Upper Lillooet Hydro Project

Weekly Environmental Monitoring Report #78

Reporting Period: November 1 – November 7, 2015

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)

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Owner Construction Permits and Approvals

Environmental Assessment Certificate No. E13-01 (Amendment 1, 2, 3, 4, 5 & 6)
Fisheries Act Subsection 35(2)(b) Authorization No. 09-HPAC-PA2-000303 (Amendment 1, 2)
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) No. L49717 (Amendments 1, 2, 3, 4, 5, 6, 7)
Occupant Licence to Cut (BDRHEF – KM 38 laydown) No. L49698
Occupant Licence to Cut (BDRHEF) No. L49816 (Amendments 1, 2, 3)
Occupant Licence to Cut (TX Line) No. L49697 (Amendments 1, 2, 3, 4, 5, 6, 7, 8, 9)
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
SLRD Building Permit (10864) – Upper Lillooet River HEF Powerhouse
SLRD Building Permit (10865) – Boulder Creek HEF Powerhouse
Works Permit for Construction within FSR Right-of-Way No. 6123-14-01
Works Permit for Construction within FSR Right-of-Way No. 7977-15-01
Section 52(1)(b) FRPA Authorization for Ryan River Wet Crossing File No. FOR-19400-01/2014
MOTI Permit to Construct, Use and Maintain Works Upon the Right-Of-Way of a Provincial Public Highway No. 2014-06099
Magazine Licence File No. UL76018 (Renewal 1)
Section 8 Approval – Short Term Use of Water File (Lillooet River and Tributaries) No. A2006123 (Amendment 1)

Contractor Construction Permits and Approvals

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 (Renewal 1)
Wildlife Act Permits – Pacific Tailed Frog Salvage Permit # SU15-164805; Fish Salvage Permit # SU15-174722
Fisheries and Oceans Canada – Anadromous Fish Salvage Permit #XR 178 2015
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
SLRD Building Inspection Report dated August 13, 2014 - Construction Camp Building Permit No. 10830
Lillooet River FSR Temporary Road Closures Approval File No. 11250-32/6123 (Amendment 1, 2)
Lillooet South FSR Temporary Road Closures Approval File No. 11250-32/7977
SLRD Building Permits for Mechanic Shop (10862) and Carpentry Shop (10836) March 18, 2015
SLRD Building Permit Stages 1 - 4 – Boulder Powerhouse Architectural, Electrical and Mechanical (10865) October 8, 2015
SLRD Building Permit Stages 1 - 4 – Upper Lillooet Powerhouse Architectural and Mechanical (10864) October 6, 2015

ACRONYMS:

AMBNS	Active Migratory Bird Nesting Survey
Andritz	Andritz Hydro Canada Inc.
ANFO	Ammonia nitrate fuel oil (industrial explosive)
ASMP	Archaeological Sites Management Plan
ARD M/L	Acid Rock Drainage and Metal Leaching
BCEAO	British Columbia Environmental Assessment Office
BCWQG	British Columbia Water Quality Guidelines
BDRHEF	Boulder Creek Hydroelectric Facility
BG	Background
BKL	BKL Consultants Ltd.
CE	CRT-ebc Construction Inc.
DFO	Fisheries and Oceans Canada
DS	Downstream
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
Ecofish	Ecofish Research Ltd.
Ecologic	Ecologic Consulting
EIR	Environmental Incident Report
ESC	Erosion and Sediment Control
FAM	Field Advice Memorandum
FSR	Forest Service Road
Golder	Golder Associates
GWR	Mountain Goat Winter Range
Hedberg	Hedberg and Associates Ltd.
HWM	High water mark
IE	Independent Engineer (True North Energy)
IEM	Independent Environmental Monitor
INX	Innergex Renewable Energy Inc.
ISW	Instream Works
ITM	Environmental Issue Tracking Matrix
JEM	JEM Energy Ltd. (Delegate Independent Engineer)
LTC	Leave to Construct
MFLNRO	Ministry of Forests, Lands and Natural Resource Operations
MOE	Ministry of Environment
MOTI	Ministry of Transportation and Infrastructure
NCD	Non Classified Drainage
OLTC	Occupational License to Cut
PAG	Potentially Acid Generating
ROW	Right of Way
RVMA	Riparian Vegetation Management Area
SES	Sartori Environmental Services
SLRD	Squamish-Lillooet Regional District
Stringer Line	Temporary Backfeed Transmission Line
TX Line	Transmission Line
ULRHEF	Upper Lillooet Hydroelectric Facility
UWR	Ungulate Winter Range
VC	Valued Component
WEL	Westpark Electric Ltd.
WEMR	Weekly Environmental Monitoring Report
WHA	Wildlife Habitat Area
WQ	Water Quality

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	Key Monitoring Locations & Activities
Sunday, November 1	BA, AS	Clear, 6°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Ditch work and maintenance at KM43.5 of the Lillooet River FSR (ITM ULR#37) • Removal of material stockpiled near KM45 on the Lillooet River FSR (ITM ULR#35) ***ULRHEF Intake*** • Rebar and formwork installation • Drilling, blasting and tunnel stabilization • Dewatering to sediment basins ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***ULRHEF Penstock*** • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Rock consolidation above diversion tunnel ***BDRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Distributer and turbine housing installation ***TX-Line*** • No activities
Monday, November 2	SE, DA	Sunny, 7°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Road maintenance on the Lillooet River FSR ***ULRHEF Intake*** • Rebar and formwork installation • Drilling, blasting and tunnel stabilization • Dewatering and installation of flocculant injection system to sediment basins • Concrete pour ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***ULRHEF Penstock*** • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating, Flow meter mount setup ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Drilling at diversion tunnel upstream portal • Rock consolidation above diversion tunnel

