



November 09, 2018

Coastal GasLink Pipeline Ltd.
450 - 1st Street SW
Calgary AB T2P 5H1

Attention: Coastal GasLink Pipeline Ltd.

RE: Construction of an Aggregate Quarry – Location a-083-E, 93-K-02

Date of Issuance: November 09, 2018
Effective Date: November 09, 2018
Application Determination Number: AD 100103559
Mine Permit Number: G-11-155
Mine Number:1642044
Approved Disturbance Footprint: 3.6911 ha

ACTIVITIES APPROVED

Associated Oil & Gas Activity No.: 00172890 and 00172891	Type: Aggregate/Borrow Pit
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GENERAL AUTHORIZATIONS and CONDITIONS

AUTHORIZATIONS

Land Act

1. The BC Oil and Gas Commission (the Commission), under section 39 of the *Land Act*, hereby authorizes Coastal GasLink Pipeline Ltd. (the “permit holder”) to construct and operate a related activity as detailed in, Activities Approved table above and the Activity Details table below, when applicable, for the purposes of carrying out oil and gas activities as defined in the *Oil and Gas Activities Act* (OGAA); subject to the conditions set out herein.
2. The authorizations granted under this permit are limited to the area identified in the spatial data submitted to the Commission in the permit application as identified and dated above; herein after referred to as the ‘activity area’.

Forest Act

1. The Commission, pursuant to section 47.4 of the *Forest Act*, hereby authorizes the removal of Crown timber from the activity area under the cutting permits associated with the Master Licence(s) as follows:

Master Licence to Cut No.: M02615

Cutting Permit No.: 2

Timber Mark No.: MTC693

Total New Cut: 3.69 ha

Forest District: Stuart Nechako Natural Resource District

Region: Interior

2. The cutting permits are deemed spent upon the submission of the post-construction plan or upon either the cancellation or expiry of the activities authorized under the permit.

CONDITIONS

Notification:

3. Any notifications required to be sent to the Chief Inspector of Mines or Inspector of Mines under Mines Permit # G-11-155 for Mine No: 1642044 must also be sent to the Commission at OGC.ExternalNotifications@bcogc.ca.
4. At least 5 (five) working days prior to the commencement of construction, the Permit Holder must provide a notice of works to any First Nation(s) who may have Aboriginal Interests identified, as per the BC First Nations Consultative Areas Database, within the area in which the works are to occur.
5. Within 60 days of the completion of construction activities under this permit, the Permit Holder must submit to the Commission a post-construction plan as a shapefile and PDF plan accurately identifying the location of the total area actually disturbed under this permit. The shapefile and plan must be submitted via eSubmission.

Environmental:

6. The permit holder must implement the activities specified in the Mine Plan dated: January 17, 2018 and as indicated in Mine Permit # G-11-155 during the operation, closure and reclamation of the mine as applicable.

Clearing

7. The Permit Holder is permitted to fell any trees located on Crown land within 1.5 tree lengths of the activity area that are considered to be a safety hazard according to Workers Compensation Act regulations and must be felled in order to eliminate the hazard. Trees or portions of these trees that can be accessed from the activity area without causing damage to standing timber may be harvested.
8. The holder of the cutting permit must pay to the government, stumpage and any waste billing determined in accordance with the terms of this authorization.
9. All harvested Crown Timber must be marked with the cutting permit's associated Timber Mark.
10. Stumpage for Cutting Permit No. will be calculated in accordance with the Interior Appraisal Manual as amended from time to time.
11. Any waste assessments applied under the Master Licence to Cut are subject to the merchantability specifications and monetary waste billing requirements in the Provincial Logging Residue and Waste Manual specific to the region associated with the Cutting Permit authorization.

Archaeology:

12. An AIA report must be submitted to the Commission as soon as practicable.
13. If artifacts, materials or things protected under section 13(2) of the Heritage Conservation Act are noted during any phase of ground-disturbing activities, the Permit holder must:
 - a) immediately cease all work in the vicinity of the artifacts, features, materials or things, and
 - b) as soon as practicable, contact the Commission

unless the Permit holder holds a Permit under section 12 of the Heritage Conservation Act in respect of that artifact, material or thing.

