine Falcon (PEFA) nesting habitat.*
		Within 150m of wetlands or 100m of Coastal Tailed-Frog Streams	*IEM presence is required when clearing within 150m of wetlands or 100m of Coastal Tailed-Frog Streams, to ensure clearing area is minimized.*
		Old Growth Management Areas (OGMAs)	*IEM monitoring is required when clearing within legally designated OGMAs, to ensure clearing area is minimized.*
		Ungulate Winter Range (UWR)	*IEM monitoring is required when clearing within identified deer and moose UWR, to ensure clearing area is minimized.*
		Suitable Class 1 & 2 Grizzly Bear forage habitat	*IEM monitoring is required when clearing within identified Class 1 & 2 Grizzly Bear forage habitat, to ensure clearing area is minimized.*

Component	Location	Wildlife/Archeology Concern	Construction/Timing Restrictions & Mitigations
ULRHEF powerhouse, and Intake diversion channel	*Within 50m of identified archeologically significant area*	*Archaeologically significant site EdRu-3*	*The ASMP recommends that an archaeological technician from the Lil'wat Nation be present to monitor initial ground-disturbance activities within 50 m of the EdRu-3 site boundaries.*
	Within 30m of the Upper Lillooet River	*Riparian area and fish bearing streams*	*IEM presence is required when working within 30m of the Upper Lillooet River. Instream acoustic pressure monitoring required when blasting within 30m of the Upper Lillooet River.*
Lillooet River FSR; ULRHEF intake access; FSR realignment at Truckwash Creek	*Access roads above the lower limit of the 200m buffer Truckwash Creek Migration Corridor to the ULRHEF intake; including FSR realignment at Truckwash Creek*	*Mountain Goat UWR*	*If a goat is observed within 500 m of construction operations, construction must cease for at least 48 hours. The IEM must record and submit all goat observations to FLNR within 48 hours.*

4.0 Hydroelectric Facilities

4.1 Ancillary Components – Monitoring Results

Construction Camp

- Camp facility, electric fence and utility installation continued. The electric fence was tested on August 2nd. Confirmation that it is fully operational will be provided next week. No environmental concerns were noted.

38km Laydown

- Material crushing and screening plant operation continued this week. A watering hose was used effectively for dust control at the screening plant. No environmental concerns were noted.

Lillooet River FSR

- The application of Lignosulfonate as a dust suppression measure was completed between 2km and 8km this week. The application of Lignosulphonate has been successful at suppressing airborne dust along the FSR in sections where it is has been applied; therefore *ULR#12* will be considered closed as of July 28th.

Truckwash Creek FSR Realignment

- On July 30, 2014 a CTF salvage was performed by Ecofish and a water bypass pump was installed prior to placing additional rip-rap armouring at outlet of the 43km culvert on the new FSR alignment. No water quality concerns were noted and no CTF were found.

4.2 Boulder Creek Hydroelectric Facility – Monitoring Results

BDRHEF Downstream Portal and Powerhouse

- Tunneling activities (including: drilling, blasting, excavation, rock bolts and shotcrete/mesh installation) continued.
- The settling ponds were effectively used to manage water from seepages encountered during tunnelling activities and to manage excess process water this week. No discharge from the sediment ponds occurred this week, therefore no water quality samples were collected.
- The powerhouse excavation began this week following a pre-work meeting on July 27th. Once water is encounter in the excavation seepage water will be directed to a central sump and pumped to the sediment ponds currently being used to manage seepage/process water from the tunneling operations.
- Hydrophone monitoring was conducted during the first three blasts at the powerhouse. The peak acoustic pressure did not exceed or approach 30kPa during any of the blasts. The IEM has deemed that instream acoustic pressure monitoring is no longer required at the powerhouse location, since the powerhouse footprint is greater than 30m from Boulder Creek and the first 3 blasts did not exceed the 30kPa threshold.

BDRHEF Intake Access Road & Crane Pad

- A Stop Work Order was issued by the Owner on July 25th, 2014 and by the IE (True North Energy), on July 26th, 2014 for all activities at the Boulder Creek Intake New Access Road and Crane Pad (*ULR#18*). No activities occurred within the new access road and crane pad work area.

- Road capping, ditching and stripping and grubbing of spoil area BDR-3 (Photo 1) was completed this week. These works were permitted under a separate LTC from the new access road and crane pad LTC and were therefore permitted to proceed following confirmation from the IE and IEM.

Environmental Summary:

- The IE and Owner issued Stop Work Order for all activities at the Boulder Creek Intake New Access Road and Crane Pad will remain in effect until all action items outlined by the IE are addressed to the satisfaction of the IE as outlined in *ULR#18.*
- Seepage flowing out of the tunnel continues to be collected at the portal tunnel entrance in a sump. Water is then pumped from the sump to the oil/water separator, pH adjustment holding tank, and settlement ponds for treatment. The pH was monitored daily by the contractor and a CO_2 diffuser was used as necessary to ensure pH was within acceptable surface water quality guidelines (pH 6.5 – 9). No discharge from the treatment ponds occurred during this reporting period; therefore the IEM did not collect water quality results.
- Hydro-seeding of exposed slopes at the downstream tunnel portal face has not resulted in vegetation growth that will help to stabilize the slope. Additional hydro-seeding applications during appropriate weather conditions or other slope stabilization measures (*e.g.* poly sheeting, coco matting, etc.) may be required to ensure slopes are protected prior to fall rain events.
- Water from the Boulder Creek water withdrawal site authorized in the Short Term Water Use Approval (*No.A2006123)* was used effectively for dust suppression above 37.5km of the Lillooet River FSR and on active construction site access roads.
- The gravity fed water diversion system was used in tunneling and shotcrete process works in accordance with Short Term Water Use Approval (*No.A2006123).* No water quality or environmental concerns were noted.

Photos:

Photo 1. Stripping and grubbing of the BDR-3 spoil area (August 1, 2014).

Photo 2. Dewatering of seepage from the tunneling activities was performed this week but the water has not yet reached the second treatment pond (July 19, 2014).

Water Quality Results

The following table presents the results of the routine water quality sampling program for the BDRHEF. The IEM is undertaking a weekly monitoring program according to the conditions outlined in the Surface Water Quality Protection Plan. The regular monitoring sites have been selected to quantify WQ conditions within the Lillooet River upstream and downstream of active construction areas. The IEM acknowledges the natural variability of instream WQ conditions in Boulder Creek due to seasonal fluctuations in snowmelt. In the event that an exceedance of *in-situ* water quality (turbidity or pH) is deemed to be caused by project-related activities, the IEM will highlight the exceedance, discuss the cause, and outline measures undertaken by the Contractor to correct the issue. When an exceedance cannot be attributed to project related activities, the exceedance will be marked by an asterisk (*).

