

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY AND MINES

SAND, GRAVEL and 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: **G-7-48**

Mine Number: **0700037**

Issued to: **Lehigh Hanson Materials Limited**
PO Box 1790
Sechelt BC V0N 3A0

for work located at the following property:

Lehigh Hanson Materials Limited. - Sechelt Pit

Legal Description:

Sechelt Indian Band No. 2

Lot 288 Plan 69304 and Lot 313 Plan 69304, Group 1, New Westminster District (NWD)

Canadian Forest Products

D.L. 2461 Group 1, NWD. Except Plan LMP 108 & LMP 109, Ref Plan 20193 & 20310
(PID -008-075-701)

D.L. 2464 Group 1, NWD. Except Lot A (Ref PL 2712) & LMP 10001 (PID-008-075-514)

Lehigh Hanson Materials Limited

Lot K. Plan LMP49852, DL 1438 Group 1, NWD (PID 025-043-765) Mine Expansion

DL 3166 Group 1, NWD, except Plan 9409 & 21931 (PID 007-066-023) Mine Expansion

Crown Land

Block A, Plan 18063 DL 2725, Group 1, NWD except Plan 18131 & HWY Plan 14889
(PID 007-223-960) Lease #: 23360 expires Dec 31, 2018


Lot Rem A, D.L. 7613, Group 1 NWD (PID 011-902-523) Lease #: 233600 expires Dec
31, 2018 LBF# 0351278

D.L. 6140 Group 1, NWD Lease #233600 Expiry March 12, 2016

D.L. 7942 Group 1 NWD Lease #232807 LBF 240419 Expiry March 12, 2016

This approval and permit is subject to the appended conditions.

Issued this 4th day of November in the year 2013.



Ed Taje,
Senior Inspector of Mines U/G Coal

G-7-48 Permit and Amendments

January 28, 1988	Notice of Work, Mine site, Plant site and Load-out Conveyor.
May 16, 1988	Permit G-7-48.
May 19, 1988	Amended Permit G-7-48 addition of Crown Lands.
April 24, 1990	Amendment of Reclamation Permit G-7-48 Letter Amending Security amount.
May 25, 1990	Permit Amendment adding Canadian Forest Products.
March 27, 1992	Permit Amendment –Noise Reduction
August 10, 1993	Permit Amendment Letter -Sechelt Aggregates Ltd Permit G-7-48 Rock Removal New Conveyor Line.
February 11, 1994	Variance Section 4.9.1 Allow use of flashing warning lamp in place of audible back-up alarm, subject to conditions.
July 11, 1996	Permit Amendment Letter -Sechelt Aggregates Ltd Permit G-7-48 Excavation of Rock for Pit Crusher.
September 11, 2004	Notice of Work with Attachment A & B.
October 5, 2004	Permit Amendment Approving DL 1438 and DL 3166 Mine Expansion.
November 4, 2013	Permit Consolidation of all Permit Conditions and name change for Lehigh Hanson Materials Ltd - Sechelt Pit from Construction Aggregates Ltd -Sechelt Pit

PREAMBLE

This permit contains the requirements of the Ministry of Energy and Mines for operation and 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.

Notice to continue work on a sand and gravel pit, including a plan of the work system and a program for the protection and reclamation of the surface of the land and watercourses affected by the Notice of Work dated January 28, 1988 and March 7, 1990 and September 11, 2004 was filed with the District Inspector of Mines on January 29, 1988, March 26, 1990 and November 4, 2004. Notice of such filings was published in **The Press** on **February 16, 1988** and **Coast News** on **February 15, 1988** and the **BC Gazette** on **February 11, 1988**. RE: Permit May 16, 1988.

This permit amendment contains terms and conditions of all previous permits and amendments identified on page 2 and is consolidated and updated into one document.

Decisions made by staff of the Ministry of Energy and Mines will be made in consultation with other ministries. This application was supported by the following additional documents and reports.

This application was referred to other agencies in accordance with Part 10.3 of the Health, Safety and Reclamation Code for Mines in British Columbia (Code).

The following reports form part of the application:

Supporting Documents:

November 23, 2012	Agriculture Land Commission, <u>Notice of intent to extract Sand and Gravel from the ALR</u> , and Maps File # 52780 Richard Bullock.
February 7, 2007	Construction Aggregates Ltd. <u>Lock Out Manual Lock out and Live</u> , Sechelt Mine Site.

