



Upper Lillooet Hydro Project

Weekly Environmental Monitoring Report #36

Reporting Period: August 24th – August 30th, 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 | |
| Murray Manson | Fisheries and Oceans Canada |  J. Alex Sartori, RPBio <i>Independent Environmental Monitor (IEM)</i>  J. Stephen Sims, RPBio <i>Delegated IEM</i> |
| 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. | |
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| Richard Blanchet | Innergex Renewable Energy Inc. | |
| Claude Denault | CRT-ebc Construction Inc. | |
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| Éric Ayotte | CRT-ebc Construction Inc. | |
| Jordan Gagne | CRT-ebc Construction Inc. | |
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| D'Arcy Soutar | Westpark Electric Ltd. | |
| Pontus Lindgren | Westpark Electric Ltd. | |
| Harriet VanWart | Lil'wat Nation | |
| | | Date Prepared: September 16, 2014 Date Submitted: September 17, 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, 4) 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
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)
Lillooet South FSR Temporary Road Closures Approval File No. 11250-32/7977

ACRONYMS:

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

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 (on-site) | Weather Conditions | Key Monitoring Locations |
|---------------------|------------------------------|--------------------|---|
| Sunday August 24 | MS, MF, VD, AA, AS | Sunshine | <p>BDRHEF Tunnel Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>BDRHEF Powerhouse</p> <ul style="list-style-type: none"> • Continued rebar installation and formwork • Concrete works – Foundation pour <p>BDRHEF Intake Access Road</p> <ul style="list-style-type: none"> • Continued access road construction • Grubbing, stripping, tree removal and drilling continuing at crane pad <p>ULRHEF Downstream Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>ULRHEF Powerhouse</p> <ul style="list-style-type: none"> • Installation of mesh cover for slope stabilization • Powerhouse backfill and compaction • Continued dewatering to settling ponds <p>ULRHEF Intake Diversion Channel – South Side</p> <ul style="list-style-type: none"> • Drilling, blasting and excavating at the diversion channel • Shotcrete application for slope stabilization • Rock anchors and grouting for slope stabilization <p>TX-Line</p> <ul style="list-style-type: none"> • Segment 5 <ul style="list-style-type: none"> ➢ Falling and machine works from structures 83-96 ➢ Ground works (including blasting) at structures 92-93, 100, 111, and 114-116 • Segment 6 <ul style="list-style-type: none"> ➢ RoW clearing • Segment 10 <ul style="list-style-type: none"> ➢ Ryan River bridge complete, awaiting commissioning • Segment 14 <ul style="list-style-type: none"> ➢ Bridge repairs to surface of existing structure over Pemberton Creek ➢ Brushing along the Pemberton Main FSR |
| Monday August 25 | MS, AA, VD, DA | Sun and clouds | <p>BDRHEF Tunnel Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>BDRHEF Powerhouse</p> <ul style="list-style-type: none"> • Continued rebar installation and formwork <p>BDRHEF Intake Access Road</p> <ul style="list-style-type: none"> • Continued access road construction • Grubbing, stripping, tree removal and drilling continuing at crane pad <p>ULRHEF Downstream Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>ULRHEF Powerhouse</p> <ul style="list-style-type: none"> • Installing mesh cover for slope stabilization • Backfill and compaction of powerhouse • Continued dewatering to settling ponds <p>ULRHEF Intake Diversion Channel – South Side</p> <ul style="list-style-type: none"> • Drilling, blasting and excavating at the diversion channel • Shotcrete application for slope stabilization • Rock anchors and grouting for slope stabilization <p>TX-Line</p> <ul style="list-style-type: none"> • Segment 5 <ul style="list-style-type: none"> ➢ Falling and machine clearing of road within the RoW continues ➢ Ground works (including blasting) at structures 92-93, 100, 111, and 114-116 |

| Date | IEM Team Personnel (on-site) | Weather Conditions | Key Monitoring Locations |
|------------------------|-------------------------------------|--------------------|--|
| | | | <ul style="list-style-type: none"> • Segment 6 <ul style="list-style-type: none"> ➢ Clearing of RoW throughout segment • Segment 14 <ul style="list-style-type: none"> ➢ Bridge repairs continued over Pemberton Creek ➢ Continued brushing along the Pemberton Main FSR |
| Tuesday August 26 | TH, MS, ML, VD, DA, KM, AA | Sun and clouds | <p>BDRHEF Tunnel Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>BDRHEF Powerhouse</p> <ul style="list-style-type: none"> • Continued rebar installation and formwork <p>BDRHEF Intake Access Road & Crane Pad</p> <ul style="list-style-type: none"> • Continued access road construction • Grubbing, stripping, tree removal and drilling continuing at crane pad <p>ULRHEF Downstream Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>ULRHEF Powerhouse</p> <ul style="list-style-type: none"> • Backfill and compaction of powerhouse • Continued dewatering to settling ponds – Installation of French drain to direct sub-grade seepage to sump <p>ULRHEF Intake Diversion Channel – South Side</p> <ul style="list-style-type: none"> • Drilling, blasting and excavating at the diversion channel • Continued rock anchoring, grouting and Shotcrete application for slope stabilization <p>TX-Line</p> <ul style="list-style-type: none"> • Segment 1 <ul style="list-style-type: none"> ➢ Line crews dressing poles from structures 22-24 ➢ Stringing from structures 8-15 (includes stream 9a RVMA) • Segment 5 <ul style="list-style-type: none"> ➢ Spider hoe working at structures 109-111 ➢ Fallers and machinery working from structures 83-96 ➢ Ground works at structure 93 • Segment 6 <ul style="list-style-type: none"> ➢ Faller clearing RoW throughout segment ➢ Lillooet South FSR – Commencement of road works (including ballasting and culvert installations), fish salvages were conducted as necessary • Segment 14 <ul style="list-style-type: none"> ➢ Continued bridge repairs to surface of existing structure over Pemberton Creek ➢ Brushing along the Pemberton Main. |
| Wednesday August 27 | KM, DA, VD | Sun and clouds | <p>BDRHEF Tunnel Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>BDRHEF Powerhouse</p> <ul style="list-style-type: none"> • Continued rebar installation and formwork <p>BDRHEF Intake Access Road & Crane Pad</p> <ul style="list-style-type: none"> • Continued access road construction • Ditching work along access road as discussed with IEM • Grubbing, stripping, tree removal and drilling continuing at crane pad <p>ULRHEF Downstream Portal</p> <ul style="list-style-type: none"> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <p>ULRHEF Powerhouse</p> <ul style="list-style-type: none"> • Backfill and compaction of powerhouse • Continued dewatering to settling ponds – French drain constructed to direct sub-grade seepage to sump • Continued dewatering to settling ponds <p>ULRHEF Intake Diversion Channel – South Side</p> <ul style="list-style-type: none"> • Drilling, blasting and excavating at the diversion channel • Continued rock anchoring, grouting and Shotcrete application for slope stabilization <p>ULRHEF Intake – North Side</p> |