Date	IEM Team Personnel	Weather Conditions	Key Monitoring Locations & Activities
			BDRHEF Downstream Tunnel Portal • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Distributer and turbine housing installation ***TX-Line*** • Segment 12 ➢ Falling hazard trees ➢ Groundworks for pole foundations • Segment 12 and 13 ➢ Road works (roads 305 & 306)
Tuesday, November 3	SE, DA	Sunny, 7°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Road maintenance on the Lillooet River FSR ***ULRHEF Intake*** • Rebar and formwork installation • Concrete pour • Drilling, blasting and tunnel stabilization • Dewatering to sediment basins ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***ULRHEF Penstock*** • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout • ASTR03 over-drain construction began following kick-off meeting ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating, Flow meter mount setup ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Preparation of tunnel ramp, sump and pumps • Drilling and blasting from the upstream side of the diversion tunnel • Rock consolidation above diversion tunnel ***BDRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Distributer and turbine housing installation ***TX-Line*** • Segment 12 ➢ Falling hazard trees ➢ Groundworks for pole foundations • Segment 12 and 13 ➢ Road works (roads 305 & 306)
Wednesday, November 4	SE, DA	Sunny, 5°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Road maintenance on the Lillooet River FSR ***ULRHEF Intake*** • Rebar and formwork installation • Concrete pour • Drilling, blasting and tunnel stabilization • Dewatering to sediment basins ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization

Date	IEM Team Personnel	Weather Conditions	Key Monitoring Locations & Activities
			ULRHEF Penstock • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout • ASTR03 over-drain construction ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating, Flow meter mount setup ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Rock consolidation above diversion tunnel and intake portal faces ***BDRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Distributer and turbine housing installation ***TX-Line*** • Segment 12 ➢ Falling hazard trees ➢ Groundworks for pole foundations • Segment 12 and 13 ➢ Road works (roads 305 & 306)
Thursday, November 5	SE, DA	Sunny, 5°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Road maintenance on the Lillooet River FSR • Ditch work and maintenance completed between KM43.5 to KM44 of the Lillooet River FSR (ITM ULR#37) ***ULRHEF Intake*** • Rebar and formwork installation • Drilling, blasting and tunnel stabilization • Maintenance of the sediment basins ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***ULRHEF Penstock*** • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout • ASTR03 over-drain construction ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating, Flow meter mount setup ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Rock consolidation above diversion tunnel and intake portal faces • Ditching and installation of Curlex in the ditch line from KM4 – KM5 of the BDRHEF intake access road ***BDRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Distributer and turbine housing installation ***TX-Line*** • Segment 12 ➢ Falling hazard trees ➢ Groundworks for pole foundations • Segment 12 and 13 ➢ Road works (roads 305 & 306)

Date	IEM Team Personnel	Weather Conditions	Key Monitoring Locations & Activities
Friday, November 6	SE, DA, AS, TH	Rain, Snow, 4°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Road maintenance on the Lillooet River FSR ***ULRHEF Intake*** • Rebar and formwork installation • Concrete pour • Tunnel works on hold until grouting/stabilization methods confirmed • Installation of a larger flocculant injection system to increase the effectiveness of the sediment basins ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization • Ditch improvement works started along access road ***ULRHEF Penstock*** • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout • ASTR03 over-drain construction ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating, Flow meter mount setup ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Rock consolidation above diversion tunnel and intake portal faces ***BDRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Distributer and turbine housing installation ***TX-Line*** • Segment 12 ➢ Falling hazard trees ➢ Groundworks for pole foundations • Segment 12 and 13 ➢ Road works (roads 305 & 306)
Saturday, November 7	SE, AS	Rain, Overcast, 5°C	***Construction Camp, Laydown Areas and the Lillooet River FSR*** • Ditch maintenance on the Lillooet River FSR between KM44.7 – KM45 ***ULRHEF Intake*** • Rebar and formwork installation • Concrete pour • Tunnel works on hold until grouting/stabilization methods confirmed • Installation of a larger flocculant injection system to increase the effectiveness of the sediment basins ***ULRHEF Downstream Tunnel Portal*** • Drilling, blasting and tunnel stabilization ***ULRHEF Penstock*** • Placing & welding; 3+850 – 4+115 • Backfill; 3+100 – 3+800 • Installation of coating throughout • ASTR03 over-drain construction ***ULRHEF Powerhouse*** • Superstructure construction • HVAC Installation, Manifold coating, Flow meter mount setup ***BDRHEF Intake Access Ramp and Diversion Tunnel*** • Rock consolidation above diversion tunnel and intake portal faces

Date	IEM Team Personnel	Weather Conditions	Key Monitoring Locations & Activities
			BDRHEF Downstream Tunnel Portal • Drilling, blasting and tunnel stabilization ***BDRHEF Powerhouse*** • Second-stage concrete works for distributor and turbine housing ***TX-Line*** • Segment 12 ➢ Groundworks for pole foundations

IEM Team Personnel: *TH – Tom Hicks; SS – Stephen Sims; BA – Blake Aleksich; DA – Danita Abraham; SE – Stephanie Ellis; AS – Anne Sutherland*

