



March 06, 2019

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

Attention: Coastal GasLink Pipeline Ltd.

RE: Construction of an Aggregate Quarry

Date of Issuance: March 06, 2019
Effective Date: March 06, 2019
Application Determination Number: 100106967
Mine Permit Number: G-13-064
Mine Number: 1642052
Approved Disturbance Footprint: 4.97 ha

ACTIVITIES APPROVED

Associated Oil & Gas Activity No.: 00192031	Type: Aggregate/Borrow Pit
Associated Oil & Gas Activity No.: 00192032	Type: Access

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’.
3. The Commission, pursuant to section 39 of the *Land Act*, hereby authorizes the occupation and use of any Crown land located within the activity area.
 - a) A licence authorized under section 39 of the *Land Act* for the Crown land portion of this application will follow. The Permit Holder is subject to the conditions contained in the Licence.

- b) The authorization to occupy and use Crown land under the Licence expires two years from the date of issuance, unless the Commission has received notice of construction start, or this permit is otherwise extended, suspended, cancelled, surrendered or declared spent.
- c) The authorization to occupy and use Crown land does not entitle the Permit Holder to exclusive possession of the activity area.
- d) The total disturbance within the activity area must not exceed the total approved disturbance footprint as referenced above.

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.: M02617

Cutting Permit No.: 13

Timber Mark No.: MTC738

Total New Cut: 4.96 ha

Forest District: Coast Mountains Natural Resource District

Region: Coastal

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

4. Any notifications required to be sent to the Chief Inspector of Mines or Inspector of Mines under Mine No: 1642052 must also be sent to the Commission at OGC.ExternalNotifications@bcogc.ca.
5. 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.
6. 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

7. The permit holder must implement the activities specified in the Mine Plan dated: November 28, 2018 and as indicated in Mine No.:1642052 during the operation, closure and reclamation of the mine as applicable.
8. Except with leave of the Commission, the permit holder must not undertake clearing or significant maintenance activities within 200 metres of any active grizzly bear or black bear den between December 1 and April 30.

Clearing

9. 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.
10. 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.

11. All harvested Crown Timber must be marked with the cutting permit's associated Timber Mark.
12. Stumpage for Cutting Permit No. M02617 (Master License to Cut) will be calculated in accordance with the Interior Appraisal Manual as amended from time to time.
13. 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

14. An AIA report must be submitted to the Commission as soon as practicable.
15. If artifacts, features, materials or things protected under section 13(2) of the Heritage Conservation Act are identified the permit holder must, unless the permit holder holds a permit under section 12 of the Heritage Conservation Act issued by the Commission in respect of that artifact, feature, material or thing:
 - a) immediately cease all work in the vicinity of the artifacts, features, materials or things, and
 - b) immediately notify the Commission and the Archaeology Branch of the Ministry of Forests, Lands and Natural Resource Operations and Rural Development
 - c) refrain from resuming work in the vicinity of the artifacts, features, materials or things except in accordance with an appropriate mitigation plan that has been prepared in accordance with the Heritage Conservation Act and approved by the Archaeology Branch of the Ministry of Forests, Lands and Natural Resource Operations and Rural Development.

ACTIVITY SPECIFIC DETAILS PERMISSIONS, and CONDITIONS

ASSOCIATED OIL AND GAS ACTIVITY

ACTIVITY DETAILS

AOGA Number: 00192031	AOGA Type: Aggregate/Borrow Pit
AOGA Number: 00192032	AOGA Type: Access
Tenure No.: 9000477 Document No.: 957818	

All permissions for this activity are subject to the following conditions:

Associated Oil and Gas Activity Conditions

16. Aggregate operations associated with authorization are considered a mining activity under the Mines Act. A Mines Act permit issued by the Ministry of Energy and Mines prior to the commencement of operations.
17. Material excavated under this permit will not be produced for "sale" to or used by any party other than the named proponent.
18. The Permit holder must give two days prior notice to the BC Oil and Gas Commission, Compliance and Enforcement Branch, of initial construction start and any subsequent recommencements of operations.
19. The Permit holder must notify the BC Oil and Gas Commission, Environmental Management & Reclamation and Permit Operations & Administration Branches, upon completion of final activities, including reclamation.
20. The amount of available suitable borrow material for construction purposes must be estimated prior to clearing the entire borrow pit area.

ADVISORY GUIDANCE

1. Construction Plan, CGW4703-MCSL-G-MP-1641-A29.8B_SKETCH-Rev0.pdf, is for the Permit Holder's internal reference only and was not reviewed as a decision tool for this permit, nor does it form an integral part of this permit.
2. 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*.
3. 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.
4. 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.
5. The Commission recommends a document summarizing how reclamation of the borrow pit will be undertaken and shared with 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 and prior to commencement of reclamation activities.

All pages included in this permit and any attached documents form an integral part of this permit.



Mahesh Khadka
Authorized Signatory
Commission Delegated Decision Maker

cc: Commission No.: AD100106967
Worksafe BC
Ministry of Forests District Office – Coast Mountains Natural Resource District
First Nations: Haisla Nation Council, Kitselas First Nation (Traditional Territory)
OGC Compliance & Enforcement

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

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

Permit Number: **G-13-064**

Mine Number: **1642052**
Approval Number: **19-1642052-0306**

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

For work located at the following property:

Borrow Site A29.8B
Lat: 54.24444N Long: -128.24611W

This authorization approves mining activities as described in Mine Plan (dated November 28, 2018 Rev. 0 and submitted with the application) beginning March 06, 2019 and ending prior to December 01, 2021.

This approval and permit is subject to the appended conditions.

Date of Issuance: **Wednesday, March 06, 2019**



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 November 28, 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. Volume of Material

Total volume of material permitted to extract under this permit must not exceed 100,000 tonnes per year.

3. Land Use

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

4. 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.

5. Revegetation

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

6. 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.
7. 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.
8. 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.
9. 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.
10. 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 10 (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.
11. 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.
12. 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.

13. Safety Provisions

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

14. Monitoring

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

15. Alterations to the Program

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

16. 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.

17. Annual Report

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

18. 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 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.

19. 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.

20. 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.

21. 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.

22. Mine Emergency Response Plan (MERP):

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 MERP. The plan must be available on site for review.

23. 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.

24. 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.

25. 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.

26. 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*

27. 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%

28. 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.

29. 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*.

30. 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.

31. 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.

32. 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:
 - a) be rough and loose with abundant microsites to facilitated the lodging and germination of seeds;
 - b) be keyed into the under laying materials such that they do not slump off;
 - c) incorporate roots, stumps and other woody debris to reduce erosion and create greater biological diversity; and
 - d) be re-vegetated promptly.

The mine site must be returned to a forested state.

33. 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.

34. 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.