| Date | IEM Team Personnel (on-site) | Weather Conditions | Key Monitoring Locations |
|-----------------------|------------------------------|--------------------|--|
| | | | <ul style="list-style-type: none"> • Grubbing and stripping of open cut commenced <i>TX-Line</i> • Segment 1 <ul style="list-style-type: none"> ➢ Heli-stringing line from structures 8-15 • Segment 4 <ul style="list-style-type: none"> ➢ Fallers clearing trees at structures 52 and 73. • Segment 5 <ul style="list-style-type: none"> ➢ Machinery working at structure 98 and 107 ➢ Faller and machines operating from structures 83-96 ➢ Continued ground works at structures 93, 99, and 114. • Segment 6 <ul style="list-style-type: none"> ➢ Continued clearing of RoW throughout segment ➢ Lillooet South FSR – Continued road works (including ballasting and culvert installations), fish salvages were conducted as necessary • Segment 10 <ul style="list-style-type: none"> ➢ Construction of approach ramp for Ryan River bridge ➢ Continued road works along South Ryan road • Segment 14 <ul style="list-style-type: none"> ➢ Continued bridge repairs to surface of existing structure over Pemberton Creek ➢ Brushing along the Pemberton Main. |
| Thursday August 28 | TH, MF, DA, VD, KM | Sun and clouds | <ul style="list-style-type: none"> <i>BDRHEF Tunnel Portal</i> • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds <i>BDRHEF Powerhouse</i> • Continued rebar installation and formwork <i>BDRHEF Intake Access Road & Crane Pad</i> • Continued access road construction • Ditching work along access road as discussed with IEM • Grubbing, stripping, tree removal and drilling continuing at crane pad <i>ULRHEF Downstream Portal</i> • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into settling ponds <i>ULRHEF Powerhouse</i> • Backfill and compaction of powerhouse • Continued dewatering to settling ponds – French drain completed to direct sub-grade seepage to sump <i>ULRHEF Intake Diversion Channel – South Side</i> • Continued drilling, blasting and excavation at the diversion channel • Continued rock anchoring, grouting and Shotcrete application for slope stabilization <i>ULRHEF Intake – North Side</i> • Continued grubbing and stripping of open cut <i>TX-Line</i> • Segment 1 <ul style="list-style-type: none"> ➢ Heli-stringing line from structures 8-15 • Segment 4 <ul style="list-style-type: none"> ➢ Fallers clearing trees at structures 52 and 73 • Segment 5 <ul style="list-style-type: none"> ➢ Excavator working at structures 102 and 107 and spider hoe working at structure 96 ➢ Fallers and machinery working from structures 83-96 ➢ Ground works at structures 99 • Segment 6 <ul style="list-style-type: none"> ➢ Continued clearing of RoW throughout segment ➢ Continued road works along Lillooet South FSR • Segment 10 <ul style="list-style-type: none"> ➢ Continued road works along South Ryan Road • Segment 14 <ul style="list-style-type: none"> ➢ Hand falling at structures 346-347 |
| Friday August 29 | MF, VD, AA, KM | Clear | <ul style="list-style-type: none"> <i>BDRHEF Tunnel Portal</i> • Drilling, blasting and tunnel stabilization |

