Environmental Assessment Office

Inspection Record

Project Name: Northwest Transmission Line	Inspection Status:
Certificate #: E09-01	Inspection No:
Certificate Status: *Certified*	Inspection Date: 2012-11-13
Region: Skeena	Office: Victoria
Trigger: Planned	**Incidents of Non-Compliance Observed: Yes**
Non-Compliance Decision Matrix Level: Level 2 - Minor temporary impact likely	Non-Compliance Decision Matrix Category: Many NCs, little/not aware/not capable to comply
Inspector Name(s): Chris Parks (EAO), Stuart Abels (FLNRO), Justin Carlson (EAO)	
Audit Record(s): N/A	Total Non-Compliance(s):
Proponents Name: BC Hydro	
Proponents Contact(s): Tim JENNINGS	
Mailing Address: BC Hydro Transmission and Distribution, Major Projects 1100-1055 Dunsmuir St. Vancouver, BC V7X 1V5	
Phone No: 604-699-9020	Fax No:
Contact Email:	
Location Description: The Northwest Transmission Line Project is a 344 km Transmission Line (currently under construction), running between Terrace and Bob Quinn. The transmission line route generally parallels Highway 118 (the Nisga'a Highway), the Nass Forest Service Road, and Highway 37. Location lat and long below are for the Terrace Substation (southern terminus of the Project).	
Lat: 54°27'06.82 N	Long: 128°37'55.76 W
Sector: Energy	

Summary

MONITORING AND REPORTING REQUIREMENTS

Inspection Period:
From: 2012-11-13 **To:** 2012-08-16

Certificate or Act:
Certificate under the Environmental Assessment Act

Activity: On Site

Inspection Summary:

Inspectors from the Environmental Assessment Office (Chris PARKS, Compliance Officer, and Justin CARLSON, Compliance Specialist), and the Compliance and Enforcement Branch of the Ministry of Forests, Lands, and Natural Resource Operations (Stuart ABELS, Compliance and Enforcement Field Unit Supervisor) completed an inspection of the Northwest Transmission Line Project against Conditions of EAC# E11-01, issued for the NTL Project. The purpose of the inspection was to:

1. Follow up on incidents of non-compliance noted in previous inspections (see inspection reports dated 2012-05-08 and 2012-07-23, and EAO Non-Compliance Warning Letter issued to Tim JENNINGS of BC Hydro on June 18, 2012);

2. Verify the certificate holders response to those previously noted non-compliances; and

3. Further verify the certificate holders compliance with Conditions of EAC# E11-01.

Inspectors met with JENNINGS and other representatives from BC Hydro on November 13 in Terrace to discuss the inspection and previous incidents of non-compliance.

PARKS, ABELS, AND CARLSON inspected construction works between Terrace and Bob Quinn by truck, foot, and helicopter on November 13, 14, 15, and 16, 2012. Bart DEFRIETAS of Golder Associates and Kevin STANCZYK of BC Hydro attended the inspection, with the exception of the helicopter portion.

1. Inspectors noted that the certificate holder had substantially addressed incidents of non-compliance identified during previous inspections.

2. Inspectors noted that the certificate holder was in non-compliance with EAC conditions #44, 45, 47, 49, 53, and 67. See inspection details section.

3. Inspectors could not determine compliance with conditions #'s10 and 19 given snow conditions.

4. Inspectors completed a verbal debrief with DEFRIETAS and STANCZYK with respect to the projects non-compliance with EAC conditions #47 and 49.

5. A follow-up inspection is recommended for spring 2013.

Response:
Warning

Compliance Summary	In	Out	N/A	N/D
Automatically populated upon upload				

Inspection Details

Types of Compliance: **Construction**

Requirement Description:

Condition #7 Geotechnical Stability

To mitigate potential adverse effects of high groundwater levels encountered during road or foundation excavation, temporary sumps and pumps will be installed and used, or ditches or drains will be installed. Roads must be designed with suitable ditches, drains or granular filters to intercept and control both shallow groundwater seepage and surface runoff. Suitable foundation designs must be developed for the materials or groundwater levels likely to be encountered.