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.
November 3	*Pre-work meeting*	SES, CE, INX	ASTR03 over-drain construction work plan and water management plan was reviewed with the site supervisor and superintendent.	-
November 4	*Email and FAM*	SES, CE, INX	SES prepared and distributed FAM#6, to address the non-compliance issue of a concrete truck travelling through the Truckwash creek mountain goat migration corridor during the sunset shutdown period on November 3, 2015. Further information is included in the appended FAM#6.	FAM#6; ULR#38
November 6	*Email*	CE, SES, INX	CE formally responded to FAM#6, confirming that guards will be stationed on either side of the mountain goat migration corridor to block traffic during the sunrise and sunset shutdown periods for rest of November. A calendar was redistributed to site supervisors outlining all of the daily shutdown start and end times.	FAM#6; ULR#38
November 7	*Pre-work meeting*	SES, CE, INX	ASTR04 over-drain construction work plan and water management plan was reviewed with the site supervisor and superintendent. CE indicated that works are on hold until a CTF salvage is complete and a pump is installed to divert water around the work site.	-
	Email	INX, SES, JEM	INX provided an update to the IEM and IE teams on the status of the Environmental Permitting Amendments they are seeking from MFLNRO and BCEAO.	-

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
TX Line	Segments 7 – 16	Within 150m of wetlands or 100m of Coastal Tailed Frog Streams	IEM presence is required when clearing within 150m of wetlands or 100m of CTF Streams, to ensure clearing areas are minimized.
		Riparian Vegetation Management Areas (RVMA)	IEM monitoring is required during clearing within RVMAs.
		Surface Water Quality	IEM monitoring is required during culvert installation activities in non-fish bearing waters to document adherence to the Surface Water Quality Protection Plan objectives.
		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 areas are minimized.
Lillooet River FSR & ULRHEF	Access roads above the lower limit of the 200m buffer Truckwash Creek Migration Corridor to the ULRHEF intake	Mountain Goat UWR & Migration Corridor	IEM was onsite to oversee daily construction equipment shutdowns (November 1 - 30) beginning one hour before and two hours after sunrise as well as two hours before and one hour after sunset. Noise monitoring equipment is in place to monitor background noise levels and exceedances of the 75dbA noise level maximum resulting from blasting activities. Adaptive drilling/blasting noise mitigation strategies will be developed and implemented should activities show persistent exceedances of the noise level threshold. Daily snow depth monitoring within the Truckwash Creek Migration Corridor will occur once snowfall accumulations persist according to the Project's Mountain Goat Management Plan. A two-week shutdown of work activities will occur once a significant snowfall is recorded (average snow depth of 10cm in forested habitat or 30cm in open terrain). Mountain Goat monitoring activities will occur daily throughout the winter and spring (November 1 – June 15) when construction activities are occurring at the ULRHEF lower tunnel portal and/or the ULRHEF intake. If a mountain goat is observed within 500m line of sight 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.

Component	Location	Wildlife/Archeology Concern	Construction/Timing Restrictions & Mitigations
BDRHEF intake	Portion of intake access road and crane pad within UWR	Mountain Goat UWR	During winter months (November 1 – April 30), access to BDRHEF intake must be gated at least 500 m from UWR to restrict motorized use within the UWR, unless otherwise directed by MFLNRO. If a mountain goat is observed within a 500 m line of site of a construction activity within UWR u-2-002 UL 12, construction activities will cease for at least 48 hours. Approval from the IEM must be obtained prior to recommencing construction activities.

4.0 Upper Lillooet River HEF – Monitoring Results

4.1 *Construction Camp, KM 38 Laydown, Access Roads & Lillooet River FSR*

Activities:

- Routine maintenance of construction equipment within the mechanic shop and fuel storage continued at the KM 38 laydown. All hazardous substance materials (waste oil, contaminated soil, used oil/hydraulic fluid containers, etc.) were stored temporarily for off-site disposal in a designated area at the laydown. The materials were all well contained and protected from the weather.
- The electric fences surrounding the construction camp were maintained and operational throughout this reporting period.
- Ditch maintenance from KM 43.5 – 44KM on the Lillooet River FSR (Photo 1).
- CE removed material stockpiled on the Lillooet River FSR at KM45 and repaired some of the roadside ditches, closing one of the three items outlined as ITM ULR #35 that require attention (Photo 2 & Photo 3; see Section 9.0 for further details).

Environmental Summary:

- The roadside ditch was restored by removing accumulated sediments and reshaping the ditch between KM 43.5 and KM 44 of the Lillooet River FSR during this reporting period (Photo 1). The ditch has eliminated runoff on the road during rain events and completed recommended mitigation measures to close ITM item *ULR #37* (see Section 9.0).
- On November 3, 2015, SES noted an issue of non-compliance during an audit of the sunset shutdown period within the mountain goat migration corridor at Truckwash Creek. SES noted a concrete truck travelling through the migration corridor during the sunset shutdown period. FAM#6 was prepared by the IEM and distributed to address the issue of non-compliance which CE responded to immediately by ensuring that either side of the corridor is guarded to prevent travel during the shutdown periods. A written response to FAM#6 was provided to the IEM acknowledging the non-compliance and outlining how the sunrise and sunset restrictions will be managed for the remainder of November, thereby closing the issue tracked as ITM ULR#38 (See appended FAM#6 and Section 9.0 for further information).

Photos:

Photo 1 – Ditch work completed between KM43.5 – KM44 of the Lillooet River FSR (November 1, 2015).