Date	Time	Sample Location Description	pH	Turbidity (NTU)	Cond (*u*S)	Temp (°C)
July 29	**N/A**	BDR Background - BRDHEF upstream of intake *not currently accessible*	**N/A**	**N/A**	**N/A**	**N/A**
July 29	**N/A**	BDR #1 - Downstream of BDRHEF intake *not currently accessible*	**N/A**	**N/A**	**N/A**	**N/A**
July 29	**13:36**	BDR #2 - Upstream of BDRHEF Powerhouse	**7.8**	**35.9**	**41**	**14.5**
July 29	**13:45**	BDR #3 - Downstream of BDRHEF Powerhouse at Pebble Creek Bridge	**7.8**	**38.0**	**38**	**14.3**

4.3 Upper Lillooet River Hydroelectric Facility – Monitoring Results

ULRHEF Powerhouse and Access Road

- Excavation at the ULRHEF powerhouse continued this week. The excavated material was dumped within the limits of the powerhouse spoil area and suitable material was separated and hauled to the crushing/screening plant located near 38km of the Lillooet River FSR.
- Sediment ponds were used to treat seepage water from within the powerhouse excavation and an additional pond was constructed to accommodate the increased volume of water once a 10” pump was installed in the sump (Photo 3). Water from the ponds discharged to vegetation prior to reaching the Lillooet River. Water quality was taken upstream and 5m downstream of the discharge point (within the mixing zone) daily when water reached the Lillooet River. No water quality concerns were noted (see Water Quality Results)

ULRHEF Intake and Access Roads

- The area was closed due to landslide risk throughout the week.

ULRHEF Downstream Portal

- Excavation of the ULRHEF portal continued throughout the week. Once bedrock was exposed drilling & blasting was completed to expose the portal face. Hand scaling, and the installation of chain link mesh was completed to protect workers from falling rock. Blast rock was hauled to the lower spoil area and managed according to the ARD management plan. No environmental concerns were noted.

Environmental Summary:

- Once work resumes at the intake diversion channel the IEM will have a monitor onsite full time for all future blasts and excavation activities to document that all efforts to prevent rocks from entering the Lillooet River are made and to record approximate quantities in the event rocks do enter the river. The IEM recognizes that large rocks are not a deleterious substance and that rock entering the river at this location is unlikely to cause serious harm to fish given the marginal fish habitat present at this location due to the water velocity within the rock canyon. Minor

amounts of rock entered the Lillooet River during this reporting period and no measurable effect on water quality.

- A gravity feed water extraction system was installed in Truckwash creek this week and will be managed by CRT-ebc according to the conditions of the Short Term Water Use Approval (*No.A2006123).* The water is currently being used for drilling works at the downstream portal (Photo 4).
- Dewatering of the powerhouse excavation into the sediment ponds will be monitored daily and water quality will be recorded daily when the discharge to vegetation reaches the Lillooet River.
- The IEM collected water quality samples of run-off emanating from the PAG stockpile located at the Truckwash west heading and submitted water quality samples for lab analysis on July 24th. Sampling results were received from the lab on July 30th and are appended to this report. Sampling will continue on a monthly basis according to the ARD/ML Monitoring and Control Plans.

Photos:

Photo 3. New large sediment pond constructed for the dewatering of the ULRHEF powerhouse excavation (August 1, 2014).

Photo 4. Installation of the gravity feed water diversion system within Truckwash Creek. Water will be used for construction activities at the ULR downstream portal. (July 27, 2014).

Water Quality Results

The following table presents the results of the routine water quality sampling program for the ULRHEF. The IEM is undertaking a weekly monitoring program according to the conditions outlined in the Surface Water Quality Protection Plan. The regular monitoring sites have been selected to quantify WQ conditions within the Lillooet River upstream and downstream of active construction areas. The IEM acknowledges the natural variability of instream WQ conditions in the Lillooet River due to seasonal melt fluctuations and large tributary inputs. In the event that an exceedance of *in-situ* water

quality (turbidity or pH) is deemed to be caused by project-related activities, the IEM will highlight the exceedance, discuss the cause, and outline measures undertaken by the Contractor to correct the issue. When an exceedance cannot be attributed to project related activities, the exceedance will be marked by an asterisk (*).

Date	Time	Sample Location Description	pH	Turbidity (NTU)	Cond (*u*S)	Temp (°C)
July 29	N/A	ULR Background - ULRHEF Intake	Closed due to landslide risk			
July 29	14:50	ULR # 1 - Upstream of ULHEF Powerhouse	7.9	86.7	36	15.7
July 29	14:34	ULR #2 - Downstream of ULRHEF Powerhouse between 40.5k and 41k	7.8	75.6	37	15.8
July 29	14:04	ULR #3 - Upper Lillooet FSR 38km Laydown - D/S of Boulder confluence	7.8	71.0	38	16.1
July 29	16:35	ULR #4 - Upper Lillooet FSR 24km - D/S of all works and Meager confluence	8.3	101.8*	65	15.1
July 31	11:30	Lillooet River – Upstream of powerhouse dewatering input	-	75.6	-	-
July 31	11:40	Lillooet River – Downstream of powerhouse dewatering input	-	34.5	-	-
Aug 2	13:37	Lillooet River – Upstream of powerhouse dewatering input	-	63.5	-	-
Aug 2	13:45	Lillooet River – Downstream of powerhouse dewatering input	-	55.2	-	-

4.4 Hydroelectric Facilities – Recommendations

All items of the IE issued Stop Work Order for the Boulder Creek intake access road and crane pad construction must be addressed in a timely manner to the satisfaction of the IE prior to resuming works.

4.5 Hydroelectric Facilities – Upcoming Works

CRT-ebc has confirmed that the failed crossing at 39.7km (*ULR#4)* will be repaired and/or replaced, and the failed culvert at 47km (*ULR#4)* will be remediated by removing debris from within the stream. This work will be completed during the 2014 instream work window following the preparation of a work plan and approval by MFLNRO.

Excavation of the intake diversion channel is scheduled to continue next week at the ULRHEF intake provided the landslide hazard rating is at suitable levels to permit works to continue. Excavation of ULRHEF downstream tunnel portal will continue for the next two weeks. Bench excavation at the ULRHEF powerhouse and capping of the old sections of the BDRHEF intake access road will continue next week.

5.0 Transmission Line

5.1 Monitoring Results

Segment 1-7 & 9-10

- Pole installation and dressing continued in Segment 4 & 5 this week.
- Clearing occurred in Segment 7, following the completion of AMBNS (Photo 6).
- Access roads were upgraded/constructed in Segments 7 & 10 this week. Works in Segment 10 included widening of the approach to the Ryan River Bridge, which involved drilling and blasting within 30m of the Ryan River (Photo 5). The IEM was onsite and conducted instream acoustic pressure monitoring during blasting activities on August 1st. No instream acoustic overpressure was recorded during the blasts.

Environmental Summary:

- The IEM was present as required when clearing activities occurred within 150m of wetlands, 30m of a stream, 100m of Coastal Tailed Frog Streams, Class 1 & 2 suitable Grizzly Bear forage habitat, moose and deer UWR, legally designated Old Growth Management Areas (OGMAs), or within NOGO, SPOW, and WESO, suitable nesting habitat. All flagged boundaries were respected during clearing activities. No environmental issues were observed.
- AMBNS were completed prior to all vegetation clearing along the TX-Line alignment prior to August 1st, 2014. Recent bird/nesting activity observed during AMBNS did not warrant extending the AMBNS survey window beyond July 31st deadline required by the CEMP.

Photos:

Photo 5. Blast mats placed prior to blasting at the Ryan River bridge approach. (August 1, 2014).

Photo 6. Feller Buncher clearing in Segment 7 (July 29, 2014).

Water Quality Results

Date	Time	Sample Location Description	pH	Turbidity (NTU)	Temperature (°C)
No WQ measurements were recorded at active Tx-line work areas during this reporting period. Construction and clearing activities had no visual effect on WQ.					