| Date | IEM Team Personnel (on-site) | Weather Conditions | Key Monitoring Locations |
|--------------------|------------------------------|--------------------|--|
| | | | <ul style="list-style-type: none"> • Seepage from tunnel pumped from sump at portal entrance into settling ponds BDRHEF Powerhouse • Continued rebar installation and formwork • Concrete works – Foundation pour BDRHEF Intake Access Road & Crane Pad • Continued access road construction • Ditching work along access road as discussed with IEM • Grubbing, stripping, tree removal and drilling continuing at crane pad ULRHEF Downstream Portal • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into settling ponds ULRHEF Powerhouse • Continued backfill and compaction • Continued dewatering to settling ponds ULRHEF Intake Diversion Channel – South Side • Continued drilling, blasting and excavation at the diversion channel • Continued rock anchoring, grouting and Shotcrete application for slope stabilization ULRHEF Intake – North Side • Continued grubbing and stripping of open cut TX-Line • Segment 2 <ul style="list-style-type: none"> ➢ Pole straightening at heli-set poles • Segment 3 <ul style="list-style-type: none"> ➢ Clearing of snags at structures 44-47 • Segment 4 <ul style="list-style-type: none"> ➢ Structure work included backfilling, straightening, and dressing at structures 51 and 53-56 • Segment 5 <ul style="list-style-type: none"> ➢ Pole straightening at heli-set poles ➢ Ground works continued at structures 107 and 109 ➢ Falling and machine clearing of the road • Segment 6 <ul style="list-style-type: none"> ➢ Continued clearing of RoW throughout segment • Segment 11 <ul style="list-style-type: none"> ➢ Installation of two 400 mm culverts at crossings RY1 and RY2 approximately 100 m and 150 m on the bush side of the Ryan River bridge crossing • Segment 14 <ul style="list-style-type: none"> ➢ Clearing recommenced |
| Saturday August 30 | MF, AA, VD, KM | Sun and clouds | <ul style="list-style-type: none"> BDRHEF Tunnel Portal • Drilling, blasting and tunnel stabilization • Seepage from tunnel pumped from sump at portal entrance into settling ponds BDRHEF Powerhouse • Continued rebar installation and formwork BDRHEF Intake Access Road & Crane Pad • Continued access road construction • Grubbing, stripping, tree removal and drilling continuing at crane pad ULRHEF Downstream Portal • Drilling, blasting and stabilization of the tunnel • Seepage from tunnel pumped from sump at portal entrance into settling ponds ULRHEF Powerhouse • Continued backfilling and compaction • Continued dewatering to settling ponds ULRHEF Intake Diversion Channel – South Side • Continued rock anchoring, grouting and Shotcrete application for slope stabilization ULRHEF Intake – North Side • Continued grubbing and stripping of open cut TX-Line • Segment 2 <ul style="list-style-type: none"> ➢ Continued pole dressing • Segment 3 |

| Date | IEM Team Personnel (on-site) | Weather Conditions | Key Monitoring Locations |
|------|------------------------------|--------------------|---|
| | | | <ul style="list-style-type: none"> ➤ Clearing of snags at structures 44-47 • Segment 4 <ul style="list-style-type: none"> ➤ Continued pole dressing • Segment 5 <ul style="list-style-type: none"> ➤ Continued pole dressing ➤ Structure work continued at pole 105 and commenced at pole 107 ➤ Ground works continued at pole 81, 86 and 87 |

IEM Team Personnel: MS – Mandala Smulders; TH – Tom Hicks; VD – Vanessa Dan; AA – Anthony Andrews; DA – Danita Abraham; MF – Matt Fuller; AS – Anne Sutherland; KM – Kathy Mai

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. |
|------------------------------|--------------------------|------------------------|--|---------------|
| August 24 th | <i>Emails</i> | CE, SES | PAG stockpile from BDRHEF intake access road near crusher pad at laydown – Discussed perimeter berm and ditching as well as covering of stockpile with poly sheeting. | - |
| | <i>Emails</i> | INX, CE, SES, JEM | LTC issued for ULRHEF Intake Grubbing and Stripping – INX emphasized the IE hold points inserted into the LTC package. | - |
| August 25 th | <i>Email</i> | Hedberg, INX, WEL, SES | Ryan South Road upgrade prescription and mapping. | - |
| | <i>Email</i> | SES, INX | WP-CE-036&037 - Lillooet River FSR km39.7 and km47 Log Box Culvert Replacement – Approval of Work Plan by IEM. | - |
| | <i>Emails</i> | CE, SES, INX | PAG spoil at km 44.5 – Discussions with CE regarding PAG management according to currently approved ARD/ML Monitoring and Control Plans. | - |
| August 26 th | <i>IE/IEM site visit</i> | JEM, SES, INX | Monthly IE site inspection. | - |
| | <i>Pre-work Meeting</i> | CE, INX, SES | ULRHEF North side excavation (grubbing and stripping) – Discussed details of the Work Plan including environmental mitigations, Hold Points and timing. | - |
| August 25 – 26 th | <i>Email</i> | WEL, INX, SES | Ryan South Road Upgrade Prescription (first 1000m) – Work Plan review and acceptance. | - |
| August 26 – 28 th | <i>Email</i> | WEL, INX, SES | Mitigating impacts to grizzly bear forage habitats in Segment 8 to avoid significant construction delays – Timing constraint mitigations within ULH-GB33 were discussed. | - |
| August 27 th | <i>Pre-work Meeting</i> | INX, WEL, Hedberg, SES | Ryan South Road upgrades – Discussed Work Plan, mapping, mitigations and culvert locations. | - |
| | <i>Email</i> | INX, MFLNRO, SES | Notice of Incident (2014-08-26 CE-EIR-012) Moose struck and killed on Lillooet River FSR – Copy of the EIR that the IEM reviewed was provided to MFLNRO. | <i>ULR#19</i> |