July 12, 2006	<u>Agriculture Land Commission, RE: Aggregate Extraction as a Non-Farm Use in an ALR in the District of Sechelt Application #Z-31860</u> Letter Erik Karlsen.
August 2004	Construction Aggregates Ltd. <u>Emergency Procedures Manual Sechelt Mine Site.</u>
September 28, 2001	Construction Aggregates Ltd. <u>Variance to Section 4.4.17 (5) Health, Safety and Reclamation Code letter- Ship loader operator, lockout procedure, flashing strobes Section 12.3.1.</u> Chuck Cookney
September 19, 2001	Construction Aggregates Ltd. <u>Letter to Fisheries and Oceans Warning Notice August 8, 2001</u> File W55 Ship Loading Conveyor.
November 17, 2000	BC Research Inc. <u>Assessment of Worker's Exposure to Noise and Silica Dust (Respirable Quartz) Conclusions and Recommendations.</u>
May 2000	EBA Engineering Consultants Ltd. <u>Review of Construction Aggregates Ltd. Effluent and Biosolids Recycling Property Sechelt. Construction Aggregates Ltd. Project No. 0805-00-85165. P.12</u>
December 13, 1999	Fisheries and Oceans Canada, Coast Guard, <u>Navigable Waters Protection Act Sec 10(2) Application by Sechelt Indian Band for Approval to Construct Deep Water Terminal ect...</u> 8200-T-2054.2 File 2401915.
July 19, 1999	Latitude Geographic Group Ltd. <u>Visibility Project of Construction Aggregates Sechelt Mine Site Maps.</u>
July 1999	Golders Associates. <u>Report on Geotechnical and Hydrology Assessment Proposed Effluent Discharge Facility DL 3166 Property Sechelt.</u> Construction Aggregates Ltd.
February 17, 1999	Sechelt Indian Band. <u>Construction Aggregates Effluent Re-use plan Option Approval Letter</u> to Construction Aggregates Ltd.
May 5, 1998	BKL Consultants Ltd. <u>Community Noise and Vibration Study March 1998 Sechelt BC,</u> Construction Aggregates Ltd. File 0470-98A.
March 10, 1998	<u>Soil Conservation Act Application #Z-31860 Resolution #134/1998</u> Applicant: Construction Aggregate Ltd.

January 6, 1995	Golders Associates. <u>Stability of Existing Settling Pond Embankment and Gravel Operations, Sechelt.</u> Construction Aggregate Ltd. GRIT 002073. & GRIT 002090.
December 30, 1994	Golders Associates Ltd. <u>Closure of Existing Settling Pond, Sand and Gravel Operation Report, Sechelt.</u> Construction Aggregates Ltd. GRIT 002071.
March 29, 1993	Ministry of Energy, Mines and Petroleum Resources, Recommended Earthquake Design Methodology.
October 1993	Golders Associates. <u>Report on Settling Pond Development Sand and Gravel Deposits Sechelt BC.</u> Construction Aggregate Ltd. GRIT 001812.
December 31, 1993	Ministry of Energy, Mines and Petroleum Resources, Letter <u>RE: Sechelt Plant Tailings Pond</u> from John Errington Chief Inspector of Mines.
November 27, 1992	Ministry of Energy, Mines and Petroleum Resources, <u>Variance Letter Section 6.7.6 Institute Benching and Reduce Height of Wall.</u> R.W McGinn, P.Eng.
September 17, 1990	Thurber Engineering Report - Dam
February 17, 1988	Sechelt Aggregate Ltd. <u>Sechelt Aggregates Mining Permit Application.</u>
January 21, 1988	Ministry of Transportations and Highways <u>Permission to Construct Works within Crown Lands Permit 12/179/87</u> File No. 12-21-1C.
November 26, 1987	BC Hydro. <u>Proposed Load out Conveyor, Access Road and Fence Crossing B.C. Hydro's Right of Way on Sechelt Indian Reserve No. 2.</u> File 1757 BCE J.T. Arnold
August 1986	Barron & Associates. <u>Acoustical Study of the Proposed Sechelt Aggregates Plant.</u> Project Report #1132.861 8902A.
February 26, 1985	Canadian Coast Guard. <u>Approval of Application of a proposed Barge loading facility (radial barge loader, conveyor, dolphins), Strait of Georgia Trail Bay, fronting Sechelt Indian Reserve No.2, Group 1, N.W.D, near Sechelt, B.C.</u> J. Bourassa.
November 26, 1985	Sunshine Coast Regional District. <u>Proposed Supply of Raw and Domestic Water</u> letter to Sechelt Indian Band Council.