Findings:

The stability and condition of Access Road 306/1 has been improved since the last 2 inspections. The road has been narrowed and capped with competent material to increase stability, suitable ditch lines are evident on both sides of the road, and rock lined french drains have been placed to facilitate cross slope drainage. The road appears to have adequate sediment and erosion control mitigation measures in place, including erosion matting along the exposed soil of the road cut. See Appendix A: Figures 1-4. Snow cover made it difficult to see the road completely. Recommend follow up inspection at this location to confirm compliance.

Access Road 273/1A was just starting construction when we arrived. The road itself was not stable for vehicle traffic an was inspected on foot. The contractor on site was aware of the condition of the road and stated that he intended to have road capping material brought in to improve the road condition prior to the spring melt.

Compliance: In

Types of Compliance: **Construction**

Requirement Description:

Commitment #10 Geotechnical Stability

Should construction take place on active alluvial fans, design and construction practices must incorporate prescriptions outlined in MOFR's Land Management Handbook 57.

Findings:

Access Road 316/1 runs parallel to Revision Creek as identified in the inspection on 2012-07-23. Revision Creek falls on an alluvial fan as well as the ROW for the transmission line. The inflow of the creek is identified by flagging ribbon. Trees were cut and laid down on the alluvial fan; Golder Representatives stated that trees were fallen in a way so that they would not obstruct the waterway. They stated that trees would be removed after the spring snowmelt.

The 2012-07-23 inspection noted that tree falling into the stream channel of revision creek had caused or contributed to an avulsion of the stream channel at this location. Inspectors noted that the avulsion at at this location preceded the clearing work, however that the falling of trees into the braided channels contributed to the diversion of some channels subsequent to the avulsion.

Snow cover made it difficult to determine compliance. Photos depicted in Appendix A do show debris pushed against one of the trees recently cleared from the right-of-way that would indicate that the tree was felled into a waterway. Inspectors pulled snow away from the debris and confirmed that they were alluvial in nature. Recommend follow up inspection at this location in snow-free conditions to confirm compliance.

See Appendix A: Figure 5. See also Appendix C, page 30 for conditions when working in and around alluvial fans (Excerpt from MOFR Handbook 57). The work at Revision Creek appears to meet the requirements noted in the handbook, however this site should be reinspected under snow-free

conditions.

Compliance: Not Determined

Types of Compliance: **Construction**

Requirement Description:

Commitment #15 Fish and Aquatic Habitat

BC Hydro will avoid in-stream work, including construction of towers, in fish bearing watercourses.

Findings:

Snow cover prevented certain access roads from being inspected. Multiple stream crossings with heavy equipment were identified in all the previous inspection reports. Access Road 273/1A did have an excavator cross a stream, but the contractor stated that it will only do the one crossing until a bridge is constructed as per DFO operational statements.

Compliance: In

Types of Compliance: **Construction**

Requirement Description:

Commitment #17 Fish and Aquatic Habitat

Installation of transmission towers will not occur below the high water mark of any fish bearing watercourse except for the seasonally wetted area of the Snowbank Creek wetland complex on the west side of Highway 37, as agreed to during the environmental assessment.

Findings:

Tower foundation construction at Snowbank Creek was observed during the inspection. Two tower foundations were under construction. Tower foundations were being constructed by first building a rock pad out into the wetland from the Highway 37 causeway. A steel casing was vibrated into the ground, and the casing drilled out to allow cement placement. Cement was then injected into the casing. All material drilled from the casing was being removed from site and disposed of off-site. Mitigation measures in place included onsite environmental monitoring, pH monitoring to determine if cement was entering the wetland (would drive pH level up), and the use of the use of a steel casing to contain drilling process and cement injection.

