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Eagle Mountain - Woodfibre Gas Pipeline Project

BCER Waste Discharge Approval Report—BC Rail Site Sampling and Monitoring

**Report Period: Initial Report
October 20th to December 3rd, 2023**



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Appendix A: Point of Discharge from Water Treatment System Documentation

Appendix B: Receiving Environment Documentation

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Preamble

This report is the initial report for the British Columbia Energy Regulator (BCER) Waste Discharge Approval (BCER number AE 111824) for the FortisBC Eagle Mountain – Woodfibre Gas Pipeline (EGP) Project for the BC Rail site. This initial report covers the reporting period from October 20th to December 3rd, 2023 and includes the results of water quality monitoring and sampling of the receiving environment (upstream and downstream) in the Squamish River. During this timeframe no discharge into the receiving environment in the Squamish River occurred from the BC Rail site water treatment plant.

FortisBC has retained Triton Environmental Consultants Ltd. as the Qualified Professional to implement and oversee the monitoring and sampling program in the receiving environment. The data represented below, including laboratory reported exceedances, represent background conditions of the receiving environment, and are not related to EGP Project activities. The data collected and reported in this report represents background water quality conditions at the two receiving environment sampling sites as shown on the approved Waste Discharge Approval AE-111824.

Water Treatment Plant Update

Since the issuance of the Waste Discharge Approval (AE 111824) on September 29, 2023, FortisBC's tunnel contractor Frontier-Kemper Michels Joint Venture (FKM) has commenced setting up the water treatment plant (WTP) including the installing the plumbing, pumps & equipment, and treatment chemicals. The commissioning process of the water treatment plant (WTP) began on October 22, 2023 and is continuing. Water will be sampled to confirm that the batch from the WTP meets the British Columbia Approved and Working Water Quality Guidelines for Freshwater & Marine Aquatic Life requirements prior to discharge as outlined in the Waste Discharge Approval.

Introduction

The results provided in this document are submitted to BC Energy Regulator (BCER) by FortisBC as per the requirements listed in the Waste Discharge Approval AE-111824 Section 4.2:

The Approval Holder shall summarize the results of the discharge and receiving environment compliance sampling and monitoring program in a report that shall be submitted weekly over the term of this approval. The sampling and monitoring results shall be suitably tabulated and include comparison to the respective British Columbia Approved and Working Water Quality Guidelines for Freshwater & Marine Aquatic Life, as published by the Ministry of Environment & Climate Change Strategy. Any exceedance of regulatory guidelines shall be clearly highlighted, and any missed sampling events/missing date shall be identified with an explanation provided. Reporting frequency may be reduced upon a history of compliance and by written confirmation from the BCER. These reports shall be submitted to Waste.Management@bc-er.ca. A copy of the reports shall be provided to each First Nation consulted with regarding this subject approval, and also made publicly available on the FortisBC Eagle Mountain-Woodfibre Gas Pipeline Project | Talking Energy webpage.

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FortisBC requests that the BCER confirm the receipt of this submittal and confirm that the submission meets the requirements of reporting. Future reports will use this format unless otherwise directed by BCER.

Sampling Methodology

The monitoring and sampling has been carried out in accordance with the procedures described in the most recent edition of the “British Columbia Field Sampling Manual” using field equipment and lab samples to meet daily and real time requirements for the Waste Discharge Approval.

At the receiving environment, real time daily field readings of pH, temperature, NTU, electrical conductivity, DO, ORP and salinity are being taken using an AquaTROLL 600 datalogger upstream and downstream in the river. Visible sheen will be monitored with visual inspections during times of discharge or sampling. Real time and daily readings are being monitored at the same time with one piece of equipment, allowing all the daily readings to be real time.

At the point of discharge from the WTP, the parameters are being monitored using field equipment (YSI ProDSS) and sondes/real time meters make and models to be confirmed by the contractor. Table 1 and Table 2 below show how each parameter is being monitored.