August 6, 1985	Fisheries and Oceans. Approval of " <u>Application under Navigable Waters Protection Act by the Sechelt Indian Band for approval to construct a trestle with walkway and conveyor, surge bin, four cluster dolphins and overhead radial barge loader in Trail Bay, Sechelt IR #2, near Sechelt B.C.</u> " L.R. Russell.
1985	N.D. Lea & Associates. <u>Sunshine Coast Highway Crossing drawing 8533-02.</u>
September 4, 1984	Fisheries and Oceans. <u>Approval of "Sechelt Aggregates Ltd. Proposed Gravel Barge Load out Facility at Trail Bay, Sechelt IR #2, Letter L.R. Russell Habitat Biologist.</u>

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

- (a) The owner, agent or manager (herein called the Permittee) shall maintain with the Minister of Finance security in the amount of one hundred thousand dollars (\$100,000). The security will be held by the Minister of Finance for the proper performance of the approved program and all the conditions of this permit in a manner satisfactory to the Chief Inspector. Permit November 4, 2013.
- (b) The Permittee shall conform to all forest tenure requirements of the Ministry of Forests, Lands and Natural Resources Operations. Should the Permittee not conform to these requirements then all or part of the security may be used to cover the costs of these requirements. RE: Permit October 5, 2004.
- (c) The Permittee shall conform to all Ministry of Environment approval, license and permit conditions, as well as requirements under the **Wildlife Act**. Should the Permittee not conform to these conditions, then all or part of the security may be used to fulfill these requirements. RE: Permit October 5, 2004.

2. Land Use

The surface of the land and watercourses shall be reclaimed to any of the following land uses: **Industrial, commercial tree plantation, public works and wildlife habitat.** RE: Permit October 5, 2004.

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 that demonstrates, to the satisfaction of the Chief Inspector, the impracticality of doing so. RE: Permit October 5, 2004.

4. Revegetation

Land shall be revegetated to a self-sustaining state using appropriate plant species. RE: Permit October 5, 2004.

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 that demonstrates, to the satisfaction of the Chief Inspector, that reclamation objectives can otherwise be achieved. RE: Permit October 5, 2004.
- (b) No topsoil shall be removed from the property without the specific written permission of the District Inspector. RE: Permit October 5, 2004.

6. Buffer Zones and Berms

- (a) Buffer zones and/or berms shall be established between the mine and the property boundary unless exempted in writing by the District Inspector. RE: Permit October 5, 2004.
- (b) Temporary overburden and topsoil piles shall be graded and seeded to prevent erosion and control dust. RE: Permit November 4, 2013.

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, RE: Permit October 5, 2004.
- (b) concrete foundations shall be covered and revegetated unless, because of demonstrated impracticality, they have been exempted by the Inspector, and RE: Permit October 5, 2004.
- (c) all scrap material shall be disposed of in a manner acceptable to the Inspector. RE: Permit October 5, 2004.

8. Watercourses

- (a) Watercourses shall be reclaimed to a condition that ensures
 - I. long-term water quality is maintained to a standard acceptable to the Chief Inspector, RE: Permit October 5, 2004.
 - II. drainage is restored either to original watercourses or to new watercourses which will sustain themselves without maintenance, and RE: Permit October 5, 2004.
 - III. use and productivity objectives are achieved and the level of productivity shall not be less than existed prior to mining unless the Permittee can provide evidence which demonstrates, to the satisfaction of the Chief Inspector, the impracticality of doing so. RE: Permit October 5, 2004.
 - IV. Contaminated or silt laden water shall be suitably contained on site and shall not be allowed to enter any watercourse or stream. RE: Permit November 4, 2013.
 - V. Erosion shall be minimized and controlled at the source eliminating negative impacts to the environment. RE: Permit November 4, 2013.
 - VI. Water which flows from disturbed areas shall be collected and diverted into settling ponds. RE: Permit October 5, 2004.

- VII. A water management and pond system shall be constructed to prevent siltation entering any water course or creek. Pond discharge shall not exceed 25 mg/litre of total suspended solids. Ponds shall be designed to withstand a 200 year flood event. RE: Permit November 4, 2013.
- VIII. In the event of high water levels/flow the total suspended solids (TSS) must not exceed the background levels. RE: Permit November 4, 2013.