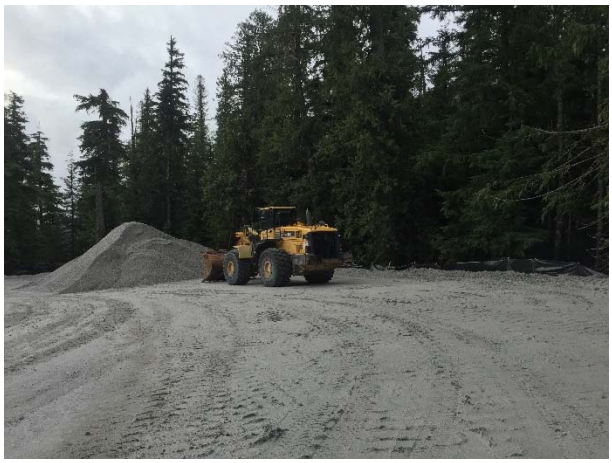

Photo 2 – Removing the last of the material stockpiled at KM 45 of the Lillooet River FSR (November 1, 2015).

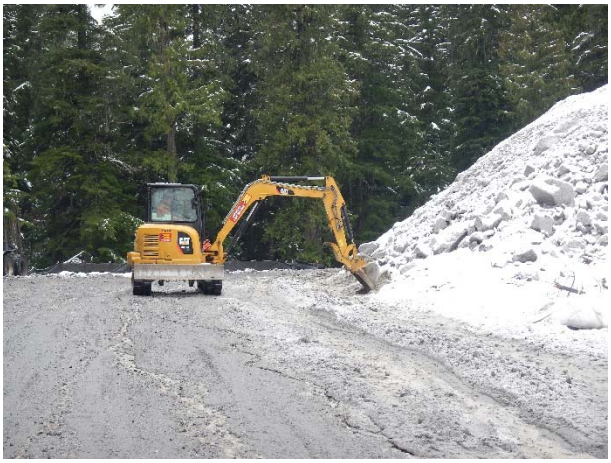

Photo 3 – Ditch repairs underway at KM45 of the Lillooet River FSR (November 7, 2015).

4.2 *Intake (North & South Sides), and Upstream Tunnel Portal*

Construction Activities:

- Drilling, blasting and tunnel stabilization at the ULRHEF upstream portal.
- Rebar and formwork installation.
- Concrete pours for intake structure (Photo 4 and Photo 5).
- Dewatering to the ULRHEF intake sediment basins and oil/water separator (Photo 6 and Photo 7).
- Addition of an improved flocculant injection system in cell #2 and the continued use of a secondary flocculant injection system in cell #5 of the ULRHEF intake sediment basins (Photo 8 and Photo 9).

Environmental Summary:

- All turbid or alkaline water resulting from activities at the ULRHEF intake or upstream tunnel portal is pumped to the ULRHEF intake sediment basins. A dedicated CE crewmember is present to monitor the pumps within the intake work area and tunnel portal during active construction works. This person has the responsibility of directing all turbid or alkaline water to the sediment ponds and must verify with CE environmental staff or the IEM prior to directing any water to the Lillooet River.
- The IEM conducted regular water quality sampling at the ULRHEF intake sediment basin discharge location during this reporting period. Please see Section 4.6 Water Quality Results for a detailed description.
- On November 6, CE's environmental management team installed an improved flocculant injection system in cell #2 of the ULRHEF intake sediment basins (Photo 8). The system was installed in cell #2 to ensure that the flocculant is in contact with turbid water for the greatest amount of time possible. A secondary system remains installed in the last cell before the lower basins to ensure sediment basin discharge remained within Project water quality guidelines.

Photos:

Photo 4 – Concrete pour at the ULRHEF intake (November 4, 2015).

Photo 5 – Concrete pour at the ULRHEF intake (November 7, 2015).

Photo 6 – Oil/water separtor section of the ULRHEF intake sediment basins (November 6, 2015).

Photo 7 – Treated water discharged to the Lillooet River (November 3, 2015).

Photo 8 – Installating a more robust flucculant injection system and cell #2 of the ULRHEF intake sediment basins (November 6, 2015).

Photo 9 – Secondary flocculant injection system installed at ULRHEF intake sediment basins was functioning throughout the reporting period (November 6, 2015).

4.3 *Downstream Tunnel Portal*

Construction Activities:

- Drilling, blasting, mucking and stabilization works within the tunnel (Photo 10).
- Dewatering to downstream tunnel portal settling ponds.

Environmental Summary:

- CE improved the ditch along the ULRHEF downstream tunnel access road on November 6, 2015; however, the IEM observed that the ditch was discontinuous once it reached the equipment laydown area, resulting in water fanning out over the running surface instead of being directed offsite. Further ditch work and clean-up of the laydown was discussed with the CE environmental management team and is included as ITM ULR #31 (See Section 9.0). The IEM noted that the improved ditch line at KM 45 on the Lillooet River FSR has reduced the amount of runoff reaching the area since the last reporting period.

Photos:

Photo 10 – Current conditions at the ULRHEF downstream tunnel portal (November 3, 2015).

Photo 11 – CE performed maintenance of the ditch along the ULRHEF downstream portal access road (November 6, 2015).

4.4 *Penstock*

Construction Activities:

- Penstock placement, wielding and coating continued from 3+850 – 4+115 (Photo 12 and Photo 13).
- ASTR03 over-drain installation works began (Photo 14 and Photo 15).