Table 1. Monitoring Process at Point of Discharge from Water Treatment System

Permit Frequency	Parameters	Details
Daily	Visible Sheen	In field inspection
Daily (or per batch)	DO	Monitoring using YSI ProDSS
	ORP	Monitoring using YSI ProDSS
	Salinity	Monitoring using YSI ProDSS
Real Time (or per batch)	pH	Monitoring using YSI ProDSS
	Temperature	Monitoring using YSI ProDSS
	NTU	Monitoring using YSI ProDSS
	Electrical Conductivity	Monitoring using YSI ProDSS
Weekly (or per batch) Lab Samples	List prescribed in permit	No Changes, still lab samples

Table 2. Receiving Environment (upstream and downstream) Monitoring Process

Permit Frequency	Parameters	Details
Daily	Visible Sheen	In field inspection
Daily	DO	Monitoring using Sonde- AquaTROLL 600 datalogger
	ORP	Monitoring using Sonde- AquaTROLL 600 datalogger
	Salinity	Monitoring using Sonde- AquaTROLL 600 datalogger
Real Time	pH	Monitoring using Sonde- AquaTROLL 600 datalogger
	Temperature	Monitoring using Sonde- AquaTROLL 600 datalogger
	NTU	Monitoring using Sonde- AquaTROLL 600 datalogger
	Electrical Conductivity	Monitoring using Sonde- AquaTROLL 600 datalogger
Weekly Lab Samples	List prescribed in permit	No changes, still lab samples

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Receiving Environment equipment details: Sondes: Aqua-TROLL 600 made by In-Situ Inc. Sondes set up to log temperature, specific conductivity, salinity (in PSU), pH, ORP, DO (mg/L), and turbidity (NTU) at 10 minute intervals.

Point of Discharge from the water treatment system equipment details: YSI ProDSS with pH, conductivity, DO, ORP and turbidity probe that measure pH, temperature, NTU, electrical conductivity, ORP, DO and salinity

Summary

Activities

- The real time water quality monitoring equipment (sondes) were deployed into the receiving environment on October 20th, 2023.
- The real time water quality monitoring probe for DO and ORP were added on the receiving environment sondes on November 14th, 2023.
 - Adding real time probes for daily monitoring of DO and ORP will allow for a more consistent and accurate data set. Daily monitoring of DO and ORP will be completed by reviewing data from the probes on a daily basis during discharges.
- 5 lab samples of the receiving environment have been collected as detailed in Table 3 and 4, starting October 30th, 2023 to November 27th, 2023.
- No discharges to the receiving environment have occurred from the water treatment plant within the reporting period (October 20th to December 3rd, 2023). The water treatment plan is currently being commissioned.
- On November 27th and November 28th the downstream and upstream solar panels and telemetry units were vandalized. Currently, sondes with dataloggers are still operational in the receiving environment, although there is no real time data transmission. Data is collected manually from the sondes on a weekly basis until the telemetry units are re-connected.

Point of Discharge from Water Treatment System Summary

N/A - No discharge occurred during the reporting period.

Exceedance details

N/A - No discharge occurred during the reporting period.

Receiving Environment Summary

The receiving environment is being monitored as a permit requirement, currently, there are no discharges from the WTP to the receiving environment, so all recorded exceedances in the laboratory report are not project related and existing background quality.

Table 3: Upstream Monitoring Information

Date of Lab Sample	Real Time Monitored	Field Samples Taken	Results
2023-11-27	Yes	Yes-real time	Full set of lab sample results, photo and documentation are provided in Appendix B
2023-11-20	Yes	Yes-real time	
2023-11-14	Yes	Yes-real time	
2023-11-06	Yes	No	
2023-10-30	Yes	No	

Table 4: Downstream Monitoring Information

Date of Lab Sample	Real Time Monitored	Field Samples Taken	Results
2023-11-27	Yes	Yes-real time	Full set of lab sample results, photo and documentation are provided in Appendix B
2023-11-20	Yes	Yes-real time	
2023-11-14	Yes	Yes-real time	
2023-11-06	Yes	No	
2023-10-30	Yes	No	

* Real time DO and ORP probes were installed on 2023-11-14, there have been no discharges into the receiving environment.

Receiving Environment Monitoring Details

- Daily visible sheen checks have not been conducted in the receiving environment as there have not been any discharges from the WTP.
- All receiving environment lab results are in Appendix B.
- Recorded exceedances in the laboratory and field samples collected from the receiving environment (upstream and downstream) are indicative of the existing background water quality in the Squamish River, and are not related to the EGP Project activities.