5.2 Transmission Line – Recommendations

No recommendations are provided for this reporting period.

5.3 Transmission Line – Upcoming Works

Pole installation and dressing is scheduled to continue in Segment 4 & 5 next week. Clearing is scheduled to continue in Segment 4, 5 & 7 and in Segment 9 and 10. Upcoming transmission line works will be focused on road construction and the Ryan River Bridge installation, pole installation, and completing the clearing within the Segments 3-10.

6.0 Wildlife Sightings

As per the CEMP, a wildlife sightings record has been implemented and will be updated regularly by Project Personnel. It is mandatory for all personnel to report wildlife sightings including, but not limited to bears, cougars, mountain goats and deer. Wildlife sighting will be reported and recorded by the contractor(s) and will submitted to the IEM on a weekly basis. Wildlife Observation forms will be summarized on a monthly basis and appended to the first WEMR of the following month. Observation or detection of the following species will trigger notification to identified parties according to the following table.

Species Observed or Detected	Notification Period	Agencies to be Notified
Northern Rubber Boa	Immediately	IEM, Owner
Grizzly Bear	24hrs	IEM, Safety Officer, Conservation Officer, Owner
Wolverine Den	24hrs	IEM, MFLNRO, Owner
Spotted Owls	24hrs	IEM, MOE, Owner
Mountain Goats	48hrs	IEM, MFLNRO, Owner

Please refer to the attached Wildlife Observation Form for a summary of observations recorded in July 2014.

7.0 Mountain Goat Monitoring Program

The critical early summer forage period for Mountain Goats has now ended; therefore Mountain Goat Monitoring has been temporarily suspended until the fall monitoring period as outlined in the Mountain Goat Management Plan.

No Mountain Goats were observed within 500m line of sight of construction activities during this reporting period; therefore no work stoppages were required.

8.0 Environmental Issues Tracking Matrix (ITM)

8.1 Hydroelectric Facilities (ULRHEF & BDRHEF)

ITM Tracking Legend:	*Work Item Open*
	Work Item Complete
	Issue Closed

Issue Tracking		Environmental Issue		Mitigation Measures			
ID No.	Status	Location	Issue Description	Action Taken/Recommended	Date of Identification	Targeted Date for Completion	Date Completed
ULR#4	**Open**	47km – Lillooet River FSR	A log box structure failed while being crossed by an excavator (***EIR002***).	1. CRT-ebc to prepare an EIR detailing the cause, description and actions items related to the incident. 2. IEM to review and approved the EIR. 3. CRT-ebc employees will be reminded of spill response procedures and how to use the spill kits in a potential future event. 4. CRT-ebc to confirm that load ratings of equipment adhere to maximum crossing structure load ratings.	May 23, 2014	May 26, 2014.	-
				5. Complete FSR and temporary access road crossing assessment by a Qualified Professional. 6. Determine the requirements for crossing structure remediation or replacement		June 26, 2014 Transmitted to IEM on July 15, 2014	
				7. Develop a work plan to remediate the failed log box structure and execute the approved plan during the 2014 instream works window. On July 19th, 2014 CRT-ebc confirmed that the failed crossing structure [at 47km of the Lillooet River FSR; a fish bearing stream] will be remediated by cleaning debris and material from the stream and banks. A work plan will be submitted and mitigation measures prescribed by a QP will be implemented. This work must occur during the instream works window.		*August 1 – September 15*	

Issue Tracking		Environmental Issue		Mitigation Measures			
ID No.	**Status**	**Location**	**Issue Description**	**Action Taken/Recommended**	**Date of Identification**	**Targeted Date for Completion**	**Date Issue Closed**
ULR#8	**Open**	39.7km – Lillooet River FSR	Stream 9 – log box structure failure (***EIR004***).	1. Develop a work plan to remediate the failed log box structure and execute during the 2014 instream works window. On July 19th, 2014 CRT-ebc confirmed that this crossing structure will be repaired or replaced during the 2014 instream works window following MFLNRO approval.	*May 28, 2014*	*2014 instream work window (August 1 – September 15)*	
ULR#10	**Open**	Lillooet River FSR	Innergex issued stop work order for heavy hauling on Lillooet River FSR	Recommendations have been submitted to MFLNRO for review and approval. Work plan submission and repairs to be completed prior to September 15 for crossing structures at 39.7km and 47km of the Lillooet River FSR.	*May 28, 2014*	*September 15, 2014*	-
ULR#12	**Closed**	Lillooet River FSR	Inadequate dust suppression between 0-37.5km of the Lillooet River FSR	1. CRT-ebc has confirmed that dust control product (Lignosulfonate) will be applied to the Lillooet River FSR beginning on July 22nd, 2014, and will be completed by July 25th, 2014.	*May 31, 2014*	*July 25, 2014*	*July 28, 2014*
ULR#16	**Open**	BDR Intake Access Road	Culvert installed without IEM presence or notification	1. Prepare and submit EIR#010 outlining the root cause of the incident and how it will be avoided in future.	*July 23, 2014*	*July 28, 2014*	*July 31, 2014*
				2. A Communication Plan will be submitted and enacted to prevent a reoccurrence.	July 26, 2014	*August 4, 2014*	
ULR#17	**Open**	BDR Intake Access Road	Damage to standing timber and impacts outside of minimized clearing boundary & approved OLTC	1. Prepare and submit EIR#011 outlining the root cause of the incident and how it will be avoided in future.	*Confirmed in Hedberg report July 25th, 2014*	*July 30, 2014*	*August 1, 2014*
				2. Assess damage to standing timber and impacts outside of the minimized clearing boundaries and approved OLTC. This will be performed once slope stabilization works are completed to protect worker safety.		*Once slope stabilization is complete*	
ULR#18	**Open**	BDR Intake Access Road	STOP WORK ORDER for Boulder Creek Intake Access Road and Crane Pad	Based on the recommendations by Hedberg Associates and the lack of following Work Plans the IE requests the following prior to re-authorizing the commencement of work on the Boulder Creek intake access: 1. Complete an Environmental Incident Report ("EIR") within 48 hours. The EIR should describe/quantify both the damage to standing merchantable and the impacts to the area outside the Occupant Licence to Cut ("OLTC").	July 26, 2014	*July 30, 2014*	*August 1, 2014*

ID No.	Status	Location	Issue Description	Action Taken/Recommended	Date of Identification	Targeted Date for Completion	Date Issue Closed
				2. Submit to the IE a new/updated Work Plan prior to the IE removing the Stop Work Order and reissuing the Leave to Construct Authorization the following: a. encompasses the repair/remediation of the works completed to date; b. implements the recommendations by Hedberg Associates; and c. includes methods to execute to ensure that the road construction meets the approved "Issued for Construction" design.	July 26, 2014	*Draft provided to IE, IEM and Owner on July 30, 2014 Finalization of the work plan is pending required edits*	
				3. A qualified professional be on site 2 to 3 times a week to assist with the direction and inspection of the road construction.	July 26, 2014	*Confirmed in draft work plan provide July 30 2014*	
				4. Provide as-built drawings of the clearing and impacted boundaries to date for both the access road and crane pad area.	July 26, 2014	*Assessment pending slope stabilization*	
				5. Submission to the IE all site wide ARD rock testing results complete volumes, tracking records and a summary of mitigation where results were positive.	July 26, 2014	*August 9, 2014*	
				6. Provide a work plan communication plan that ensures all staff are aware of the approved work plans and adhere to hold points.	July 26, 2014	*August 4, 2014*	
next ITM – ULR#19							