Environmental Summary:

- On November 3, a kick-off meeting was held prior to the start of the installation works for the ASTR03 over-drain. It was agreed during the site review that a small branch of ASTR03 would need to be diverted outside of the work area to permit the placement and compaction of backfill material in dry conditions. The IEM was onsite to monitor the small diversion and to sample water quality. A brief pulse of turbid water (21 NTU) was measured following the diversion; which lasted less than 10 minutes before returning to background levels (See Section 4.6 for water quality results). Water quality remained unaffected during the remainder of the ASTR03 installation works during this reporting period.
- Turbid flows (over range readings) were observed entering ASTR04 on November 6 (Photo 16). The CE environmental team was asked to address the situation immediately upon identification of the issue by the IEM – CE response was immediate. Cross ditches were dug temporarily to address the flows over the haul path entering the creek; however, this section of road requires additional repair to prevent further impacts to ASTR04, a CTF bearing stream (ITM ULR #30; See Section 9.0).

Photos:

Photo 12 – Transporting and placing penstock (November 4, 2015).

Photo 13 – Penstock installation, wielding, and coating (November 5, 2015).

Photo 14 – Taking water quality measurements during diversion of a small portion of ASTR03 (November 4, 2015).

Photo 15 – ASTR03 over-drain construction (November 6, 2015).

Photo 16 – Turdid road runoff entering ASTR04 (November 6, 2015)

4.5 *Powerhouse & Access Road*

Construction Activities:

- Manifold installation and superstructure construction (Photo 17 and Photo 18).
- Dewatering seepage water to the Lillooet River.

Environmental Summary:

- No environmental issues were observed at the ULRHEF powerhouse during this reporting period.

Photo 17 – Current conditions at the ULRHEF powerhouse (November 5, 2015).

Photo 18 – ULRHEF powerhouse superstructure construction (November 4, 2015).

4.6 *Water Quality Results*

The following table presents the results of the routine WQ 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 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* WQ (turbidity and/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 with an asterisk (*).

The IEM monitored the discharge from the ULRHEF sediment basins daily throughout the reporting period. The turbidity of water discharging from the sediment basins measured between 4.11 NTU (November 5) and 56 NTU (November 3) during this reporting period. As there is currently no turbidity vs total suspended solids (TSS) curve developed for the Upper Lillooet River, the IEM has chosen 75NTU as an upper limit for discharge to the Lillooet River until a better relationship between turbidity and TSS can be generate through lab analysis of water samples.

Date	Time	Sample Location Description	pH	Turbidity (NTU)	Cond (*u*S)	Temp (°C)
Routine Water Quality						
November 5, 2015	12:15	ULR Background – ULRHEF Intake	7.1	12.5	100	2.9
	12:40	ULR #0.5 – Downstream of ULRHEF intake at Keyhole Bridge	7.3	13.4	106	3.2
	11:19	ULR # 1 – Upstream of ULRHEF Powerhouse	6.7	10.0	103	4.1
	13:24	ULR #2 – Downstream of ULRHEF Powerhouse between KM 40.5 and KM 41	7.3	12.3	101	3.6
	16:29	ULR #3 – Lillooet River FSR KM 38 Laydown – D/S of Boulder confluence	7.7	9.5	97	3.9
	14:00	ULR #4 – Lillooet River FSR KM 24 – D/S of all works and Meager confluence	7.5	10.3	112	4.7
Water Quality for Specific Works – ASTR03 Over-drain Installation						
November 4, 2015	8:00	Background – upstream of works	7.0	0.79	-	3.8
	8:05	25m downstream of works	-	**21**	-	-
	8:11	25m downstream of works	-	3.59	-	

4.7 *Recommendations*

IEM recommendations for the ULRHEF are as follows:

- All seepage water in the intake excavation and portal should be conveyed to the sediment basins unless approved for discharge directly to the Lillooet River by the IEM or CE environmental manager.
- The IEM recommends that the access roads and tributaries on the penstock alignment be monitored regularly to ensure that no ESC issues develop with the continued installation works and traffic.
- The ULRHEF powerhouse sump water should be monitored regularly. Alkaline or turbid water should be pumped to the settling ponds for treatment.
- Environmental issues and recommendations associated with FAM#05 should be addressed in a timely manner. Refer to the ITM for outstanding items as of the end of this reporting period.

4.8 *Upcoming Works*

The following new and/or environmentally sensitive construction activities are scheduled to occur at the ULRHEF in the upcoming reporting period(s):

- Tunneling activities will continue at the ULRHEF upstream and downstream portals.
- Rebar, formwork installation, and concrete pours will continue at the ULRHEF intake.
- Dewatering to the ULRHEF intake sediment basins will continue.

- Penstock installation will continue.
- ASTR03 over-drain construction will continue.
- Superstructure and manifold installation will continue at the ULRHEF powerhouse.

5.0 Boulder Creek Hydroelectric Facility – Monitoring Results

5.1 *Intake Access Ramp & Diversion Tunnel*

Construction Activities:

- Rock consolidation works on the right bank and above the diversion tunnel (Photo 19 and Photo 20).
- Drilling, blasting and excavation for the BDRHEF intake diversion tunnel (Photo 21 and Photo 22).
- Repairs and maintenance of road side ditches from KM4 – KM5 of the Boulder intake access road was completed as recommended by the IEM closing ITM item *BDR #26* (see Section 9.0; Photo 23).