ACTIVITY SPECIFIC DETAILS PERMISSIONS, and CONDITIONS

ASSOCIATED OIL AND GAS ACTIVITY

ACTIVITY DETAILS

AOGA Number: 00172890 & 00172891	AOGA Type: Aggregate/Borrow Pit
Tenure No.: 9000430 Document No.: 957634	

ADVISORY GUIDANCE

1. Unless a condition or its context suggests otherwise, terms used in this approval have the same meaning as the Environmental Protection and Management Regulation under the *Oil and Gas Activities Act*.
2. As per the Health, Safety and Reclamation Code for Mines in British Columbia, all Mines plans, including programs for reclamation and closure, must be updated at a minimum of 5 years upon commencement of activity.
3. Instructions for submitting notice of construction start, as required by regulation, can be found in the Oil and Gas Activity Operations Manual on the Commission's website.
4. The permit holder should be aware that there may be First Nation's traditional, cultural, or spiritual activities occurring concurrently with site construction and operation activities, as well as known areas of current use or cultural resources that are within close proximity to the activity area. All reasonable efforts should be made to minimize interference with those activities while carrying out the activities authorized herein.



Mahesh Khadka
Review Approval Resource Officer

pc: Commission No.: AD 100103559
Worksafe BC
Ministry of Forests District Office – Stuart Nechako Natural Resource District
First Nations: Carrier Sekani Tribal Council, Nadleh Whut'en First Nation, Stelat'en First Nation,
Yekooche First Nation (Area B).
OGC Compliance & Enforcement

**PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES**

**SAND AND GRAVEL PERMIT
APPROVING MINE PLAN AND RECLAMATION PROGRAM**
(Issued pursuant to Section 10 of the **Mines Act** R.S.B.C. 1996, C.293)

Permit Number: **G-11-155**

Mine Number: **1642044**
Approval Number: **18-1642044-1109**

Permittee: **Coastal GasLink Pipeline Ltd.**
450 - 1st Street SW
Calgary AB T2P 5H1

Business Phone: **(403) 920 7061**

For work located at the following property:

a-083-E, 93-K-2

This authorization approves mining activities as described in Mine Plan (dated January 17, 2018 and submitted with the application) beginning November 09, 2018 and ending prior to January 01, 2024.

This approval and permit is subject to the appended conditions.

Date of Issuance: Friday, November 09, 2018



Mahesh Khadka
Review Approval Resource Officer
BC Oil and Gas Commission

PREAMBLE

Notice of intention to commence work on a sand and gravel pit, including a plan of the proposed work system and a program for the protection and reclamation of the surface of the land and watercourses affected by the Mine Plan dated January 17, 2018 and submitted with the application.

This permit contains the requirements of the Ministry of Energy and Mines for reclamation. It is also compatible, to the extent possible, with the requirements of other provincial ministries for reclamation issues. Nothing in this permit, however, limits the authority of other provincial ministries to set other conditions, or to act independently, under their respective permits and legislation.

CONDITIONS

The Chief Inspector of Mines (Chief Inspector) hereby approves the work plan and the program for protection and reclamation of the land surface and watercourses subject to compliance with the following conditions:

1. Reclamation Security

The requirement for reclamation security as provided for in Part 10(4) of the *Mines Act* is waived, and in its place securities provided to the Oil and Gas Commission by the Permittee will be relied upon for the proper performance of the approved program, including completion of reclamation of the mine site and all the conditions of this permit, in a manner satisfactory to the Chief Inspector and in accordance with the standards described in section 10.7 of the Health, Safety and Reclamation Code for Mines in British Columbia.

2. Land Use

The surface of the land must be reclaimed to the following land use: **Wildlife**

3. Productivity

The level of land productivity to be achieved on reclaimed areas must not be less than existed prior to mining on an average property basis unless the Permittee can provide evidence which demonstrates, to the satisfaction of the Chief Inspector, the impracticality of doing so.

4. Revegetation

Land must be re-vegetated to a self-sustaining state using appropriate plant species.

5. Use of Suitable Growth Medium

- a. On all lands to be revegetated, the growth medium must satisfy land use, productivity, and water quality objectives. Topsoil and overburden (to rooting depth) must be removed from operational areas prior to any disturbance of the land and stockpiled separately on the property for use in reclamation programs, unless the Permittee can provide evidence which demonstrates, to the satisfaction of the Chief Inspector, that reclamation objectives can otherwise be achieved.
- b. No topsoil must be removed from the property without the specific written permission of the Inspector of Mines.

6. Buffer Zones and Berms

Buffer zones and/or berms must be established between the mine and the property boundary unless exempted in writing by the Inspector of Mines.

7. Treatment of Structures and Equipment

Prior to abandonment, and unless the Chief Inspector has made a ruling otherwise, such as heritage project consideration or industrial use,

- (a) all machinery, equipment and building superstructures must be removed,
- (b) concrete foundations must be covered and revegetated unless, because of demonstrated impracticality, they have been exempted by the Inspector, and
- (c) all scrap material must be disposed of in a manner acceptable to the Inspector.