8.2 Transmission Line

ITM Tracking Legend:	*Work Item Open*
	Work Item Complete
	Issue Closed

Issue Tracking		Environmental Issue		Mitigation Measures			
ID No.	Status	Location	Issue Description	Action Taken/Recommended	Date of Identification	Targeted Date for Completion	Date Issue Closed
No outstanding environmental issues (next ITM – Tx#2)							

Environmental Incident Reporting Form

General Information

Project Name: Upper Lillooet Hydro Project	**Project Component**: BDR HEF – Intake Access Road
Time/Date of Incident Start: July 18th – 2014	**Time/Date Incident Stopped**: July 18th - 2014
Date of Report: Draft Submitted: 2014-07-23 Final Submitted: 2014-07-31	**Project Incident Report Number**: 2014-07-31 CE-EIR-010 **Incident Description:** BDRHEF – Intake access road culvert installation without the presence of the IEM
Report Prepared By: Jordan Gagné/Ian McKeachie	
Contractor's Environmental Manager: Jordan Gagné / Ian McKeachie	
Independent Environmental Monitor (Sartori Environmental Services): Stephen Sims/ Tom Hicks	
Initial IEM Contact: 2014-07-22, the IEM raised concerns regarding the work being done without him present. It was confirmed by CRT-ebc team the same day.	
Licensee's Environmental Manager: Julia Mancinelli	

Contact Information for Company Involved in Incident

Company: CRT-ebc	**Address**: 11-7339 Old Mill Road, PO Box 585, Pemberton, BC, V0N 2L0
Phone #: 604-894-5002	**Email**:jgagne@crtconstruction.ca/imckeachie@crtconstruction.ca/ smunneke@crtconstruction.ca
Contact Person: Jordan Gagné/Ian McKeachie/Simon Munneke	**Position**: Environmental Manager/Field Engineer

Incident Type *(check all that apply)*

Encroachment of an Environmentally Sensitive Area (*e.g.* Riparian/Wildlife Buffer) **Please provide details in "Description" section below.**	☑	**Potential Adverse Impacts to Fish/Wildlife (*e.g.* Mortality/Injury)** **Please provide details in "Description" section below.**	☐
Water Quality/Quantity **Please provide details in "Description" section below.**	☐	**Hazardous Material Spills (to ground or water)** **Please provide details in description section in regards to:** • Perceives extent of damage • Type, quantity and area of the spill • Containment Procedures • Environmental features in close proximity to the spill	☐

Disturbance of known or unknown archeological /heritage site Please provide details in "Description" section below.	☐	**Air Quality** Please provide details in "Description" section below.	☐
Spill reported to external agencies If yes, describe the receiving environment and substance/quantity spilled.	☐	**Other** Please provide details in "Description" section below.	☑

Incident Profile

Weather at time of incident								
	☑ Clear	☐ Partly Cloudy/ Variable	☐ Cloudy	☐ Showers/ Periods of Rain	☐ Rain	☐ Heavy Rain *(>25mm in 24hr)*	☐ Storm *(Heavy rain and high winds)*	☐ Snow

Specific Location:
BDR HEF – Intake Access Road

Description and Cause of Incident:

Description:

- On July 17th, the CRT-ebc environmental team went on site and discussed with the foreman (Michel Poirier) and superintendent (Roger Pelletier) about the best way to install culvert in the wetted area. BMPs were discussed and agreed upon with them.
- On July 18th, 3 culverts were installed within wetted areas at BDR HEF intake access road. The work was carried out by CRT-ebc superintendent (Roger Pelletier) and Foreman (Michel Poirier) using BMPs to minimize the impact on surface water quality. BMPs included pumping water to divert around area of culvert installation to minimize sediment flow in the watercourse.
- 2 of the culvert installations were in wetted construction ditches.
- 1 culvert installation was in a stream, with a defined channel, stabilized bank, and scoured substrate, which has been assessed by a QP (Ecofish) and found not to contain fish or Coast Tailed Frog.
- However, it was performed without notifying the IEM. Therefore, the IEM was not on site to monitor water quality when work was being carried out.

Cause:

- The IEM was not notified of work occurring within the wetted area and was therefore not on site.

Incident Witness: CRT-ebc environmental team and the IEM (Tom Hicks & Mandala Smulders)

Were there any Potential Environmental impacts as a result of the incident? (e.g., surface contamination, storm sewers, or fish/wildlife mortalities)	Yes ☐	None Observed ☑

If Yes, please describe:

Has Wildlife Salvage Protocol been followed?	**Yes** ☐	**No** ☐	**N/A** ☑
If No, please explain:			
Water Quality Samples Collected?	**Yes** ☐	**No** ☐	**N/A** ☑
If yes, attach results of water quality analysis to report in table format. Include Laboratory analysis if completed. If No please explain:			
Have applicable photos and/or drawings been attached to the incident report?	**Yes** ☑	**No** ☐	**N/A** ☐

Incident Response Measures

When CRT-ebc was made aware of the incident by the IEM (Tom Hicks) on July 22nd the following response measures were taken:

- On the morning of July 23rd, CRT-ebc environmental manager (Ian McKeachie) & superintendent (Gaetan Turgeon) went on site to assess the situation with the IEM (Tom Hicks).
- CRT-ebc environmental manager (Ian McKeachie) conducted a site investigation to collect information on the incident.
- IEM recommendation to rehabilitate stream channel on downstream (outlet) side of culvert will be followed.

Actions to Prevent Incident Recurrence

Before the incident the mitigation measures in place were:

- Work plans are being reviewed during kick-off meetings and include the presence of CRT-EBC Superintendents, Foreman, Field Engineer and Environmental Manager; the IEM; and the Owner.
- The work plans are referenced on site by foremen and superintendents during construction activities.
- All steps and hold points were highlighted during kick-off meetings.
- Weekly 3-Week Schedule – CRT-ebc environmental management team will determine the necessity for IEM presence on site when construction works require it. As discussed with owner, the 3-week schedule will highlight kick-off meetings and IEM requirements for the next three weeks on a weekly basis. Notification of the IEM via email at least 48hs prior to sensitive works will continue. The IEM will also be notified 48h prior to any construction activity within a sensitive area, which requires their presence.

Action Items:

- Stream Rehabilitation – Stream and bank on downstream (outlet) side of the culvert will be remediated as per IEM direction).
- Solidify communication protocols – Superintendents and foreman to increase review of work plans to daily with field engineers and environmental managers if any new steps in construction are occurring. Foreman will have a copy of the LTC authorization package (which includes the Work Plans) with them at all times and be able to demonstrate knowledge of the details and identify hold points.
- Daily Reporting Schedule – on July 23, 2014, the Owner mandated to implement a daily notification system to

inform the IEM and the Owner of activities required the IEM's presence at the work site. Notification will summarize work activities planned for the next calendar 4 days (96 hour) period, its associated constraints, and the requirement for IEM presence.