Environmental Summary:

- The BDRHEF intake access road is gated >500m from mountain goat UWR u-2-002 UL12, as outlined in the Mountain Goat Management Plan and the General Wildlife Measures Exemption Approval for the BDRHEF. As of November 1st, 2015, the gate will be guarded fulltime by a CE employee (Photo 24).
- All wastewater related to diversion tunneling activities is pumped to an active water treatment system installed at the bottom of the intake access ramp. The IEM and CE's environmental management team will routinely sample the system discharge to Boulder Creek. No water discharged from the active treatment system during this reporting period.
- Water continues to flow over and down the intake access ramp. CRT-ebc has indicated they will use blast rock from the diversion tunnel excavation to lift and crown the access ramp and install ditches on either side according to the work plan. The water does not reach the river at this point; however, with increased rain and decreased infiltration this may pose a concern in the coming weeks.

Photo 19 – Rock consolidation above intake access road (November 2, 2015).

Photo 20 – Rock consolidation above diversion tunnel (November 2, 2015).

Photo 21 – Loading drilled holes with explosives prior to the diversion tunnel blast (November 3, 2015).

Photo 22 – Mucking after diversion tunnel blast (November 3, 2015).

Photo 23 – Ditch maintenance and installation of Curlex within the ditch line (November 5, 2015).

Photo 24 – BDRHEF intake access road gate in operation by a full time guard >500m from mountain goat UWR (November 1, 2015).

5.2 *Downstream Tunnel Portal and Powerhouse*

Construction Activities:

- Drilling, blasting, mucking and stabilization works within the tunnel.
- Second stage concrete pour for the distributor and turbine housing (Photo 25).
- Dewatering of the tunnel and powerhouse to the oil water separator and settling ponds continued. CE placed blast rock over the haul path between the spoil area and the powerhouse access road (Photo 26).

Environmental Summary:

- All wastewater related to the BDRHEF tunnelling works continued to be contained and conveyed to the downstream portal settling ponds for treatment. CE placed and compacted blast rock adjacent to the ponds on November 1, 2015. The intent was to stop water seeping from the fourth cell of the water treatment ponds, flowing over an active haul path, and along the edge of the powerhouse access road. The blast rock seems to have stopped the seepage from the ponds and the haul path is no longer impacted, therefore ITM item *BDR #25* is consider closed (see Section 9.0; Photo 26).

Photos:

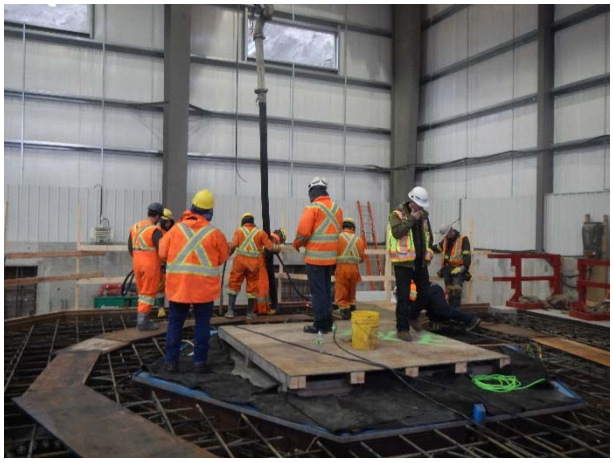

Photo 25 – Second stage concrete pour inside the BDRHEF powerhouse for the distributor and turbine housing (November 7, 2015).

Photo 26 – Blast rock placed to prevent seepage from the 4th cell of the BDRHEF tunnel portal settling ponds from impacting the haul path. (November 5, 2015).

5.3 *Water Quality Results*

The following table presents the results of the routine WQ 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* WQ (turbidity and/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 (uS)	Temp (°C)
Routine Water Quality						
November 5, 2015	15:29	BDR BG – Upstream of BDRHEF intake	7.7	2.7	81	2.8
	15:37	BDR #1 – Downstream of BDRHEF intake	7.7	3.5	82	2.6
	14:38	BDR #2 – Upstream of BDRHEF Powerhouse	7.7	2.7	82	3.0
	16:40	BDR #3 – Downstream of BDRHEF Powerhouse at Pebble Creek Bridge	7.7	4.5	82	3.2

5.4 *Recommendations*

IEM recommendations for the BDRHEF are as follows:

- All wastewater related to the BDRHEF tunnelling works should continue to be contained and conveyed to the downstream portal settling ponds for treatment. Regular inspections of the treatment ponds should be performed to ensure the necessary maintenance activities outlined in the work plan are performed.
- Environmental issues and recommendations associated with FAM#05 should be addressed in a timely manner. Refer to the ITM for outstanding items as of the end of this reporting period.

5.5 *Upcoming Works*

The following new and/or environmentally sensitive construction activities are scheduled to occur at the BDRHEF in the upcoming reporting period(s):

- Drilling, blasting and mucking will continue for the BDRHEF intake diversion tunnel.
- Rock consolidation will continue at the BDRHEF intake.
- BDRHEF downstream portal tunnelling works will continue.
- Structural, mechanical and electrical works within the BDRHEF powerhouse will continue.

6.0 Transmission Line – Monitoring Results

6.1 *Transmission Line Construction Activities*

Right-of-Way Clearing:

- Hand falling danger trees throughout Segment 12.

Existing Road Upgrades and Access Road Construction

- Road construction on Road 305 in Segment 12.
- Road construction on Road 306 in Segment 13.

Transmission Line Pole Installation, Line Stringing and Clipping

- Groundworks for pole foundations in Segment 12.

