

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY AND MINES

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

Permit: **Q-9-042**

Mine No.: **1641254**

Issued to: **British Columbia Hydro and Power Authority**
Suite 1100, Four Bentall Centre, 1055 Dunsmuir Street
Vancouver, BC V7X 1V5

for work located at the following property:

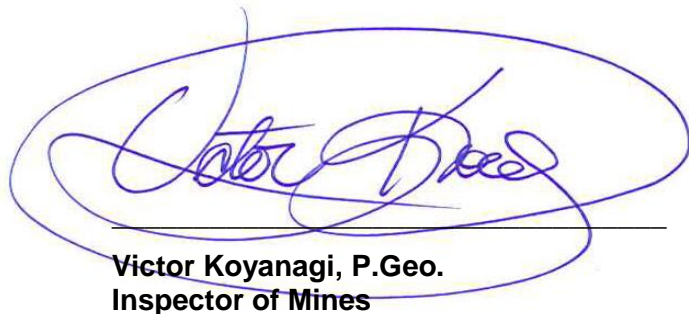
Wuthrich Quarry

as described in Notice of Work application 16412554-201402

The approval for Notice of Work 1641254-201402 is valid beginning July 24, 2015 and ending prior to December 31, 2021.

This approval and permit is subject to the appended conditions.

Issued this 24th day of July in the year 2015.



Victor Koyanagi, P.Geo.
Inspector of Mines

PREAMBLE

Notice of intention to commence work on a quarry, 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 Notice of Work 1641254-201402 was submitted November 24, 2014 to the Regional Inspector of Mines.

This permit contains the requirements of the Ministry of Energy and Mines for reclamation. Nothing in this permit limits the authority of other provincial ministries to set other conditions, or to act independently, under their respective permits and legislation.

The Site C Clean Energy Project (the Project) has undergone an environmental assessment in accordance with the Canadian Environmental Assessment Act, 2012 (CEAA 2012), the BC Environmental Assessment Act (BCEAA), and the Federal-Provincial Agreement to *Conduct a Cooperative Environmental Assessment, Including the Establishment of a Joint Review Panel of the Site C Clean Energy Project*. The assessment found that the effects of the Project will largely be mitigated through careful, comprehensive mitigation programs and ongoing monitoring during construction and operations.

Mitigation, management and monitoring plans for the Project have been developed taking into account the measures proposed in the EIS, information received during the Joint Review Panel hearing process, and the Report of the Joint Review Panel on the Project. Those plans are consistent with, and meet requirements set out in, the conditions of the Environmental Assessment Certificate (EAC) and of the Decision Statement issued on October 14, 2014 and November 25, 2014 respectively. Under the EAC, the proposed works must be conducted in accordance with the requirements of the CEMP.

Mitigation measures specific to the activities proposed are described in the Construction Environmental Management Plan (CEMP).

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

- a) Reclamation security is not required at this time. The responsibility to reclaim the site will remain with the Ministry of Transportation and Infrastructure (MoTI) after this approved program is completed, or at such time as this permit is closed. The requirement for, as well as amount of security deposit may be adjusted in the future on the basis of performance, field inspections by an inspector of mines, and on reports which may be requested.

- b) Topsoil, overburden (to rooting depth), subsoil, and non-merchantable coarse woody debris shall be removed from operational areas prior to any disturbance of the land and stockpiled separately on the property for use in reclamation programs. Topsoil shall not be removed from the mine site without the specific written permission of the Regional Inspector of Mines.
- c) Reclamation material stockpiles shall be appropriately protected from invasive plant species, erosion, degradation and contamination, and shall be clearly marked to ensure that they are protected during all construction and mining activities.

2. Temporary Shutdown

If this quarry ceases operation for a period longer than one year the Permittee shall 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 of Mines.

3. Alterations to the Program

Substantial changes to the program must be submitted to the Regional Inspector for approval prior to initiation of the proposed substantial changes..

4. 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 shall be filed with the Regional Inspector of Mines not less than seven days prior to cessation of work.

5. Annual Summary

Annual summary of activities shall be submitted to the Regional Mines office in Prince George prior to March 31 of each year the permit remains valid. This shall also include, but is not limited to, an as-built map of the mine site.

The origin, storage locations, quantities, and stockpile protection activities for stored reclamation materials shall be documented and reported in the Annual Summary Report.

6. Site Stability

- a) The Regional Inspector of Mines shall 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 and rock faces shall be maintained at all times and erosion shall 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, shall be

reported to the Regional Inspector of Mines as soon as possible and work shall cease until the Regional Inspector advises otherwise.

7. Training and Orientation

The Manager shall 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 shall maintain a record of all training workers and supervisors have received, and make this record available to an Inspector of Mines upon request.

8. Hazards and Confined Spaces

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

9. Emergency Response Plan

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

10. Dangerous Occurrences

The Manager shall ensure compliance with section 1.7.1 of the Code and report dangerous occurrences to the Regional Health and Safety Inspector of Mines whenever necessary.

