

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY AND MINES

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: **G-9-288**

Mine No.: **1641278**

Issued to: **BC Hydro & Power Authority**
600-1055 Dunsmuir Street
Burnaby BC V7X 1V5

for work located at the following property:


Del Rio Pit

as described in Notice of Work application 1641278-201401

The approval for Notice of Work 1641278-201401 is valid beginning **March 29, 2016** and ending prior to **March 29, 2021**.

This approval and permit is subject to the appended conditions.

Issued this **29th day of March** in the year 2016.



Victor Koyanagi, P.Ge.
Inspector of Mines

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 Notice of Work was filed with the Inspector of Mines on November 24, 2014.

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. The amount of security required by this permit, and the manner in which this security may be applied, will also reflect the requirements of those ministries. 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.

Decisions made by staff of the Ministry of Energy and Mines will be made in consultation with other ministries.

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

Reclamation security for this program has been waived. BC Hydro (permittee) is required to ensure proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector.

2. Land Use

The surface of the land and watercourses shall be reclaimed to the following land use:
Wildlife, Forestry.

3. Productivity

The level of land productivity to be achieved on reclaimed areas shall 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 shall 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 shall satisfy land use, productivity, and water quality objectives. Topsoil and overburden (to rooting

depth) shall 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 shall be removed from the property without the specific written permission of the Regional Inspector.

6. Buffer Zones and Berms

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

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

8. Watercourses

Impacts to watercourses are not authorized under this approval.

9. Roads

- (a) All roads shall 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:
 - (1) 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
 - (2) 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 as directed by the Chief Inspector 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 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.

12. Safety Provisions

All safety and other provisions of the ***Mines Act*** and the **Health, Safety and Reclamation code for Mines in British Columbia (HSR Code)** shall be complied with to the satisfaction of the Chief Inspector.

13. Monitoring

The Permittee shall develop and implement monitoring programs to demonstrate progressive reclamation is being conducted and that reclamation objectives are being achieved.

14. Alterations to the Program

Substantial changes to the program must be submitted to the Regional Inspector 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 shall be filed with the Regional Inspector not less than seven days prior to cessation of work.

16. 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. A detailed as-built map shall be provided with the annual summary. Hand drawn maps are not acceptable.

17. Site Stability

- (a) The inspector 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 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 inspector as soon as possible and work shall cease until the inspector advises otherwise.

18. Training and Orientation

The Manager shall ensure compliance with section 1.11.1 of the HSR Code and 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 upon request.

19. 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.

20. Guarding of Equipment:

The Manager shall ensure compliance with section 4.4.2 and 4.4.16(6) of the HSR Code and shall ensure:

- (a) all head, tail, drive, and tension pulleys of a conveyor shall be effectively guarded at their nip points and the guards shall extend for a distance of at least 1 m from the nip point, and
- (b) 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 shall be effectively enclosed, covered, or guarded.

21. Emergency Response Plan:

An emergency response plan 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.

22. Access Control

The Manager shall ensure compliance with section 1.3 of the HSR Code and shall ensure that 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.

23. Environmental Protection:

- (a) Silt laden water shall be suitably contained on site and not be allowed free access to any watercourse or stream.
- (b) Erosion shall be suitably managed and controlled, eliminating or minimizing environmental impacts.
- (c) Dust originating from the mine site shall be controlled at the source.
- (d) All roads shall be appropriately constructed and top dressed such that dust is controlled. A sprinkler system or water truck shall be utilized to ensure dust control.
- (e) Excessive noise shall be controlled at the source. Adequate mufflers shall be utilized on equipment to eliminate excessive noise.

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 shall 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, 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 and clean-up for fuels and lubricants stored on or off the mine site. 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) Impermeable, oil absorbent matting shall be used when refueling and servicing equipment.
- (c) While refueling the operator shall 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 shall be forthwith collected and removed for appropriate disposal.
- (e) 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.
- (f) 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%

27. Chance Find Plan

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.

28. Groundwater Table

The Manager shall ensure sand and gravel is **not** excavated below a depth 1.5 metres above the high ground water table. A minimum of 1.5 metres of sand and gravel shall be maintained above the ground water table.

29. Crushing and Screening

The Manager shall ensure written notice is provided to the Regional Inspector of Mines a minimum of five days prior to initiating crushing or screening activities on the mine site.

30. Dangerous Occurrences

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