Environmental Summary:

- The IEM was present as required when clearing activities occurred within 150m of wetlands, 15m RVMAs (30m for CTF streams), 100m of Coastal Tailed Frog Streams, Class 1 & 2 suitable Grizzly Bear WHA and/or suitable forage habitat, moose and deer UWR, legally designated Old Growth Management Areas (OGMAs) or within Northern Goshawk, Spotted Owl or Western Screech-Owl nesting habitat (during breeding season). All flagged boundaries were respected during clearing activities. No environmental issues were observed.

6.2 *Water Quality Results*

Date	Time	Sample Location Description	pH	Turbidity (NTU)	Cond (uS)	Temp (°C)
No construction activities involving water management were conducted during this reporting period.						

6.3 *Recommendations*

- The IEM has no recommendations at this time.

6.4 *Upcoming Works*

- Groundworks for pole foundations in Segment 12.
- Road construction in Segment 12 and 13.

7.0 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 recorded and reported by the contractor(s). Wildlife Observation forms will be included in first reporting period following month end. 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

8.0 Mountain Goat Monitoring Program

The following mitigation measures related to mountain goats were implemented during this monitoring period:

- The IEM conducted daily snow depth monitoring within the Truckwash Creek Migration Corridor flowing snowfall accumulation according to the Project's Mountain Goat Management Plan. A two-week shutdown of work activities will occur once a significant snowfall is recorded (average snow depth of 10cm in forested habitat or 30cm in open terrain).
- Access to the BDRHEF intake is gated and locked or guarded fulltime to restrict motorized use within the UWR from November 1 – April 30.
- IEM was onsite to audit daily construction equipment shutdowns (November 1 - 30) beginning one hour before and two hours after sunrise as well as two hours before and one hour after sunset. The IEM recorded a non-compliance issue of a concrete truck travelling through the Truckwash Creek Mountain Goat migration corridor during the sunset shutdown period on November 3, 2015. Further information is included in the appended FAM#6.
- Noise level monitoring data continued to be collected and used to adaptively manage construction noise and ensure that the 75db noise level threshold is not exceeded as outlined in the Mountain Goat Management Plan.
- The IEM or designate was on site to monitor Mountain Goat activity within 500m of construction activities at the ULRHEF intake and the ULRHEF downstream tunnel portal. Mountain goats were monitored from four sites:
  - Truckwash Creek viewing river right of the Migration Corridor– MG-OBS01 (10U 467955 5612773):
  - Keyhole Falls viewing the south side u-2-002 UL11 – MG-OBS02 (10U 466593 5613988); and,
  - Garibaldi Pumice mine site viewing u-2-002 UL 19 – MG-OBS03 (10U 467388 561408); and,
  - Salal Creek monitoring site viewing u-2-002 UL 8 – MG-OBS04 (10U 466133 5613991).

  Monitoring effort was split between all sites during daylight hours, unless safety concerns or weather conditions interfered. The order of site visits rotated daily. Construction activities must cease if a goat(s) are observed moving towards the ULRHEF intake and/or if a goat(s) are observed within a 500m line of site of a construction activity. No goats were observed within 500m line of sight of construction activities and no work stoppages were required.

9.0 Environmental Issues Tracking Matrix (ITM)

9.1 *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
BDR#25	CLOSED	Boulder Powerhouse water treatment ponds	Water from the fourth cell of the water treatment ponds is seeping out of the edge of the pond, flows over an active haul path, and along the edge of the powerhouse access road before infiltrating to ground	1. Remove sediment accumulations from cells 1 – 3 of the treatment ponds to promote infiltration as outlined in the work plan. OR 2. Ensure all flowing surface water seeping from the fourth pond is conveyed in armoured ditch lines and through road culverts.	Oct. 26, 2015	Nov. 7, 2015	Nov. 1, 2015
BDR#26	CLOSED	Boulder Intake Access Road 4 – 5KM	Ditch installation and maintenance is required to ensure runoff is directed away from the running surface and is conveyed offsite clean, without being impacted by vehicle traffic	1. Install and armour ditch line from 4 -5 KM 2. Repair all damaged or infilled culvert inlets from 4-5KM	Oct. 26, 2015	Nov. 7, 2015	Nov. 3, 2015
BDR#27	OPEN	Boulder Intake Access Ramp	Ditches outlined in the work plan have not been installed and the haul path is conveying sediment and sediment laden water along the length of the ramp	Install ditches on either side of the access ramp and crown/cap road to ensure runoff is conveyed in the ditch lines and not along the running surface	Oct. 26, 2015	Nov. 7, 2015	-
ULR#30	OPEN	ASTR04 – Haul road crossing	The silt fence on the downstream side of the WBC/road has failed. Runoff from the surface of the haul road is not conveyed in a ditch. As a result flows concentrate in this location, which led to the silt fence failure.	1. Repair the haul road drainage to direct water away from ASTR04 2. Remove failed silt fence ensuring material does not enter ASTR04, and replace it.	Oct. 26, 2015	Nov. 7, 2015	-
ULR#31	OPEN	ULRHEF-Downstream Tunnel Portal access road drainage ditches	Ditches are not collecting and transporting road runoff as intended due to the road grading along the lower ULRHEF tunnel portal access road and infilling of the ditch line.	1. Clean out ditch line and re-grade road to convey water to the ditch line 2. Ensure water from the laydown area is drained/conveyed into the re-established ditch line.	Oct. 26, 2015	Nov. 7, 2015	-
ULR#35	OPEN	Lillooet River FSR – KM45	Stockpiles along the edge of the FSR at ~KM45 of the Lillooet River FSR near the	1. Install a ditch line along the forested edge of the stockpile (edge of the FSR) and install silt fencing to prevent the migration of sediment	Oct. 27, 2015	Nov. 7, 2015	-