| Date | Communication Type | Participants | Issues Discussed | ITM ID No. |
|-------------------------------------|-------------------------|------------------------|--|------------|
| | <i>Email</i> | INX, JEM, SES | BDRHEF intake access road and crane pad PAG – Results of Golder Associates Ltd. assessment for ARD potential and associated impacts to surface WQ indicated that there was low concern and that material may be spoiled without further mitigations or monitoring. | - |
| Thursday August 28 th | <i>Pre-work Meeting</i> | INX, WEL, Hedberg, SES | Segment 14 clearing and Pemberton Main FSR road upgrades – Discussed clearing plans, road upgrade prescriptions and mitigations. | - |
| | <i>Email</i> | INX, MFLNRO, SES, JEM | Revised ULRHEF and BDRHEF ARD/ML Monitoring and Control Plans. | - |
| August 30 th | <i>Pre-work Meeting</i> | CE, SES, | ULRHEF intake north side bulk excavation to elevation 666m – Discussed details of the Work Plan including environmental mitigations, Hold Points and timing. | - |
| | <i>Email</i> | INX, CE, SES, JEM | LTC issued for ULRHEF Intake North Side Bulk Excavation down to Elev. 666 m. | - |

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 1 –11, & 14 | <i>Within 150m of wetlands or 100m of Coastal Tailed-Frog Streams</i> | <i>IEM presence is required when clearing within 150m of wetlands or 100m of Coastal Tailed-Frog Streams, to ensure clearing area is minimized.</i> |
| | | <i>Old Growth Management Areas (OGMAs)</i> | <i>IEM monitoring is required when clearing within legally designated OGMAs, to ensure clearing area is minimized.</i> |
| | | <i>Ungulate Winter Range (UWR)</i> | <i>IEM monitoring is required when clearing within identified deer and moose UWR, to ensure clearing area is minimized.</i> |
| | | <i>Suitable Class 1 & 2 Grizzly Bear forage habitat</i> | <i>IEM monitoring is required when clearing within identified Class 1 & 2 Grizzly Bear forage habitat, to ensure clearing area is minimized.</i> |

| Component | Location | Wildlife/Archeology Concern | Construction/Timing Restrictions & Mitigations |
|---|--|---|--|
| <i>ULRHEF powerhouse, and Intake diversion channel</i> | <i>Within 50m of identified archeologically significant area</i> | <i>Archaeologically significant site EdRu-3</i> | <i>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.</i> |
| | <i>Within 30m of the Upper Lillooet River</i> | <i>Riparian area and fish bearing streams</i> | <i>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.</i> |
| <i>Lillooet River FSR; ULRHEF intake access; FSR realignment at Truckwash Creek</i> | <i>Access roads above the lower limit of the 200m buffer Truckwash Creek Migration Corridor to the ULRHEF intake; including FSR realignment at Truckwash Creek</i> | <i>Mountain Goat UWR</i> | <i>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.</i> |

4.0 Hydroelectric Facilities

4.1 Ancillary Components – Monitoring Results

38km Laydown

Construction Activities:

- Material crushing and screening plant operation continued throughout this reporting period. A watering hose was used effectively for dust control at the screening plant.

Environmental Summary:

- No environmental issue were observed.

4.2 Boulder Creek Hydroelectric Facility – Monitoring Results

Downstream Tunnel Portal and Powerhouse

Construction Activities:

- Drilling, blasting, mucking and stabilization (anchoring and shotcrete application) continued within the tunnel. Seepage water from the tunnel portal was conveyed effectively to the settling ponds for treatment and storage.

- Concrete works – Powerhouse foundation pours occurred on August 24th and 29th.
- Rebar installation and formworks (Photo 1) at the powerhouse commenced during this reporting period.

Environmental Summary:

- Seepage flowing out of the tunnel continues to be collected at the portal tunnel entrance in a sump and this 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 CO₂ 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 WQ results.
- 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 WQ or environmental concerns were noted within Boulder Creek.
- Concrete works occurring for the powerhouse foundation were completed in the dry and fully isolated from seepage water. No environmental issues were observed.
- 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 37.5 km of the Lillooet River FSR and on active construction site access roads.

Intake Access Road & Crane Pad

Construction Activities:

- Intake access road construction and ditching/culvert improvements (Photo 2) continued throughout the reporting period. Berms (Photo 3) were constructed at the toes of slope to protect OLTC boundary against falling debris.
- Grubbing, stripping and removal of merchantable timber continued at the crane pad (Photo 4).

Environmental Summary:

- Construction activities occurring along the BDRHEF intake access road and crane pad with the IEM onsite for clearing activities within UWR and construction activities within 30 m of Boulder Creek and other smaller watercourses. Ditching and culvert works (August 28th & 29th) were completed with the IEM on-site and no environmental issues were observed.

Photos:



Photo 1 – Formworks at powerhouse and tunnel portal (August 25th, 2014)



Photo 2 – Intake access road construction and ditching (August 25th, 2014)



Photo 3 – BDRHEF Intake access road construction with OLTC protection berm (August 24th, 2014)



Photo 4 – BDRHEF crane pad construction (August 24th, 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 (µS) | Temp (°C) |
|------------------------------|-------|--|-----|-----------------|-----------|-----------|
| Routine Water Quality | | | | | | |
| - | - | BDR Background –Upstream of BDRHEF intake *not currently accessible* | - | - | - | - |
| - | - | BDR #1 – Downstream of BDRHEF intake *not currently accessible* | - | - | - | - |
| August 30 | 11:30 | BDR #2 – Upstream of BDRHEF Powerhouse | 7.7 | 48.9 | 37 | 9.0 |
| | 11:55 | BDR #3 – Downstream of BDRHEF Powerhouse at Pebble Creek Bridge | 7.6 | 49.7 | 39 | |

4.3 Upper Lillooet River Hydroelectric Facility – Monitoring Results

Powerhouse and Access Road

Construction Activities:

- Mesh fencing was installed on slopes above the powerhouse excavation to improve slope stability.
- A French drain (Photo 5) was installed on the riverside of the powerhouse excavation. Two pumps (6” and 10”) previously installed in the sump draining seepage waters in the powerhouse excavation continued to convey water to the existing settling ponds (Photo 6). No flowing surface water was observed within the excavation and pump capacity appears to be adequate to maintain isolation from active work areas.
- Continued backfill and compaction in preparation for mud slab pour and foundation formworks.