9. Roads

- (a) All roads shall be reclaimed in accordance with land use objectives unless permanent access is required to be maintained. RE: Permit October 5, 2004.
- (b) Individual roads will be exempted from the requirement for total reclamation under condition 9(a) if either: RE: Permit October 5, 2004.
 - (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 RE: Permit October 5, 2004.
 - (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 security provisions, of this reclamation permit, and to comply with all other relevant municipal, provincial and federal government regulatory requirements. RE: Permit October 5, 2004.

10. Disposal of Fuels and Toxic Chemicals

Fuels, chemicals or reagents that cannot be returned to the manufacturer or supplier are to be disposed of as directed by the Chief Inspector in compliance with municipal, regional, provincial and federal statutes. RE: Permit October 5, 2004.

11. Fuels and Lubricants

Fuels and Lubricants, if stored on the mine site, shall conform to the requirements of the Ministry of Environment **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 the mine site. The plan shall account for the following:

- (a) While refueling the operator shall be in control of the refueling nozzle at all times. RE: Permit November 4, 2013.
- (b) 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. RE: Permit November 4, 2013.
- (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%. RE: Permit November 4, 2013.
- (g) Any spill reportable under the *Transportation of Dangerous Goods Act* (TDG) shall be reported without delay to the Inspector. RE: Permit November 4, 2013.
- (h) Any oil or fuel spills shall be cleaned up immediately and disposed of in an appropriate manner. Absorbent pads shall be maintained on-site during the course of operations. Stationary engines shall be provided with appropriate design drip pans. RE: Permit November 4, 2013.
- (i) All onsite and lubricant storage shall be dual walled or similar containers fitted with a secondary containment vessel capable of holding 110% of the tank volume, to protect the inadvertent spills. Tanks shall be signed "No Smoking" and have fire extinguishers available in close proximity. RE: Permit November 4, 2013.

12. Archaeological Find

An Archaeological Chance Find Procedure (ACFP) for this site shall be developed within 3 months of the date of this permit:

- (a) A copy of the procedure shall be posted at the Mine Site, and all workmen shall be trained in the implementation of this procedure.

- (b) A copy of this procedure shall be filed with the Inspector.

In the event that an archaeological site is encountered during the course of the approved mining activities, the program shall be suspended or modified in such a manner so as to ensure that the site is not damaged, desecrated or otherwise altered and the occurrence shall be reported immediately to the Archaeological Branch of the Ministry of Tourism, Culture and the Arts, and the Ministry of Energy and Mines. Work shall not be resumed until authorized by the joint Ministries. Permit November 4, 2013.

13. Site Access

The Mine Manager, or in their absence a Designate, shall allow Employees of other Provincial Ministries holding authorizations related to Compliance and Enforcement duties onto the mine site subject to the following conditions:

- (a) the Provincial Employee must present the appropriate Ministry identification; and
- (b) must clearly state that they are acting on behalf of an Inspector of Mines;
- (c) they must be given a site orientation as required by the Health & Safety, and Reclamation Code;
- (d) they must sign-in and sign-out as acknowledgement of being on site;
- (e) they must be accompanied at all times by the Mine Manager, or qualified person appointed by the Manager, and shall take all necessary measures to ensure the safety and well being of the individual(s); and this condition is not applicable to other Provincial Legislation. Permit November 4, 2013.

14. 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, as well as significant adverse geological conditions shall be reported to the inspector as soon as possible and work shall cease until the inspector advises otherwise. Permit November 4, 2013.

15. Site Security

All site access shall be secured with locking gates and signage provided indicating the mine name, operator's name and emergency contact number as well as all necessary safety advisories. Gates shall be locked when the quarry is not in operation. Permit November 4, 2013.

16. Temporary Shutdown

If this mine 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. RE: Permit October 5, 2004.

17. Safety Provisions

All safety and other provisions of the **Mines Act** shall be complied with to the satisfaction of the Chief Inspector. RE: Permit October 5, 2004.

18. Monitoring

The Permittee shall undertake monitoring programs, as required by the District Inspector, to demonstrate that reclamation objectives are being achieved. RE: Permit October 5, 2004.

19. Alterations to the Program

Substantial changes to the program must be submitted to the Inspector for approval. RE: Permit October 5, 2004.

20. Notice of Closure

Pursuant to Part 10.5.1 of the Health, Safety and Reclamation Code for Mines in British Columbia, a Notice of Completion of Work shall be filed with the District Inspector not less than seven days prior to cessation of work. RE: Permit October 5, 2004.