			crushing/screening plant are not protected according to the ESC Plan.	*into the ditch line and/or the Mountain Goat replacement area immediately adjacent to the stockpile. Closed November 2, 2015* 2. *Remove accumulated sediment that has infilled the existing ditch line between the new spoil pile access road and the stockpiled material.* 3. *Clean out blocked culvert at the entrance to the active KM45 spoil area. (Identified October 30, 2015)*			
ULR#36	*OPEN*	*Covered Stockpiles at KM44.5 of the Lillooet River FSR*	*The stockpile tarp coverings are deteriorating and are no longer serving their original intent as a potential PAG rock temporary storage measure.*	1. *Remove the tarps if they are no longer required. Update November 6, 2015 – The IEM has been provided with verbal confirmation that the stockpiles are non-PAG and do not require a tarp covering to protect the material from contact with water/snow. This item will be closed once a QP provides confirmation.* *OR* 2. *Repair the tarps if they are still required (pending clarification on PAG vs non-PAG status)*	*Oct. 27, 2015*	*Nov. 30, 2015*	-
ULR#37	*CLOSED*	*Lillooet River FSR – KM44 to KM43.5*	*Ditches have been infilled with sediment and are missing in some sections*	1. *Remove accumulated sediment and restore the ditch line in areas where it is no longer continuous and/or where runoff is likely to erode the running surface.*	*Oct. 27, 2015*	*Nov. 7, 2015*	*Nov. 6, 2015*
ULR#38	*CLOSED*	*Truckwash Creek mountain goat migration corridor*	*A concrete truck travelled through the Truckwash Creek migration corridor during the sunset shutdown period on November 3, 2015. See FAM #6 for additional details*	1. *Station two CE crew members to block the road to project related traffic at KM44 and KM48 of the Lillooet River FSR during the sunrise and sunset shutdown periods. Completed November 4, 2015.* 2. *Respond in writing that this has been completed.*	*Nov. 4, 2015*	*Nov. 4, 2015*	*Nov. 6, 2015*

9.2 *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 Completed
No outstanding environmental issues (next ITM – Tx#3)							

FIELD ADVICE MEMO (FAM)

Project:	Upper Lillooet Hydro Project	**FAM Number:** *(yyyy-mm-dd_FAM##)*	2015-11-04_FAM#6
FAM Author:	Tom Hicks, Lead Monitor Sartori Environmental Services	**Date of FAM Issuance:**	November 4, 2015
Distribution List: *(Name - Company)*	To: Jean Pelletier, Jordan Gagne & Ian McKeachie - CRT-ebc CC: Julia Mancinelli - Innergex, Stephen Sims - Sartori Environmental Services		
Environmental Incident Reports (EIR): *(If applicable)*	This FAM is not associated with an environmental incident. This issue will be tracked in the Issue Tracking Matrix (ITM ULR#38) in the Weekly Environmental Monitoring Report. A repeat violation of travel through the mountain goat migration corridor during the sunrise/sunset restricted times will be consider an environmental incident.		

Identified Environmental Issue(s):

As outlined by Condition 15 of the Environmental Assessment Certificate #E13-01and the stated in the Mountain Goat Management Plan:
In November and May, daily operational shutdowns within 200 m of Goat Winter Range (GWR u-2-002 UL 11, UL 19) and migration corridor will be implemented to allow migrating Mountain Goats to access valuable habitat during critical migration periods. Shutdowns will occur during the dusk and dawn periods (i.e., 1 hour before and 2 hours after sunrise, and 2 hours before and1 hour after sunset).

Yesterday afternoon at 15:05, the a concrete truck travelled through the Truckwash Creek mountain goat migration corridor within the sunset operational shutdown period (14:47-17:47). The concrete truck was travelling down the Lillooet River FSR from the Upper Lillooet River intake work area and was heard calling the KM markers within the migration corridor by the IEM. CRT-ebc had a crew member stationed at KM44 to prevent project related traffic from heading up the Lillooet River FSR at this time, but did not have someone stationed on the opposite side of the FSR (beyond KM46) to stop project related traffic headed down from the Upper Lillooet River intake work area.

As a side note, audits of the sunrise operational shutdown period have found no travel infractions to date. CRT-ebc employees have been stationed at KM44 throughout the sunrise shutdown period to stop traffic heading up the Lillooet River FSR from KM44.

Requested Outcome(s)

The IEM requests that CRT-ebc station two crew members, one on each side of the 200m buffer of the mountain goat migration corridor, to block all project related traffic during the operational shutdown periods for the remainder of all future sunrise/sunset shutdowns in November.
One crew member should be stationed at KM44 of the Lillooet River FSR to stop all project related traffic from heading up the FSR, and the IEM requests that the second is stationed at KM48 to prevent travel down the FSR from the Upper Lillooet River intake work area. The IEM has requested that the upper end of travel be restricted from KM48 as the edge of the 200m buffer for the migration corridor is near KM46 which is very close to edge of GWR u-2-002 UL11. Furthermore, there are no project activities occurring between KM46 and KM48 of the Lillooet River FSR that need to be accessed during the operational shutdown periods.
The IEM understands that CRT-ebc has stationed crews at KM44 and KM46 during some of the shutdown periods; however based on the issue observed it has not been effective and the IEM feels it requires a more formal strategy to prevent another infraction.

Please respond by email to confirm the implementation of the strategy outlined above.