Turbidity was visually noted under the ice in the wetland. An environmental representative from Cambria Gordon (EM firm) was asked about the turbidity levels and he could not provide a response. He stated that he was only testing for the Creek's pH levels. No other towers were observed being constructed within the high water mark of any fish bearing stream. DEFRIETAS stated that turbidity levels were naturally high in the wetland. See Appendix A: Figures 6-9.

Compliance: In

Types of Compliance: **Construction**

Requirement Description:

Commitment #19 Fish and Aquatic Habitat

For any new access road that requires a crossing of a fish-bearing watercourse, BC Hydro will install a clear span bridge that meets the requirements of the most recent version of the DFO Pacific Region Operational Statement for Clear Span Bridges unless otherwise advised by DFO.

Findings:

One bridge was observed on section 314-2A. The bridge appeared to be compliance with DFO Operational Statement as required by condition, however snow cover made it difficult to confirm. Recommend follow-up inspection under snow free conditions, see Appendix A: Figure 10. Section 273-1A was just getting ready to install a clear span bridge at the time of inspection.

Compliance: Not Determined

Types of Compliance: **Construction**

Requirement Description:

Commitment #32 Wildlife and Wildlife Habitat

Outside the period from June 15 to October 31, BC Hydro must not operate helicopters for construction of the Project within a 2 km line of sight from any mountain goat UWR along the Project route.

Findings:

No project helicopters were observed flying in within 2km of the mountain goat UWR at the time of inspection. DEFRIETAS stated that he is aware of this condition and reports project staff are made aware of the requirement when undertaking helicopter work.

Compliance: In

Types of Compliance: **Construction**

Requirement Description:

Commitment #44 Construction Environmental Management Plan

BCH will implement mitigations considered as per the Construction Environmental Management Plan, (CEMP), dated November 19, 2010.

Findings:

A number of mitigations identified in the CEMP are not being implemented as required by the condition. See non compliances below listed under commitments #'s 47, 49, and 53.

Non compliances with other portions of the Construction Environmental Management Plan were not identified at the time of inspection. See Appendix B for a copy of the CEMP that was drafted March 12, 2012.

Compliance: Out

Types of Compliance: **Construction**

Requirement Description:

Commitment #45 Construction Environmental Management Plan -

Prior to the commencement of construction activities, BC Hydro must implement a construction Environmental Management Plan (construction EMP), which will be developed as described in Chapter 11 of the Application and updated as necessary.

Findings:

Specific elements of the required CEMP are not being implemented. See findings for commitment #'s 47, 49, and 53. See Appendix B for a copy of the CEMP that was drafted March 12, 2012.

Compliance: Out

Types of Compliance: **Construction**

Requirement Description:

Commitment #47 Construction Environmental Management Plan - Air Quality and Dust Control Plan

Findings:

Large burn piles from transmission line were noted throughout the inspection. Prior to the inspection; Terrace was receiving complaints regarding the smoke from all of these large wood piles being burned close to town. We spoke with Hydro Contracting staff: Jim Dent Construction at Meziadin Junction regarding the proscriptions set forth in the Air Quality and Dust Control; to wit, burning conditions that mirror environmental regulations under the Open Burning Smoke Regulation. In order to burn, the

venting indices must read as "good" on the day of burning followed by "good" or "fair" on the following day. Numerous piles of burning debris were observed on this inspection throughout the 4 days. The indices on November 15, 2012 stated "poor" and "fair" followed by "good" the next day. This non-compliance was observed and indicated to the contracting staff available.

See Appendix A: Figures 11-13 and Appendix B for more details on the Air Quality and Dust Control Management Plan.

EAO will defer follow-up on this issue to FLNRO C&E as it is part of their normal regulatory mandate to enforce under the Open Burning Smoke Regulation. As of April; 18, 2013, FLNRO C+E has communicated the Open Burning Smoke Regulation requirements to BC Hydro and the contractors, and held information sessions specific to this issue.