Notification Record

Agency Reported to	Contact Information	Agency Contacted		Date and Time Reported	Reported By	Method of Reporting
		Yes	No			
External Notifications						
MFLNRO BC EAO	James Davies	☑	☐	2014-08-01	Julia Mancinelli	Submission of EIR 010 via email.
	Chris Parks	☑	☐	2014-08-01	Julia Mancinelli	Submission of EIR 010 via email.
PEP	1-800-663-3456	☐	☑			
MOE Staff		☐	☑			
DFO		☐	☑			
DFO		☐	☑			
Environment Canada	604-666-6100	☐	☑			
Canadian Coast Guard	604-666-6011	☐	☑			
Local Fire Rescue	911	☐	☑			

Reported to	Contact Information	Contacted		Date and Time Reported	Reported By	Method of Reporting
		Yes	No			
Internal Notifications						
CRT-ebc	Jordan Gagné 604.894.5002	☑	☐	2014-07-22 1:30PM	Tom Hicks	Phone
Owner Innergex	Julia Mancinelli jmancinelli@innergex.com	☑	☐	2014-07-22 9:45PM	Tom Hicks	Email
IEM Sartori Environmental	Stephen Sims steve@sartorienv.com	☑	☐	2014-07-22 9:45PM	Tom Hicks	Email
IE True North Energy	Jenn McCash	☑	☐	2014-07-22 9:45 PM	Tom Hicks	Email
Owner Innergex	Julia Mancinelli jmancinelli@innergex.com	☑	☐	2014-07-23 10:55PM	Ian McKeachie	Email
IEM Sartori Environmental	Stephen Sims steve@sartorienv.com	☑	☐	2014-07-23 10:55PM	Ian McKeachie	Email

Reported to	Contact Information	Contacted		Date and Time Reported	Reported By	Method of Reporting
		Yes	No			
IEM Sartori Environmental	Tom Hicks tom@sartorienv.com	☑	☐	2014-07-23 10:55PM	Ian McKeachie	Email

Contractor's Environmental Manager:

Jordan Gagné	Environmental Manager, CRT-ebc		2014-07-31
Print Name	Position and Company	Signature	Date

Contractor's Environmental Manager:

Ian McKeachie	Environmental Manager, CRT-ebc		2014-07-31
Print Name	Position and Company	Signature	Date

Reviewed by:

J. Stephen Sims	Independent Environmental Monitor, Sartori Environmental Services		2014-07-31
Print Name	Position and Company	Signature	Date

List of attachments:

- Ian McKeachie post-installation pictures of culvert in stream.

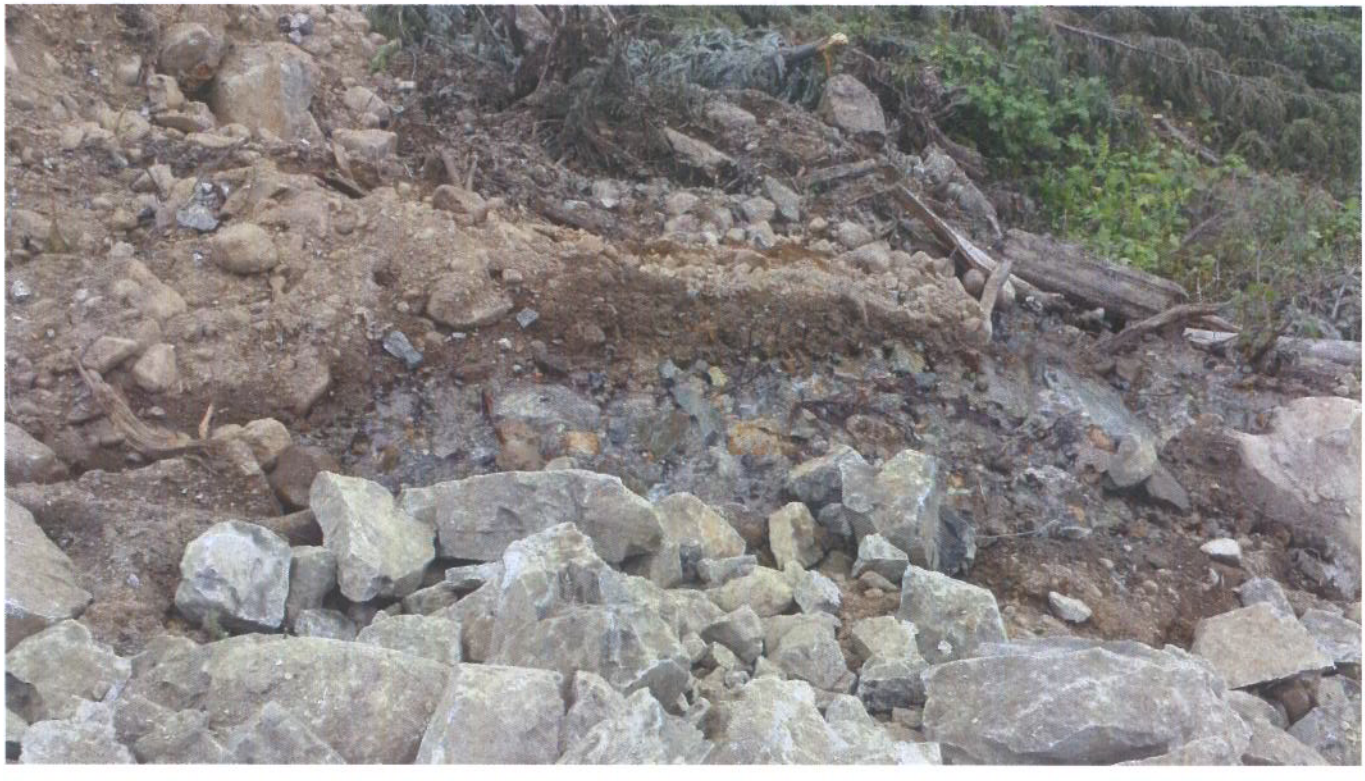

Photo 1: Outlet of culvert after installation where IEM recommended rehabilitation will be performed.

Photo 2: Immediately upstream of culvert
after installation.

Photo 3: Stream bed 25m downstream of culvert.

Environmental Incident Reporting Form

General Information

Project Name: Upper Lillooet Hydro Project	**Project Component**: BDR HEF – Intake Access Road (new section)
Time/Date of Incident Start: July 7th, 2014	**Time/Date Incident Stopped**: July 25th, 2014
Date of Report: Draft Submitted: 2014-07-29 Final Submitted: 2014-08-01	**Project Incident Report Number**: 2014-08-01 CE-EIR-011 **Incident Description:** BDRHEF – Intake access road construction (new section) non-conformity
Report Prepared By: Ian McKeachie	
Contractors Environmental Manager: Jordan Gagné / Ian McKeachie	
Independent Environmental Monitor (Sartori Environmental Services): Stephen Sims/ Tom Hicks	
Initial IEM Contact: 2014-07-22, the IEM raised concerns regarding the work being done.	
Licensee's Environmental Manager: Julia Mancinelli	

Contact Information for Company Involved in Incident

Company: CRT-EBC	**Address**: 11-7339 Old Mill Road, PO Box 585, Pemberton, BC, V0N 2L0
Phone #: 604-894-5002	**Email**:jgagne@crtconstruction.ca/imckeachie@crtconstruction.ca/ smunneke@crtconstruction.ca
Contact Person: Jordan Gagné/Ian McKeachie/Simon Munneke	**Position**: Environmental Manager/Field Engineer