11. Access Control

The Manager shall 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 shall enter or be permitted to enter the mine site. This shall be accomplished through the use of locked gates or other suitable means. Notice to this effect shall be posted at all road entrances to the mine. A current copy of any gate key will be provided to the Regional Inspector of Mines.

12. Environmental Protection

- a) The Permittee shall conduct works in accordance with the Project (Site C) Construction Environmental Management Plan.

- b) The Permittee shall ensure that all practical means are taken to minimize the amount of new development and new land disturbance.
- c) Waste containers and garbage shall be removed from site at the earliest possible opportunity.
- d) The Permittee shall control erosion and sedimentation on site and ensure impacts to the land, watercourses and wildlife are minimized as a result of the mining activities.

13. Wildlife Management

The Permittee shall ensure all practicable measures are taken to minimize impacts to wildlife.

14. Noise Abatement

- a) The Permittee shall ensure compliance with 2.6.1 of the Code and ensure any machinery or equipment which, when operating, exposes the operator or persons in the vicinity to noise levels in excess of those prescribed in Table 2-2, Part 2, for unprotected ears, shall if practicable, be fitted with a properly maintained muffler or other noise reducing device.
- b) Stationary engines and portable compressor installations shall be enclosed in noise attenuating structures.
- c) Site equipment shall be fitted with high efficiency muffling devices.

15. Dust Control

Dust management and monitoring will take into account at minimum the following:

- a) All dust on the mine site shall be suitably controlled at the source. Dust shall not be allowed to impact adjacent properties. All dust inside building and structures shall be suitably controlled at the source.
- b) All roads on the mine site shall be appropriately constructed and top-dressed such that dust is controlled.
- c) A sprinkler system, water truck, or other appropriate means shall be utilized to ensure dust control on the mine site.
- d) The Permittee shall ensure all vehicles exiting the mine site are adequately washed to minimize the potential spread of dust.
- e) Covered trailers shall be utilized on all haul trucks exiting the mine site.

16. 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.

17. Compliance

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

- a) *Mines Act*,
- b) Health, Safety and Reclamation Code for Mines in British Columbia,
- c) Metal Leaching and Acid Rock Drainage Guidelines for Mines in British Columbia,
- d) Notice of Work and Reclamation Plan No.1641254-201402, and
- e) Quarry Development Plan – Wuthrich Quarry.

18. Fuels and Lubricants

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

The Permittee shall develop and implement a hydrocarbon management plan that deals with fueling, operational servicing, spill prevention, emergency response, spill contingency, and clean-up for fuels and lubricants stored on or off the mine site. This plan shall be kept on site and made available to the Regional Inspector upon request. The Manager shall ensure all workers on the site are aware of and understand this plan. The plan shall account for the following:

- a) Fuel and lubricants shall be delivered to site as needed to re-supply and oil tanks on mobile and fixed equipment.
- b) All fuel and chemical containers shall be stored in an appropriately designed containment area.
- c) Impermeable, oil absorbent matting shall be used when refueling and servicing equipment.
- d) While refueling the operator shall be in control of the refueling nozzle at all times. Mobile equipment shall not be refueled or serviced within 50 metres of any watercourse.
- e) If any Petroleum, hydrocarbon or other product (no matter how small) is spilled the contaminated soil/gravels shall be forthwith collected and removed for appropriate disposal.
- f) Fuel or oil leaks on equipment shall be effectively repaired as soon as they are discovered or the equipment shall be removed from the site and not operated until repairs have been made.

- g) An emergency spill containment and clean up kit shall be maintained at the site while it is in operation. The kit shall 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%.
- h) All empty fuel drums and chemical containers shall be removed from the property on a monthly basis, at minimum.
- i) All hydrocarbon and chemical containers shall be removed from the mine site upon completion of mining activities.

19. Chance Find Plan

Prior to initiating mining activities as approved under this permit, the Manager shall develop and implement a suitable Archaeological Chance Find Procedure (CFP). The Manager shall ensure all workers on the site are aware of and understand the CFP and adhere to the procedure.

20. Five Year Update

The Permittee will provide an updated mine and reclamation plan on the fifth anniversary of the issuance of this permit. This shall include updated maps and cross sections, which show as-built conditions, as well as the upcoming 5 year mine and reclamation activities.

21. Blasting

- (a) The Permittee shall, seven (7) days prior to commencing drilling of blast holes, notify the Regional Health & Safety Inspector of Mines in writing (via e-mail or letter). The notification shall include start date and the anticipated end date of the drilling operation.
- (b) The Permittee shall, seven (7) days prior to commencing blast hole loading and/or blasting, notify the Regional Health & Safety Inspector of Mines in writing (via e-mail or letter). The notification shall include start date and the anticipated end date of the loading and/or blasting operations.
- (c) The Permittee shall ensure that blasting operations are conducted by a blaster that is certified under Part 8 of the Health, Safety and Reclamation Code for Mines in British Columbia. The certified blaster shall also possess a valid urban blasting endorsement.