Environmental Summary:

- Further to routine weekly WQ sampling (see below), turbidity was visually monitored during periodic visits to the ULRHEF powerhouse by the IEM. Water entering the Lillooet River from the discharge (through vegetation) of the settling ponds remained within water quality guidelines during each inspection and works within the powerhouse excavation did not come in contact with the seepage water during this reporting period. Future opportunistic WQ sampling will be conducted at the discretion of the IEM.

Downstream Portal

Construction Activities:

- Drilling, blasting, mucking and stabilization (anchoring and shotcrete application) continued within the tunnel (Photo 7). Seepage water from the tunnel portal was conveyed effectively to the settling ponds for treatment and storage.

Environmental Summary:

- The sediment ponds installed adjacent to Truckwash Creek were used to treat the seepage and process water emanating from the tunnel. No surface discharge from the sediment ponds was observed this week; therefore no WQ measurements were taken by the IEM.
- Blast rock was hauled to the lower spoil area and managed according to the ULRHEF ARD/ML Monitoring and Control Plan.

Intake (North & South Sides) and Access Roads

Construction Activities:

- Drilling, blasting and excavation works continued during day and night shift within the intake diversion channel (Photo 8) on the south side of the Lillooet River throughout this reporting period. Rock anchoring and shotcrete application was completed as necessary for stabilization.
- Construction activities commenced on the north side (Photo 9) of the Lillooet River on August 27th following issuance of the LTC for ULRHEF Intake Grubbing and Stripping on August 24th and a pre-work meeting on the 26th. Approved works are currently limited to stripping and grubbing activities.
- A gravity fed water extraction system was used for drilling activities according to the conditions of the Short Term Water Use Approval (No.A2006123).

Environmental Summary:

- The IEM was onsite full time during day shift and night shift for all construction activities occurring on both the north and south sides of the river during day and night shift. On the south side within and adjacent to the intake diversion channel, the IEM documented occurrences of non-deleterious materials (large boulders) entering the watercourse and confirmed that all efforts to prevent rocks from entering the Lillooet River were taken.
- In order to address recommendations made by the IEM in the preceding monitoring reports CE installed a shallow interception ditch along the top of slope at the ULRHEF intake diversion cut slope during this reporting period.
- No environmental issues were observed on the north side of the Lillooet River during stripping and grubbing of the open cut.

Photos:



Photo 5 – Powerhouse excavation showing French drain in construction, back fill and compaction (August 25th, 2014)



Photo 6 – Settling ponds at ULRHEF powerhouse (August 24th, 2014)



Photo 7 – ULRHEF downstream tunnel portal (August 24th, 2014)



Photo 8 – ULRHEF intake diversion channel, north side (August 24th, 2014)



Photo 9 – Stripping and grubbing on north side of Lillooet River at intake (August 30th, 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 (µS) | Temp (°C) |
|------------------------------------|-------|---|-----|-----------------|-----------|-----------|
| Routine Water Quality | | | | | | |
| August 30 | 8:36 | ULR Background – ULRHEF Intake | 7.5 | 58.9 | 39 | 4.9 |
| | 10:37 | ULR # 1 – Upstream of ULRHEF Powerhouse | 7.6 | 56.6 | 42 | 6.6 |
| | 11:08 | ULR #2 – Downstream of ULRHEF Powerhouse between 40.5k and 41k | 7.7 | 56.5 | 37 | 7.0 |
| | 12:20 | ULR #3 –Lillooet River FSR 38km Laydown – D/S of Boulder confluence | 7.5 | 50.3 | 38 | 9.9 |
| | 13:20 | ULR #4 –Lillooet River FSR 24km – D/S of all works and Meager confluence | 7.7 | 66.9* | 46 | 10.0 |
| Opportunistic Water Quality | | | | | | |
| August 27 | 15:10 | ULRHEF Powerhouse – Upstream of sediment pond discharge | 8.0 | 89.6 | 33 | 11.5 |
| | 15:12 | ULRHEF Powerhouse – Downstream of sediment pond discharge (in mixing zone) | 8.1 | 96 | 32 | 11.6 |
| August 30 | 10:30 | ULRHEF Powerhouse – Upstream of sediment pond discharge | 7.7 | 57.4 | 44 | 7.5 |
| | 10:35 | ULRHEF Powerhouse – Downstream of sediment pond discharge (in mixing zone) | 7.7 | 64.7 | 42 | 7.8 |

4.4 Recommendations

Boulder Creek Hydroelectric Facility

IEM recommendations for the BDRHEF are as follows:

- Settling ponds at the downstream portal should be continually monitored to ensure appropriate treatment of seepage from tunnelling activities is occurring. Although dry weather persists, rain events typical of the changing season may result in increased water volumes and current infiltration rates may result in discharge from the ponds. The IEM will continue to monitor the effectiveness of the treatment systems to ensure water meets the approved guidelines prior to discharge.