21. Annual Reclamation Reports

A detailed reclamation report, summarizing the mining and reclamation program shall be submitted in a form and containing the information required by the inspector, every five years, commencing September 1, 2009. A digital, tabular summary of areas disturbed and reclaimed shall be submitted annually on or before March 31. RE: Permit October 5, 2004.

The Manager shall forward to the Inspector each year a copy of the submitted Health and Safety Assessment form. Permit November 4, 2013.

SITE SPECIFIC CONDITIONS:

22. Name change from Construction Aggregates Ltd -Sechelt Pit to Lehigh Hanson Materials Limited -Sechelt Pit. Permit November 4, 2013.
23. The estimated annual extraction from the site is 7.5 MT tonnes per year. NOW September 11, 2004.

Dust Control

24. Roads will be watered as required to minimize dust from the extraction and haul truck traffic. Lehigh Hanson Materials Limited. Dust Suppressants (magnesium chloride) may be applied in the summer." RE: NOW September 11, 2004 Attachment B.

The Berm placed on the western edge of the property will minimize the potential for wind erosion off the excavated areas prior to irrigation system of placement and tree planting. RE: NOW September 11, 2004 Attachment B.

Completing the excavation and re-vegetation in phases will minimize the amount of soil and subsoil open for potential wind erosion.
RE: NOW September 11, 2004 Attachment B.

Dust control methods shall be developed for the processing, conveying and stockpile systems, including sprinklers, sprays or atomizers at dust generation points and if necessary covering of the conveyor system. Permit November 4, 2013.

Noise Control

25. Minimizing noise as it affects residents is a key objective in preparing the site DL 1438 and DL 3166 Mine Expansion. Minimizing the noise generated in the extraction of the gravel will be completed by:
- I. Ensuring all mine haul trucks are fitted with auxiliary mufflers.
 - II. Fabricating sound berms along north and west perimeter of the proposed excavation to minimize noise transmission.
 - III. Seeding and planting the berms to dampen noise and reduce transmission
 - IV. Locating the haul road immediately behind the western perimeter sound berm.
 - V. Process the gravel at the existing facility offsite
 - VI. Restricting gravel extraction operations to 07:00 to 23:30, and
 - VII. Extracting the gravel in phases, allowing for the staged establishment and growth of the hybrid poplar crop.
- RE: NOW September 11, 2004 Attachment B.
26. This approval includes excavation of pit run material, crushing and mechanical screening, washing, blasting operations and timber clearing as well as loading facilities as described in the above noted documentation. Permit November 4, 2013.
27. The work shall be carried out in accordance with that proposed in the report and plan of the work system prepared by Klohn Leonoff dated October 1987, and March 1990 update, and the subsequent revisions required by the government agencies, but excludes the barge loading facility pursuant to the *Navigable Waters Protection Act* R.S.C., 1970 N.19. Re: Permit May 16, 1988.
28. The approval under Part 1 includes the reclamation proposals for Lot 288 & 313 of the Sechelt Band Lands N0.2, Group 1, New Westminster District, B.C., but does not include the posting of bond pursuant to Section 9 of the *Mines Act*. Re: Permit May 16, 1988.
29. The measures described in the Barron and Associates Project Report #1132.861 dated 86.08 to reduce noise levels shall be strictly complied with. Re: Permit May 16, 1988.
30. Mobile equipment, back up alarms are replaced with strobe lights. Variance February 11, 1994. Permit November 4, 2013.

31. The work shall be carried out in accordance with the terms described by in the letter from B.C. Hydro dated November 26, 1987, and countersigned by J.T. Arnold, Sechelt Aggregates, and December 10, 1987. Re: Permit May 16, 1988.
32. The construction of the conveyor crossing of Highway #101 shall be carried out in accordance with Permit #12/179/87 dated December 21, 1987 Transportation and Highways. On completion of this work, a report confirming the competency of the structure across the Highway #101 shall be prepared by a professional Engineer of the Province of British Columbia. The report shall be forwarded to the District of Mines within 14 days of being received by Sechelt Aggregates Ltd. Re: Permit May 16, 1988.
33. The portion of the site disturbed that lies within the Agricultural Land Reserve shall be reclaimed in a standard acceptable to the Agricultural Land Commission. Re: Permit May 16, 1988.
34. Unconsolidated material such as pit banks, berms, benches, hummocks, waste dumps and refuse piles shall be revegetated. Recontouring and covering the slopes with a suitable growth medium maybe required. Permit May 25, 1990.
35. A permanent system of drainage control must be established. Permit May 25, 1990.