8. Watercourses

- a. Impacts to watercourses are not authorized under this approval
- b. Water which flows from disturbed areas must be collected and diverted into settling ponds.

9. Roads

- (a) All roads must be reclaimed in accordance with land use objectives unless permanent access is required to be maintained.
- (b) Individual roads will be exempted from the requirement for total reclamation under condition 9 (a) if either:
 - i. the Permittee can demonstrate that an agency of the Crown has explicitly accepted responsibility for the operation, maintenance and ultimate deactivation and abandonment of the road, or
 - ii. the Permittee can demonstrate that another private party has explicitly agreed to accept responsibility for the operation, maintenance and ultimate deactivation and abandonment of the road and has, in this regard, agreed to comply with all the terms and conditions, including bonding provisions, of this reclamation permit, and to comply with all other relevant provincial government (and federal government) regulatory requirements.

10. Disposal of Fuels and Toxic Chemicals

Fuels, chemicals or reagents which cannot be returned to the manufacturer/supplier are to be disposed of in compliance with municipal, regional, provincial and federal statutes.

11. Temporary Shutdown

If this sand and gravel pit ceases operation for a period longer than one year the Permittee must either continue to carry out the conditions of the permit or apply for an amendment setting out a revised program for approval by the Chief Inspector.

12. Safety Provisions

All safety and other provisions of the **Mines Act** must be complied with to the satisfaction of the Chief Inspector.

13. Monitoring

The Permittee must undertake monitoring programs, as required by the Inspector of Mines, to demonstrate that reclamation objectives are being achieved.

14. Alterations to the Program

Substantial changes to the program must be submitted to the Inspector of Mines for approval.

15. Notice of Closure

Pursuant to Part 10.6.1 of the Health, Safety and Reclamation Code for Mines in British Columbia, a Notice of Completion of Work must be filed with the Inspector of Mines not less than seven days prior to cessation of work.

16. Annual Report

Annual reports must be submitted in a form and containing the information as and if required by the Inspector of Mines.

17. Site Stability

- a. The inspector must be advised in writing at the earliest opportunity of any unforeseen conditions that could adversely affect the extraction of materials, site stability, erosion control or the reclamation of the site.
- b. The stability of the slopes must be maintained at all times and erosion must be controlled at all times.
- c. The discovery of any significant subsurface flows of water, seeps, substantial amounts of fine textured, soils, silts and clays, must be reported to the inspector as soon as possible and work must cease until the inspector advises otherwise.

18. Training and Orientation

The manager must ensure that all workers are adequately trained to do their job or are working under the guidance of someone who has competency both in the job and in giving instruction, and ensure that all employees receive thorough orientation and basic instruction in safe work practices.

The manager must maintain a record of all training workers and supervisors have received, and make this record available to an inspector upon request.

19. Hazards and Confined Spaces

The Manager must ensure hazardous areas and confined spaces on the mine site are identified and documented in a formal report. Confined spaces must be clearly marked near the entrances to the confined space. Upon completion of the report, the report must be provided to all emergency responders (police, fire, ambulance, etc.) that may potentially enter the mine site.

20. Guarding of Equipment:

Unless situated so as to prevent a person coming into accidental contact with it, every drive belt, chain, rope or pulley, sprocket, flywheel, geared wheel and every opening through which any belt, pulley or

wheel operates, and every bolt, key, set screw and every part of any wheel or other revolving part that projects unevenly from the surface must be effectively enclosed, covered, or guarded.

21. Emergency Response Plan:

An emergency response plan must be developed and implemented prior to commencement of exploration activities. In addition to addressing daily operational issues, the plan must specifically address emergency evacuation of personnel due to injury and forest fire hazard. All persons on the mine site must be familiar with the ERP. The plan must be available on site for review.

22. Access Control

The Manager must ensure, pursuant to section 1.3 of the Health, Safety and Reclamation Code for Mines in British Columbia, other than an inspector, only persons authorized by the manager must enter or be permitted to enter the mine site. This must be accomplished through the use of locked gates or other suitable means. In addition, notice to this effect must be posted at all road entrances to the mine.