Upper Lillooet River Hydroelectric Facility

IEM recommendations for the ULRHEF are as follows:

- Settling ponds at the downstream portal should be continually monitored to ensure appropriate treatment of seepage from tunnelling activities is occurring. Although dry weather persists, rain events typical of the changing season may result in increased water volumes and current infiltration rates may result in discharge from the ponds. The IEM will continue to monitor the effectiveness of the treatment systems to ensure water meets the approved guidelines prior to discharge.

4.5 Upcoming Works

Boulder Creek Hydroelectric Facility

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

- Further hydroseeding will be completed on cut slopes adjacent to the BDRHEF tunnel portal to reduce the risk of developing rills during heavy rain events.
- Construction is scheduled to continue on the intake access road and crane pad which a portion of extends within 30m riparian buffer and UWR.

Upper Lillooet River Hydroelectric Facility

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

- Further hydroseeding will be completed on cut slopes adjacent to the ULRHEF intake diversion channel to reduce the risk of developing rills during heavy rain events. Hydroseeding will also be completed on slopes adjacent to the ULRHEF downstream tunnel portal and powerhouse.
- CRT-ebc has confirmed that the failed crossing at 39.7 km (*ULR#8*) will be repaired and/or replaced, and the failed culvert at 47 km (*ULR#4*) will be remediated by removing debris from within the stream. This work will be completed during the 2014 ISW window following the preparation of a work plan and approval by MFLNRO.
- Excavation (drill/blast) of the intake diversion channel is nearing completion. Once excavation and wall stabilization is complete, construction activities for the Obermeyer weir will commence.
- The LTC for the ULRHEF Intake North Side Bulk Excavation was issued on August 30th and works are scheduled to commence next week.

5.0 Transmission Line

5.1 Monitoring Results

Construction Activities:

Segment 1

- Pole dressing and stringing continued. Stringing from structures 8 -15 involve work within RVMA (stream 9a).

Segment 3

- Continued pole straitening at heli-set structures.

Segment 4

- Hand falling continued in close proximity to RVMAs. Contractor reminded fallers to avoid impacts within the RVMAs.
- Continued pole straitening at heli-set structures.

Segment 5

- Continued steep slope falling (Photo 10) and machine works (Photo 11) to construct access roads.
- Pole structure placement and associated groundworks (including blasting). Structure 81 is in close proximity to the RVMA associated with stream 80b.
- Continued pole straightening of heli-set structures.

Segment 6

- Continued RoW clearing.
- Following approval of the Work Plan by the Owner/IEM/MFLNRO and MFLNRO approval of road closures in the preceding reporting period, road ballasting and culvert installations along the Lillooet South FSR commenced on August 26th, 2014. The purpose of the road upgrades was to ensure construction vehicles were able to move safely and in an environmentally suitable manner along the FSR through the low lying wetland areas to access pole structures associated with the Lillooet River Tx line crossing.

Segment 10

- Ryan River Bridge installation has been completed with engineer sign-off and subsequent commissioning pending.

Segment 14

- Brushing along Pemberton Main FSR.
- Bridge repairs (includes laying decking on existing structure) continued over Pemberton Creek. Following completion, road works continued towards structure 344.
- Continued RoW clearing included hand-falling.

Environmental Summary:

- Works along the Lillooet South FSR adjacent to wetlands on either side of the road were monitored fulltime to ensure construction was completed, to the extents possible and practical, out of the wetted perimeter of the wetland and the watercourses running adjacent to the FSR. Excavator used for works near water was filled with synthetic biodegradable hydraulic fluid. WEL's QP performed fish salvages (following isolation) within the wetted portions of the road where the wetland frequently overtops during elevated water levels. Trash pumps were used following isolation of the work area to pump the standing water remaining on the FSR to

vegetation (Photo 12). In consultation with WEL's QP two 1000 mm culverts (Photo 13) were installed at approximately 6 km of the FSR (flowing south to north towards Lillooet River), with the intention to maintaining the same salmonid fish passage from the river side of the road to the far side. Of note is two culverts originally included in the Work Plan (two 600m at 6.4 and 6.7 km) which, following in field assessment of flow paths and perceived fish access routes to the wetland and upstream connected watercourses by the contractor's QP, were not installed.

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

Photos:



**Photo 10 – Segment 5 steep slope falling
(August 29th, 2014).**



**Photo 11 – Segment 5 machine works (excavator
and spider hoe) at structure locations
(August 30th, 2014).**



Photo 12 – Continued dewatering of salvaged and isolated wetted areas to vegetation prior to road ballasting (August 28th, 2014).



Photo 13 – Installation of two 1000 mm culverts at 6 km on the Lillooet South FSR (August 26th, 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 Recommendations

No recommendations are provided for this reporting period.

5.3 Upcoming Works

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

- Continued road works (approximately two weeks) along the Lillooet South FSR. Beaver exclusion fencing will be installed on culvert inlets prior to the end of the ISW window.
- The majority of works described in the construction activities section described above will continue. Construction activities are tentatively scheduled within RVMAs (Segment 5 & 14), as well as within 100 m CTF (Segment 5) and 150 m western toad breeding pond (Segment 3 & 5) buffers.
- Road upgrades in Segment 8 towards Blacks Creek to commence at the beginning of road 197.1.
- Road upgrades will continue in Segment 14 past the end of Pemberton Main FSR along road 371.1. The new road will cross stream 347a (currently dry) and will require two wood box culverts.