Incident Type *(check all that apply)*

Encroachment of an Environmentally Sensitive Area (*e.g.* Riparian/Wildlife Buffer) **Please provide details in "Description" section below.**	☑	**Potential Adverse Impacts to Fish/Wildlife (*e.g.* Mortality/Injury)** **Please provide details in "Description" section below.**	☐
Water Quality/Quantity **Please provide details in "Description" section below.**	☐	**Hazardous Material Spills (to ground or water)** **Please provide details in description section in regards to:** • Perceives extent of damage • Type, quantity and area of the spill • Containment Procedures • Environmental features in close proximity to the spill	☐

Notification Record

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		Yes	No			
External Notifications						
MFLNRO BC EAO	James Davies	☑	☐	2014-08-01	Julia Mancinelli	Submission of EIR 011 via email.
	Chris Parks	☑	☐	2014-08-01	Julia Mancinelli	Submission of EIR 011 via email.
PEP	1-800-663-3456	☐	☐			
MOE Staff		☐	☐			
DFO		☐	☐			
DFO		☐	☐			
Environment Canada	604-666-6100	☐	☐			
Canadian Coast Guard	604-666-6011	☐	☐			
Local Fire Rescue	911	☐	☐			

Reported to	Contact Information	Contacted		Date and Time Reported	Reported By	Method of Reporting
		Yes	No			
Internal Notifications						
CRT-EBC	Jordan Gagné 604.894.5002	☑	☐	2014-07-22 1:30PM	Tom Hicks	Phone
CRT-EBC	Jonathan Drapeau and Claude Denault	☑	☐	2014-07-22 4:44 PM	Oliver Robson	Email
Owner Innergex	Julia Mancinelli jmancinelli@innergex.com	☑	☐	2014-07-22 9:45PM	Tom Hicks	Email
IEM Sartori Environmental	Stephen Sims steve@sartorienv.com	☑	☐	2014-07-22 9:45PM	Tom Hicks	Email
IE True North Energy	Jenn McCash	☑	☐	2014-07-22 9:45 PM	Tom Hicks	Email
CRT-EBC	Claude Denault	☑	☐	2014-07-25 11:13 AM	Jenn McCash	Email
Owner Innergex	Julia Mancinelli jmancinelli@innergex.com	☑	☐	2014-07-25 4:11 PM	Claude Denault	Email + Report
CRT-EBC	Claude Denault	☑	☐	2014-07-25 5:56 PM	Renaud de Batz	Email + Letter

Disturbance of known or unknown archeological /heritage site Please provide details in "Description" section below.	☐	**Air Quality** Please provide details in "Description" section below.	☐
Spill reported to external agencies If yes, describe the receiving environment and substance/quantity spilled.	☐	**Other** Please provide details in "Description" section below.	☑

Incident Profile

Weather at time of incident	☑ Clear	☐ Partly Cloudy/ Variable	☐ Cloudy	☐ Showers/ Periods of Rain	☐ Rain	☐ Heavy Rain (>25mm in 24hr)	☐ Storm (Heavy rain and high winds)	☐ Snow

Specific Location:
BDR HEF – Intake Access Road (new section)

Description and Cause of Incident:

Description:

- On June 30th, CRT-EBC began construction of the new Boulder Creek HEF Intake Access Road.
- As construction proceeded, sections of fillslope ravelled down outside of the OLTC and into forested areas and understory. Large rocks and fill material impacted and scarred/damaged standing timber from 0+400m to 0+600m on the road heading, and damaged trees within the UWR.
- Felled merchantable timber, woody debris and overburden were buried in the fillslope/road prism.
- Sensitive work within Goat Winter Range occurred without IEM presence.

Cause:

- The entire road alignment is on a steep slope, and as a result of our efforts to minimize clearing of trees in this area, road construction is occurring within very narrow, constrained space.
- Merchantable timber was left in situ to provide a buffer to stop debris and rocks from falling down slope.
- CRT-EBC crew failed to execute the approved Work Plan as required under provincial Leave to Construct process.
- CRT-EBC crew failed to stop work and inform CRT-EBC's road design QP, the IE and IEM, and the Owner of their intention to deviate from the design

Incident Witness: CRT-EBC environmental team and the IEM (Tom Hicks & Mandala Smulders)

Were there any Potential Environmental impacts as a result of the incident? (e.g., surface contamination, storm sewers, or fish/wildlife mortalities)	**Yes** ☑	**None Observed** ☐

If Yes, please describe:
There was damage to standing trees outside of the authorized clearing area. This area will be assessed by a QP and a report will be prepared to accurately quantify the impacts. This potential impact will be offset by reducing the OLTC limits that extend beyond the intake structure.

Has Wildlife Salvage Protocol been followed?	**Yes** ☐	**No** ☐	**N/A** ☑

If No, please explain:

Water Quality Samples Collected?	**Yes** ☐	**No** ☐	**N/A** ☑

If yes, attach results of water quality analysis to report in table format. Include Laboratory analysis if completed.
If No please explain:

Have applicable photos and/or drawings been attached to the incident report?	**Yes** ☑	**No** ☐	**N/A** ☐

Incident Response Measures

When CRT-EBC was made aware of the potential incident by the IEM (Tom Hicks) and the Owner (Oliver Robson) on July 22nd the following response measures were taken:

- On the morning of July 23rd, CRT-EBC superintendent (Gaetan Turgeon), field engineer (Simon Munneke), environmental manager (Ian McKeachie) visited the site to conduct a site investigation of the incident with the IEM (Tom Hicks & Mandala Smulders).
- At the request of the IEM and Innergex, CRT-EBC organized a site visit from their QP. The site visit took place on July 24th and the QP was accompanied on site by CRT-EBC field engineer Simon Munneke & Joe Duval Bourgault.
- After verbal recommendations were made by the QP, CRT-EBC began taking preliminary actions to address their concerns. These actions included removing overburden and woody debris from fillslopes where possible without a long reach excavator, and ceasing construction techniques that might exacerbate the issues.
- On July 25th and 26th, 2014, the Owner and the IE issued Stop Works Orders, respectively, after reviewing the Interim Inspection report issued by CRT-EBC's QP after their site visit on July 24th.

Actions to Prevent Incident Recurrence

Before the incident the mitigation measures in place were:

- Work plans are being reviewed during kick-off meetings and include the presence of CRT-EBC Superintendents, Field Engineer and Environmental Manager; the IEM; and the Owner.
- All steps and hold points were highlighted during kick-off meetings.
- Experienced operators used due care and attention when working above steep slopes adjacent to forested areas.