23. Environmental Protection

- a. The Permittee must ensure an adequate erosion and sediment control plan is developed and implemented by a qualified person prior to commencement of approved activities. This plan must be updated by a qualified person, consistent with mining operations, though out the life of the mine. This plan will be made available to an Inspector upon request.
- b. Silt laden water must be suitably contained on the mine site and not be allowed access to any watercourse or stream.
- c. Dust originating from the mine site must be controlled at the source to the satisfaction of the regional Inspector. Dust must not be allowed to impact adjacent private properties.
- d. All roads must be appropriately constructed and top dressed such that dust is controlled. A sprinkler system or water truck must be utilized to ensure dust control.
- e. Excessive noise must be controlled at the source. Adequate mufflers must be utilized on equipment to eliminate excessive noise.
- f. All activities on the mine site must be designed and conducted such that impacts to wildlife are eliminated or minimized.

24. Authorizations from Other Agencies:

The Permittee is responsible for obtaining all permits and authorizations as required from other government agencies and complying with terms and conditions as set out by those agencies.

25. Compliance:

All activities on the mine site must comply with terms and conditions listed in:

- a. the **Mines Act**,
- b. the *Health, Safety and Reclamation Code for Mines* in British Columbia, and
- c. the *Metal Leaching and Acid Rock Drainage Guidelines for Mines in British Columbia*

26. Fuels and Lubricants

Fuels and Lubricants, if stored on the mine site, must conform to the requirements of the Field Guide to Fuel Handling, Transportation, and Storage.

The Permittee must develop and implement a hydrocarbon management plan that deals with fueling, operational servicing, spill prevention and clean-up for fuels and lubricants stored on or off the mine site. The plan must account for the following:

- a. Fuel and lubricants must be delivered to site as needed to re-supply and oil tanks on mobile and fixed equipment.
- b. Impermeable, oil absorbent matting must be used when refueling and servicing equipment.
- c. While refueling the operator must be in control of the refueling nozzle at all times.
- d. If any Petroleum, hydrocarbon or other product (no matter how small) is spilled the contaminated soil/gravels must be forthwith collected and removed for appropriate disposal.
- e. Fuel or oil leaks on equipment must be effectively repaired as soon as they are discovered or the equipment must be removed from the site and not operated until repairs have been made.
- f. An emergency spill containment and clean up kit must be maintained at the site while it is in operation. The kit must have the capacity to contain and clean up 100% of a spill from a failure of the largest volume of a fuel or lubricant tank or system plus 10%

27. Chance Find Plan

The Manager must develop and implement a suitable Archaeological Chance Find Procedure (CFP). The Manager must ensure all workers on the site are aware of and understand the CFP and adhere to the procedure.

28. Property Boundaries

A minimum of 5 meters (horizontal) buffer of undisturbed land must be maintained between property boundaries pursuant to part 10.5.8 of the Health, Safety and Reclamation Code for Mines in British Columbia.

29. Groundwater Table

The manager must ensure sand and gravel is not excavated below a depth 1.0 metre above the high ground water table. A minimum of 1.0 metre of sand and gravel must be maintained above the high ground water table.

30. Crushing Activities

The manager must ensure a seven day notification is provided to the Regional Inspector of Mines prior to initiating any crushing activities on the mine site.

31. Reclamation

- a. The Permittee must salvage and stockpile all available topsoil, overburden, and organic material including large woody debris in the disturbance footprint for use in reclamation.
- b. The Permittee must protect stockpiles from erosion, degradation, and contamination through re-vegetation and/or other practices.

- c. The Permittee must ensure that stockpiles are clearly marked to ensure that they are protected during construction and mine operations.
- d. Stripped and stockpiled soil suitable for use in reclamation must not be used as fill.
- e. Progressive reclamation must be conducted whenever practicable. Reclamation activities must include:
 - i. Re-contouring of disturbed areas to achieve surfaces to pre- disturbance shapes.
 - ii. Compact surfaces must be de-compacted to allow water infiltration and achieve self-staining vegetation.
 - iii. Soil Material salvages prior to the construction of the site must be replaced and must:
 - 1. be rough and loose with abundant microsites to facilitated the lodging and germination of seeds;
 - 2. be keyed into the under laying materials such that they do not slump off;
 - 3. incorporate roots, stumps and other woody debris to reduce erosion and create greater biological diversity; and
 - 4. be re-vegetated promptly.

32. Receiving Foreign Materials

The Manager must not allow any foreign materials to be accepted or stored on the mine site including but not limited to garbage, refuse, concrete, asphalt, other soils unless authorized in writing by the regional Inspector.

33. Invasive Plants

The Permittee must prevent introduction of invasive plants to the disturbance footprint, including topsoil stockpiles, and control invasive plants that do establish on the site, including via monitoring to identify establishment of invasive species and reporting of outbreaks.