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 be 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 |

7.0 Mountain Goat Monitoring Program

The critical early summer forage period for Mountain Goats 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)

| 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. CE to prepare an EIR detailing the cause, description and actions items related to the incident. | May 23, 2014 | May 26, 2014. | |
| | | | | 2. IEM to review and approve the EIR. | | | |
| | | | | 3. CE 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. | | | |
| | | | | 5. Complete FSR and temporary access road crossing assessment by a Qualified Professional. | | June 26, 2014 | |
| | | | | 6. Determine the requirements for crossing structure remediation or replacement | | | |
| | | | | 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 19 th , 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. | | September 15, 2014 | |

| 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 (EIRO04). | Develop a work plan to remediate the failed log box structure and execute during the 2014 instream works window. On July 19 th , 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 | September 15, 2014 | |
| 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#17 | Open | BDR Intake Access Road | Damage to standing timber and impacts outside of minimized clearing boundary & approved OLTC limit (both within and adjacent to UWR) | 1. Prepare and submit EIR#011 outlining the root cause of the incident and how it will be avoided in future. | July 25 th , 2014 | July 30, 2014 | August 1, 2014 |
| | | | | 2. Assess damage to standing timber and impacts outside of the minimized clearing boundaries and approved OLTC (both within and adjacent to UWR). Preliminary information has been provided to satisfy the requirements of ULR#18, however detailed survey is necessary to confirm impacted areas and access is currently not available due to slope stability issues. | Confirmed in Hedberg report July 25 th , 2014 | Pending safe work access – mid-September, 2014 | - |
| ULR#19 | Closed | Lillooet River FSR | CRT-ebc subcontractor (Summit Camps) hit a moose while driving at 12km resulting in the death of the moose (EIRO12 has been appended to this report). | <ol style="list-style-type: none"> CE to prepare an EIR detailing the cause, description and actions items related to the incident. IEM to review and approve the EIR. Crew members to be reminded of obligation to follow speed limits, be attentive and be cautious, as well as the repercussions of non-compliance. Project specific speed limits and warnings of frequent wildlife crossings will be posted at 9 km and 37.5km. The IEM has discussed this with CE and signs will be up by September 15th. In the event signs are not up by that time the IEM will reopen this issue. | August 22, 2014 | August 26, 2014 | August 26, 2014 |

next ITM – ULR#20

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 |
| <i>No outstanding environmental issues (next ITM – Tx#2)</i> | | | | | | | |









Environmental Incident Reporting Form

| General Information | |
|--|--|
| Project Name: Upper Lillooet Hydro Project | Project Component: Lillooet River Forest Service Road |
| Time/Date of Incident Start: 07:15/August 22 nd , 2014 | Time/Date Incident Stopped: 09:30/August 22 nd , 2014 |
| Date of Report: Draft Submitted: 2014-08-24 Final Submitted: 2014-08-26 | Project Incident Report Number: 2014-08-26 CE-EIR-012 Incident Description: Lillooet River FSR – Moose struck and killed km13.5 |
| 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: 2014-08-22, the IEM was informed of the collision in person & by e-mail. | |
| 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: Ian McKeachie/Eric Martin Gagnon | Position: Environmental Manager/Safety Manager |

| Incident Type (check all that apply) | | | |
|--|--------------------------|--|-------------------------------------|
| Encroachment of an Environmentally Sensitive Area (e.g. Riparian/Wildlife Buffer) Please provide details in "Description" section below. | <input type="checkbox"/> | Potential Adverse Impacts to Fish/Wildlife (e.g. Mortality/Injury) Please provide details in "Description" section below. | <input checked="" type="checkbox"/> |
| Water Quality/Quantity Please provide details in "Description" section below. | <input type="checkbox"/> | Hazardous Material Spills (to ground or water) Please provide details in description section in regards to: <ul style="list-style-type: none"> Perceives extent of damage Type, quantity and area of the spill Containment Procedures Environmental features in close proximity to the spill | <input type="checkbox"/> |
| Disturbance of known or unknown archeological /heritage site | <input type="checkbox"/> | Air Quality Please provide details in "Description" section below. | <input type="checkbox"/> |

| | | | |
|--|--------------------------|--|--------------------------|
| Please provide details in "Description" section below. | | | |
| Spill reported to external agencies If yes, describe the receiving environment and substance/quantity spilled. | <input type="checkbox"/> | Other Please provide details in "Description" section below. | <input type="checkbox"/> |