After the incident, additional mitigation measures were put in place:

- Superintendents, foremen and crew will review work plans with CRT-EBC field engineers and environmental managers prior to commencing any new steps in construction.
- Superintendents will be provided with a copy of the LTC authorization (and the associated work plan).
- Additionally, all foremen, field engineers and superintendents need to have their work plans with them at all times and know and understand fully the details within these work plans.
- CRT-EBC will communicate and provide training to all staff (including foreman and operators) so they are able and comfortable to stop work with an environmental issue similarly to safety issues.
- When design challenges arise, or when the workplans need to be revised to reflect conditions on the ground, CRT-EBC will consult with the IEM and QP's to find a solution.
- CRT-EBC will create a new work plan to repair/remediate the work according to prescriptions from a QP, and update IFC design if required in consultation with QP.
- To the extent possible, fillslope material that has moved down slope and encroached upon understory and standing timber will be removed using a long reach excavator. IEM will be notified accordingly and be on-site to ensure no additional damage occurs to the trees.
- Merchantable timber, woody debris and overburden will continue to be removed from the fillslope and will be decked away from the construction heading.
- CRT-EBC will consult with a QP onsite when field conditions require changes to the IFC design prior to proceeding with the changes (as prescribed).
- CRT-EBC will develop a Work Plan Communication Plan that ensures staff are aware of all Hold Points related to the works. This will include hold point signage, and bi-lingual hold point summary sheets.
- The standing timber that was damaged will be assessed and accurately quantified by a QP. If additional clearing is required to remove the damaged timber, CRT-EBC proposes that clearing will be further minimized in other areas within the Mountain Goat Winter Range inside the OLTC (e.g. crane pad) to offset for the damaged standing timber mentioned above.
- A 96 hour (4 day) look-ahead forecast/schedule of all construction activities will be provided to the IEM, IE & Owner on a daily basis.

Notification Record						
Agency Reported to	Contact Information	Agency Contacted		Date and Time Reported	Reported By	Method of Reporting
		Yes	No			
CRT-EBC	Claude Denault	☑	☐	2014-07-26 9:54 AM	Julia Mancinelli	Email + Letter

Contractor's Environmental Manager:

Jordan Gagné	Environmental Manager, CRT-EBC		
Print Name	Position and Company	Signature	Date

Contractor's Environmental Manager:

Ian McKeachie	Environmental Manager, CRT-EBC		
Print Name	Position and Company	Signature	Date

Reviewed by:

J. Stephen Sims	Independent Environmental Monitor, Sartori Environmental Services		2014-08-01
Print Name	Position and Company	Signature	Date

List of attachments:

- Ian McKeachie post-incident pictures of site.

Photo 1: Fillslope encroaching on understory and standing timber.

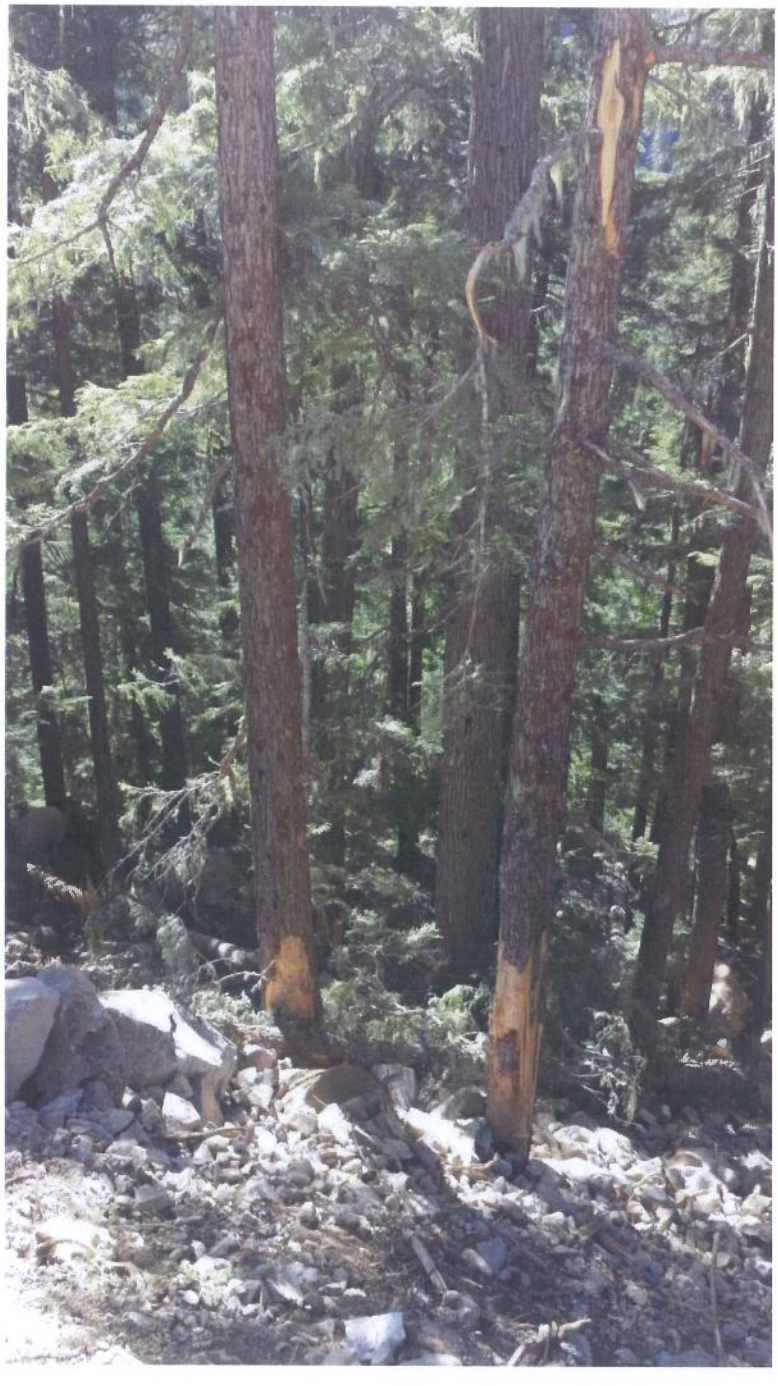

Photo 2: Damage and scarring of standing timber.

Photo 3: Merchantable timber below fillslope.

Photo 4: Merchantable timber, woody debris and overburden buried in fillslope.

SARTORI ENVIRONMENTAL SERVICES
ATTN: Tom Hicks
106-186 Forester Street
North Vancouver BC V7H 0A6

Date Received: 24-JUL-14
Report Date: 30-JUL-14 17:58 (MT)
Version: FINAL

Client Phone: 604-764-7652

Certificate of Analysis

Lab Work Order #: L1492303

Project P.O. #: NOT SUBMITTED
Job Reference: ULHP-ARD
C of C Numbers: 10-167709
Legal Site Desc:

