

British Columbia Energy Regulator

6534 100<sup>th</sup> Avenue, Fort St. John, B.C.  
V1J 8C5

**APPROVAL**  
**AE 111824**

*Under Section 15 of the Environmental Management Act*

**FortisBC Energy Inc.**  
**16705 Fraser Highway**  
**Surrey, B.C**  
**V4N 0E8**

is authorized to discharge effluent to the environment from the **Eagle Mountain Pipeline Tunnel BC Rail Site** construction project subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

**1. DEFINITIONS**

For the purpose of this approval, the following definitions apply:

- 1.1. **Act** means the *Environmental Management Act*.
- 1.2. **Approval Holder** means FortisBC Energy Inc.
- 1.3. **BCER** means the British Columbia Energy Regulator
- 1.4. **Discharge** means the total mass of a solid, liquid or gaseous material introduced into the environment.
- 1.5. **Manager** means a BCER employee authorized to exercise the powers of the BCER under Section 15 of the *Environmental Management Act*;
- 1.6. **Qualified Professional** a person who has training, experience and expertise in a discipline relevant to the area of practice set out in the condition, and who is registered with the appropriate professional organization in British Columbia, is acting under that organization's code of ethics and is subject to disciplinary action by that organization.



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- 1.7. ***Operational Phase Change*** – refers to the transitions between distinct stages of tunnel construction that could result in quantifiable changes to the effluent quality (i.e. site and portal preparation, tunneling process, pipeline hydrostatic testing, and tunnel backfilling).

## 2. **AUTHORIZED DISCHARGES**

- 2.1 This subsection applies to the discharge of effluent from the **BC RAIL SITE**. The site reference number for this discharge is E332331.
- 2.1.1. The location of the source of the discharge is described as the BC Rail Site, PID 013-336-282, District Lot 4262. The source of the discharge includes contact water from precipitation, groundwater and water generated during the construction process including drilling, grouting and tunnel boring.
- 2.1.2. The authorized point of discharge into the existing BC Rail Properties Ltd. storm sewer is described as 49.7236 N, -123.1597W, referenced in this approval as the point of compliance.
- 2.1.3. The authorized point of discharge into the receiving environment is described as from the existing BC Rail Properties Ltd. storm sewer outfall located at 49.7261 N, -123.1646 W.
- 2.1.4. During heavy rainfall or melt events, the discharge input shall not cause the storm system to be overwhelmed, discharge rates shall be adjusted accordingly.
- 2.1.5. The maximum authorized rate of discharge is 515 m<sup>3</sup>/day.
- 2.1.6. The authorized discharge period is continuous. This approval is valid for 15 months from the date of issuance.
- 2.1.7. The Approval Holder shall measure and record the daily volumetric rate of discharge.
- 2.1.8. The authorized works include a wastewater treatment system, tanks, pumps, hoses, energy dissipating equipment, sediment controls and ancillary equipment.
- 2.1.9. The effluent discharged from the wastewater treatment system at the point of compliance, shall not exceed the applicable British Columbia Approved and Working Water Quality Guidelines for Freshwater & Marine Aquatic Life, as published by the Ministry of Environment & Climate Change Strategy. Additionally, the effluent shall be free of other contaminants in



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concentrations that may have an adverse effect on the receiving environment.

2.1.10. The effluent shall not be discharged in a manner or quantity that impairs the proper ecological function or otherwise causes excessive erosion of the receiving environment into which the discharge of water is conveyed.

### 3.0 **GENERAL REQUIREMENTS**

#### 3.1 **Maintenance of Works and Emergency Procedures**

The Approval Holder shall inspect the authorized works regularly and maintain them in good working order. Records of inspection shall be maintained and made available to BCER upon request.

In the event of an emergency or condition beyond the control of the Approval Holder, which prevents continuing operation of the authorized works, the Approval Holder shall immediately notify the Manager and take appropriate remedial action.

Instances of non-compliance with any condition of this approval shall be self-disclosed upon discovery, as outlined within Chapter 3 of the BCER Compliance & Enforcement Manual; [Waste.Management@bc-er.ca](mailto:Waste.Management@bc-er.ca) shall also be informed of the self-disclosure.

For spills which meet the Spill Reporting Regulation reporting criteria, a report shall be made immediately to the Provincial Emergency Program telephone 1-800-663-3456.

#### 3.2 **Bypasses**

The discharge of contaminants, which have bypassed the authorized works, is prohibited unless the consent of the Manager is obtained and confirmed in writing.

#### 3.3 **Process Modifications**

The Approval Holder shall notify the Manager prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

#### 3.4 **Sampling Procedures**

The Approval Holder must carry out sampling in accordance with the procedures described in the most recent edition of the “*British Columbia Field Sampling Manual*”. Alternative procedures shall be authorized by the Manager.



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### 3.5 Analytical Procedures

The Approval Holder must carry out analyses in accordance with the procedures described in the latest edition of the “*British Columbia Laboratory Manual*”. Alternative procedures shall be authorized by the Manager.

### 3.6 Post Discharge

The Approval Holder shall ensure that all temporary equipment associated with the discharge is removed from the work area in a manner as to minimize environmental impact.

## 4 SAMPLING, MONITORING AND REPORTING REQUIREMENTS

The Manager may alter the monitoring and reporting program as needed. The need for changes to the program shall be based upon the results submitted as well as any other information obtained by the BCER or Environmental Protection staff in connection with the discharges.

### 4.1 Discharge and Compliance Monitoring

4.1.1 The Approval Holder shall maintain information, analytical data and flow measurements as described in Section 2 for records and inspection by BCER.

4.1.2 The Approval Holder shall retain a qualified professional to implement & oversee the monitoring and sampling program. The monitoring and sampling program shall demonstrate the discharge quality meets the discharge quality defined in Section 2 and that increased flows to the receiving environment do not adversely impact water quality or the receiving environment.