| Incident Profile | | | | | | | | |
|---|---|---|---|---|--|---|---|---|
| Weather at time of incident |  <input checked="" type="checkbox"/> Clear |  <input type="checkbox"/> Partly Cloudy/ Variable |  <input type="checkbox"/> Cloudy |  <input type="checkbox"/> Showers/ Periods of Rain |  <input type="checkbox"/> Rain |  <input type="checkbox"/> Heavy Rain (>25mm in 24hr) |  <input type="checkbox"/> Storm <i>(Heavy rain and high winds)</i> |  <input type="checkbox"/> Snow |
| Specific Location: ULR FSR – 13.5km | | | | | | | | |
| Description and Cause of Incident: <u>Description:</u> <ul style="list-style-type: none"> On August 23rd, at approximately 7:15AM Summit Camp foreman Peter Barharn was travelling at ~ 70km/h in a Ford F350 crew cab pick-up truck, up the Lillooet River FSR at approximately km13.5 and struck a juvenile bull moose which darted onto the road causing it serious injury. The moose landed in the ditch on the road side, did not get up, and showed signs of severe pain and injury. After ensuring the safety of passengers in the vehicle, Pete called CRT-ebc safety manager Eric Martin Gagnon on the radio to inform him of the incident. The regional conservation officer was contacted and informed immediately by CRT-ebc environment manager Ian McKeachie. As the conservation officer had not arrived after more than an hour, a local working in the area communicated by phone with conservation officer Tim Schumacher, and received authorization to permit a colleague who was on the scene to use his firearm to humanely euthanize the moose. This was done safely. At 9:09AM the conservation officer attended the scene and removed the carcass from the area. <u>Cause:</u> <ul style="list-style-type: none"> The speed of the vehicle at the time of the collision exceeded 50km/h and this was primary cause of the accident. The area has high numbers of animal crossings, which increased the risk of collision. | | | | | | | | |
| Incident Witness: CRT-EBC safety manager Eric Martin Gagnon, Summit Camps foreman Peter Barharn | | | | | | | | |



| | | | |
|--|---|--|---|
| Were there any Potential Environmental impacts as a result of the incident? (e.g., surface contamination, storm sewers, or fish/wildlife mortalities) | Yes <input checked="" type="checkbox"/> | None Observed <input type="checkbox"/> | |
| If Yes, please describe: A young bull moose died in the accident. | | | |
| Has Wildlife Salvage Protocol been followed? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| If No, please explain: | | | |
| Water Quality Samples Collected? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 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 <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| Incident Response Measures | | | |
| <p>When CRT-EBC was made aware of the incident by Peter Barharn the following response measures were taken:</p> <ul style="list-style-type: none"> • CRT-ebc safety manager Eric Martin Gagnon travelled to the scene to investigate & document the incident. • CRT-ebc environment manager Ian McKeachie contacted the regional conservation officer to inform them of the incident. • The IEM (Matt Fuller) was notified on site shortly after the incident occurred. • Written notification was provided to the IEM (Tom Hicks) and Owner (Innergex) once all information regarding the incident had been collected by the CRT-ebc safety and environment managers. | | | |

Actions to Prevent Incident Recurrence

Before the incident the mitigation measures in place were:

- All CRT-ebc employees and sub-contractors during mandatory orientation, and at frequent safety meetings, are told to follow speed limits, drive safely and with caution, and watch out for wildlife on the road.
- Numerous signs at our site clearly state the speed limits on the FSR and warn employees of the seriousness of observing these limits.


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

- Superintendents, foremen and crew will be reminded of the obligation to follow speed limits, and to be attentive and cautious while driving. They will also be reminded of the repercussions for not abiding by the speed limit.
- Superintendents, foremen and crew will be reminded that the area between km10 & km14 of the Lillooet FSR is a frequent crossing area for wildlife, and of the need to be aware of wildlife while driving on all areas of the site, especially the FSR.
- The driver in this instance was suspended from driving for 1 month by his employer, Summit Camps.
- Project specific speed limits will be posted on the project signage at the entrance to the Lillooet River FSR and at the signs at km38 to remind employees and sub-contractors.
- Warnings of frequent wildlife crossings on all access roads will be posted for CRT-ebc employees and sub-contractors on the project signage at the entrance to the Lillooet River FSR.

| 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 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-27 | Oliver Robson | Submission of EIR 012 via email. |
| | Chris Parks | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-27 | Oliver Robson | Submission of EIR 012 via email. |
| PEP | 1-800-663-3456 | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| MOE Staff | Conservation Officer Service 1-877-952-7277 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 7:25AM | Ian McKeachie | Phone |
| DFO | | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| DFO | | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| Environment Canada | 604-666-6100 | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| Canadian Coast Guard | 604-666-6011 | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| Local Fire Rescue | 911 | <input type="checkbox"/> | <input type="checkbox"/> | | | |
| Reported to | Contact Information | Contacted | | Date and Time Reported | Reported By | Method of Reporting |
| | | Yes | No | | | |
| Internal Notifications | | | | | | |
| CRT-EBC | Eric Martin Gagnon | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 7:15AM | Peter Barharn | By radio |
| CRT-EBC | Ian McKeachie | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 7:20AM | Eric Martin Gagnon | In person |
| IEM | Matt Fuller | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 8:30AM | Ian McKeachie | In person |
| IEM | Tom Hicks tom@sartorienv.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 6:18PM | Ian McKeachie | Email |
| Owner Innergex | Julia Mancinelli jmancinelli@innergex.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 6:18PM | Ian McKeachie | Email |
| Owner Innergex | Oliver Robson ORobson@innergex.com | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2014-08-22 6:22PM | Ian McKeachie | Email |



Contractor's Environmental Manager:

| Ian McKeachie | Environmental Manager, CRT-EBC |  | 2014-08-26 |
|---------------|--------------------------------|--|------------|
| Print Name | Position and Company | Signature | Date |

Reviewed by:

| J. Stephen Sims | Independent Environmental Monitor, Sartori Environmental Services |  | 2014-08-26 |
|-----------------|--|--|------------|
| Print Name | Position and Company | Signature | Date |

List of attachments:

- Eric Martin Gagnon post-incident pictures of site.



Photo 1: Damaged pick-up.