Dean Watt
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1492303-1				
	Description	Water				
	Sampled Date	24-JUL-14				
	Sampled Time	11:45				
	Client ID	2014-07-24				
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	259				
	Hardness (as CaCO3) (mg/L)	80.4				
	pH (pH)	5.05				
Anions and Nutrients	Sulfate (SO4) (mg/L)	98.3				
Total Metals	Aluminum (Al)-Total (mg/L)	1.97				
	Antimony (Sb)-Total (mg/L)	<0.00050				
	Arsenic (As)-Total (mg/L)	<0.0010				
	Barium (Ba)-Total (mg/L)	0.113				
	Beryllium (Be)-Total (mg/L)	<0.0050				
	Boron (B)-Total (mg/L)	<0.10				
	Cadmium (Cd)-Total (mg/L)	0.00316				
	Calcium (Ca)-Total (mg/L)	20.1				
	Chromium (Cr)-Total (mg/L)	<0.00050				
	Cobalt (Co)-Total (mg/L)	0.0568				
	Copper (Cu)-Total (mg/L)	0.107				
	Iron (Fe)-Total (mg/L)	2.24				
	Lead (Pb)-Total (mg/L)	<0.0010				
	Lithium (Li)-Total (mg/L)	<0.050				
	Magnesium (Mg)-Total (mg/L)	4.90				
	Manganese (Mn)-Total (mg/L)	2.37				
	Molybdenum (Mo)-Total (mg/L)	0.0012				
	Nickel (Ni)-Total (mg/L)	0.0397				
	Selenium (Se)-Total (mg/L)	<0.0010				
	Silver (Ag)-Total (mg/L)	0.000050				
	Sodium (Na)-Total (mg/L)	8.8				
	Thallium (Tl)-Total (mg/L)	<0.00020				
	Titanium (Ti)-Total (mg/L)	0.138				
	Uranium (U)-Total (mg/L)	<0.00020				
	Vanadium (V)-Total (mg/L)	<0.030				
	Zinc (Zn)-Total (mg/L)	0.395				
Dissolved Metals	Dissolved Metals Filtration Location	FIELD				
	Aluminum (Al)-Dissolved (mg/L)	0.352				
	Antimony (Sb)-Dissolved (mg/L)	<0.00050				
	Arsenic (As)-Dissolved (mg/L)	<0.0010				
	Barium (Ba)-Dissolved (mg/L)	0.102				
	Beryllium (Be)-Dissolved (mg/L)	<0.0050				
	Boron (B)-Dissolved (mg/L)	<0.10				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1492303-1
	Description	Water
	Sampled Date	24-JUL-14
	Sampled Time	11:45
	Client ID	2014-07-24
Grouping	**Analyte**	
WATER		
Dissolved Metals	Cadmium (Cd)-Dissolved (mg/L)	0.00362
	Calcium (Ca)-Dissolved (mg/L)	23.5
	Chromium (Cr)-Dissolved (mg/L)	<0.00050
	Cobalt (Co)-Dissolved (mg/L)	0.0632
	Copper (Cu)-Dissolved (mg/L)	0.106
	Iron (Fe)-Dissolved (mg/L)	1.30
	Lead (Pb)-Dissolved (mg/L)	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	5.24
	Manganese (Mn)-Dissolved (mg/L)	2.74
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	0.0435
	Selenium (Se)-Dissolved (mg/L)	0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.000050
	Sodium (Na)-Dissolved (mg/L)	9.9
	Thallium (Tl)-Dissolved (mg/L)	<0.00020
	Titanium (Ti)-Dissolved (mg/L)	<0.050
	Uranium (U)-Dissolved (mg/L)	<0.00020
	Vanadium (V)-Dissolved (mg/L)	<0.030
	Zinc (Zn)-Dissolved (mg/L)	0.452

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1492303-1
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1492303-1
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1492303-1
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1492303-1
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1492303-1

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

HARDNESS-CALC-VA	Water	Hardness	APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

MET-DIS-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-DIS-LOW-MS-VA	Water	Dissolved Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures involves preliminary sample treatment by filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-TOT-ICP-VA	Water	Total Metals in Water by ICPOES	EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-TOT-LOW-MS-VA	Water	Total Metals in Water by ICPMS(Low)	EPA SW-846 3005A/6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H pH Value

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

SO4-TUR-VA	Water	Sulfate(SO4) by Turbidity	APHA 4500-SO4 E. SULFATE

This analysis is carried out using procedures adapted from APHA Method 4500-SO4 "Sulfate". Sulfate is determined using the turbidimetric method.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Reference Information

Chain of Custody Numbers:

10-167709

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

10-167709

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

Page 1 of 1

Report To		Report Format / Distribution		Service Request: (Rush subject to availability - Contact ALS to confirm TAT)	
Company:	SARTORI ENVIRONMENTAL	Standard:	Other (specify):	✓	Regular (Standard Turnaround Times - Business Days)
Contact:	TOM HICKS	Select: PDF ✓	Excel ✓ Digital Fax		Priority(2-4 Business Days)-50% surcharge - Contact ALS to confirm TAT
Address:	186 FORESTER ST. NORTH VAN. UNIT 106 V7H 0A6	Email 1:	tom@sartorienv.com		Emergency (1-2 Business Days)-100% Surchargo - Contact ALS to confirm TAT
Phone:	604-764-7652 Fax:	Email 2:	steve@sartorienv.com		Same Day or Weekend Emergency - Contact ALS to confirm TAT

Invoice To	Same as Report ? (circle) Yes or No (if No, provide details)	Client / Project Information	
	Copy of Invoice with Report? (circle) Yes or No	Job #:	ULHP - ARD
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:		Quote #:	MS14HR
Lab Work Order # (l	L1492303-COFC	ALS Contact:	Sampler:

Analysis Request
(Indicate Filtered or Preserved, F/P)

Sample #	(This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	DISSOLVED METALS	TOTAL METALS	SULPHATE	PH, COND,	Number of Containers
	2014-07-24 (F)/P	24-JUL-14	11:45	WATER	✓				
	2014-07-24 (P)	24-JUL-14	11:50	WATER		✓			
	2014-07-24	24-JUL-14	12:00	WATER			✓	✓	

Short Holding Time

Rush Processing

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CSR-Commercial/AB Tier 1-Natural/ETC) / Hazardous Details

NOT INTERESTED IN MERCURY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
TOM HICKS	JUL-24 2014	19:15	IC	July 24	19:35	17.6 °C				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION | WHITE - LABORATORY COPY | YELLOW - CLIENT COPY | GENF 18.01 Front

Upper Lillooet Hydro Project - Wildlife Observation Form (July 2014)

Required Data					
Date	Time	Observer (Company)	Species or Description	Location	Comments
7/7/2014	6:55:00 AM	Cindi McPherson (CRT-ebc)	Wolf	km29.5 Lillooet FSR	
7/5/2014	11:20:00 AM	Joé Duval (CRT-ebc)	Black Bear	km43 Lillooet FSR	
7/14/2014	9:45:00 AM	Ian McKeachie (CRT-ebc)	Black Bear	km38.5 Lillooet FSR	
7/12/2014	11:00:00 AM	Cindi McPherson (CRT-ebc)	Moose	km10.5 Lillooet FSR	
7/12/2014	4:30:00 PM	Angel Orejas	Black Bear	km11.5 Lillooet FSR	
7/18/2014	12:30:00 PM	Greg Davis	Blacktail Deer	km45.5 Lillooet FSR	
7/19/2014	4:30:00 PM	Angel Orejas	Black Bear	km12 Lillooet FSR	
7/21/2014	4:00:00 PM	Angel Orejas	Black Bear	km14 Lillooet FSR	
7/21/2014	12:30:00 PM	Greg Davis	Blacktail Deer	km46.5 Lillooet FSR	
7/27/2014	6:45:00 AM	Cindi McPherson (CRT-ebc)	Black Bear	km2 Lillooet FSR	
7/27/2014	6:55:00 AM	Cindi McPherson (CRT-ebc)	Moose	km8.5 Lillooet FSR	
7/29/2014	11:00:00 AM	Greg Davis	Black Bear	km33.5 Lillooet FSR	Crossing FSR
7/29/2014	1:32:00 PM	Greg Davis	Blacktail Deer	ULR Powerhouse	
	* Activity :				
	BU: building nest				
	DI: disturbed				
	FD: Feeding				
	EX: excreting				
	FL: fleeing				
	GR: grooming				
	IN: incubating				
	LI: unspecified				
	RR: rearing				
	ST: security/thermal				
	TE: territorial (singing)				
	TF: traveling,flying				