**Table 1. B.C Rail Site Sampling and Monitoring Program**

Description	Sampling Location*	Sampling Frequency*	Parameters*
Batch Testing Prior to Discharge	At the point of discharge from the water treatment system	Once to confirm compliance with each operational phase change	<ul style="list-style-type: none"> <li>In situ field parameters including turbidity, dissolved oxygen (mg/L), pH, temperature (°C), electrical conductivity (µS/cm), visible sheen (visual), oxidation reduction potential (ORP), salinity (ppt)</li> <li>Routine parameters including pH, salinity,</li> </ul>



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			<div>hardness, alkalinity, electrical conductivity (<math>\mu\text{S}/\text{cm}</math>), solids total dissolved (TDS), solids total suspended (TSS), turbidity, ORP</div> <div><ul style="list-style-type: none"><li>Major Ions including Br, Ca, Cl, F, Mg, K, Na, <math>\text{SO}_4</math>, sulphide (as unionized <math>\text{H}_2\text{S}</math>)</li><li>Nutrients including <math>\text{NH}_3</math>, <math>\text{NH}_4</math>, <math>\text{NO}_2</math>, <math>\text{NO}_3</math>, total nitrogen, total phosphorous,</li><li>Dissolved and Total Contaminated Sites Regulation (CSR) metals,</li><li>Glycols including ethylene glycol, propylene glycol, 1, 2-</li><li>Organics including <math>\text{EPH}_{(10-19)}</math>, Polycyclic Aromatic Hydrocarbons acenaphthene, acridine, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene</li><li>Organics including Volatile Organic Compounds, VPHs, benzene, ethylbenzene (<math>\text{C}_8\text{H}_{10}</math>), monochlorobenzene, styrene, toluene, xylene (<math>\text{C}_6\text{H}_4(\text{CH}_3)_2</math>)</li><li>Organics - Others phenols, total &amp; dissolved organic carbon</li></ul></div>	
Active Operations	Discharge	At the point of discharge from the water treatment system	Real Time	pH, temperature, NTU, electrical conductivity
			Daily	Visible sheen, DO, ORP, salinity
			Daily for one week following an operational	<ul style="list-style-type: none"><li>Routine parameters</li></ul>



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		phase change.	<ul style="list-style-type: none"> <li>• Major Ions</li> <li>• Nutrients</li> <li>• Dissolved and Total CSR metals</li> <li>• Glycols including ethylene glycol, propylene glycol, 1, 2-</li> <li>• Organics including EPH<sub>(10-19)</sub>, Polycyclic Aromatic Hydrocarbons acenaphthene, acridine, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene</li> <li>• Organics including Volatile Organic Compounds VPHs, benzene, ethylbenzene (C<sub>8</sub>H<sub>10</sub>), monochlorobenzene, styrene, toluene, xylene (C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)<sub>2</sub>)</li> <li>• Organics – Others Phenols, total &amp; dissolved organic carbon</li> </ul>
		Weekly thereafter	
		Every two weeks	Toxicity Testing 96-hr LC50 Rainbow Trout
	Receiving Environment Upstream of Discharge (49.726866N, -123.163912W)	Real Time	pH, temperature, NTU, electrical conductivity
		Daily	Visible sheen, DO, ORP, salinity
		Weekly	<ul style="list-style-type: none"> <li>• Routine parameters</li> </ul>
		As necessary based on the discharge & downstream data	<ul style="list-style-type: none"> <li>• Routine parameters</li> <li>• Major Ions</li> <li>• Nutrients</li> <li>• Dissolved and Total CSR metals</li> </ul>
	Receiving Environment Downstream of Discharge (49.725282N, -123.165175W)	Real Time	pH, temperature, NTU, electrical conductivity
		Daily	Visible sheen, DO, ORP, salinity
		Weekly	<ul style="list-style-type: none"> <li>• Routine parameters</li> <li>• Major Ions</li> <li>• Nutrients</li> <li>• Dissolved and Total CSR metals</li> </ul>



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\*The sampling frequency, parameters and locations may be revised or reduced upon a history of compliance and stabilization of parameters. Sampling frequency, parameters and locations may be revised or reduced upon written confirmation from the BCER. Upon monitored/measured exceedance the sampling frequency for the exceeding parameter(s) shall revert to the most stringent.

- 4.1.3 The Approval Holder shall provide notification to the BCER, [Waste.Management@bc-er.ca](mailto:Waste.Management@bc-er.ca), at the start of the commissioning phase of the water treatment plant. Process flow as-builts of the water treatment plant shall be submitted to the BCER at the same email address.
- 4.1.4 Discharge to the receiving environment shall be halted immediately upon observed exceedance of any parameter at the point of discharge from the water treatment system.
- 4.1.5 The Approval Holder must track the status of the daily discharge, including discharge rates, monitoring logs, field and lab sample results, field notes, field meter calibration logs, reports & photos. Daily records shall be compiled.
- 4.1.6 If, in the opinion of the qualified professional responsible for the monitoring program, the discharge is or is likely causing adverse effects to the environment, the discharge shall be halted immediately.
- 4.1.7 If, in the opinion of the qualified professional responsible for the monitoring program, the discharge is or is likely causing adverse effect to the environment, the Manager shall be notified immediately at (250) 883-4958.
- 4.1.8 Photographs of the authorized works and authorized discharge shall be taken prior to, throughout and after the discharge. These shall be submitted upon request from the BCER and included as part of the weekly reporting.

## 4.2 Reporting

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](mailto: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



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available on the [FortisBC Eagle Mountain-Woodfibre Gas Pipeline Project | Talking Energy](#) webpage.

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