Recommend follow-up inspection regarding this issue and forward to FLNRO C+E for follow up and enforcement if continued non-compliance noted.

Compliance: Out

Types of Compliance: **Construction**

Requirement Description:

Commitment #49 Construction Environmental Management Plan - Sediment and Erosion Control Plan

Findings:

Snow cover prevented a very thorough inspection regarding this commitment. Sediment and Erosion Control measures were an issue on the two previous inspections. Access Road 306/1 has been improved since the prior inspections erosion control measures in place including rock-lined french drains across the road surface, erosion control matting applied to the road cut, and proper ditches directing flow to culverts. Ditches appear to be rock armored, however snow cover made this difficult to confirm.

Inspectors noted a general lack of effective and erosion control measures throughout the project. This includes measures absent where erosion was occurring, incorrect placement of erosion control measures, incorrect installation of erosion control measures (ie silt fences not dug-n) and lack of maintenance of measures that were in-place.

Recommend a follow-up inspection during spring thaw conditions.

See Appendix A: Figures 14-17 and Appendix B regarding the Sediment and Erosion Control Management Plan contained within the CEMP.

Compliance: Out

Types of Compliance: **Construction**

Requirement Description:

Commitment #53 Construction Environmental Management Plan - Fish Habitat Protection and Mitigation

Findings:

Section 5.7 of the CEMP, Fish and Fish Habitat Protection and Mitigation includes requirements for the following:

Directional falling of trees away from a waterbody; Inspectors noted trees felled across streams throughout the inspection, including confirmed fish-bearing streams (ie Hoadley Creek, EMP Mapsheet Figure 21, confirmed fish-bearing, see Appendix A: Figure 18).

Installation of effective sediment and erosion control measures to minimize potential for siltation into waterbodies: See findings for Condition 49.

Compliance: Out

Types of Compliance: **Stages**

Requirement Description:

Commitment #66 Construction Environmental Management Plan

As described in Chapter 11 of the Application, construction contractors will be required to employ qualified environmental monitors to evaluate and report on compliance with the construction EMP, Environmental Monitoring Program, and EPPs.

Findings:

Identified as an issue regarding the training and qualifications of the Environmental Monitors on site; BC Hydro identified in their response sent in regards to the warning letter issued on June 18, 2012 stating that environmental monitors have been informed of their requirements and are now been overseen through representatives from Golder and Associates. We did see representation from Cambria Gordon while work was occurring on Snowbank Creek.

Due to the concerns raised on the previous two inspections; EAO will continue to monitor progress on this commitment. See Appendix D.

Compliance: In

Types of Compliance: **Construction**

Requirement Description:

Commitment #67 Construct Environmental Management Plan

BC Hydro must develop and implement an Environmental Monitoring Program as described in Chapter 12 of the Application.

Findings:

Under Chapter 12 of the Application: 12.2 Construction Environmental Monitoring states the following: The Environmental Monitoring Plan would be prepared before construction activities began and would include monitoring requirements for each proposed mitigation measure to allow adaptive management and to evaluate the success of mitigation. Monitoring components may include:
-Regular inspection of sediment and erosion control measures
-Regular inspection of slash pile burning and reporting of the ventilation index.
-Visual monitoring of water quality in local water bodies, especially during works near watercourses.
-Water quality monitoring upstream and downstream of all construction areas as required, including measurement of common parameters (e.g., pH, turbidity, total suspended solids).

See findings on Commitments 45, 47, 49, and 53 for details regarding non-compliance with this commitment. See Appendix D for more information regarding Chapter 12 of the Application.

Compliance: Out

ACTIONS REQUIRED BY PROPONENT(S) & ADDITIONAL COMMENTS:

INSPECTION CONDUCTED BY:

Signature	*Date Signed :*
Chris Parks, Environmental Assessment Compliance Officer	FINAL

ENCLOSURE(S) TO PROPONENT(S) & DESCRIPTION:

REGULATORY CONSIDERATIONS:

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