ENVIRONMENTAL ASSESSMENT
REGISTRATION DOCUMENT

PENNECON LIMITED
PROPOSED SAND AND GRAVEL QUARRY
GOOSE BAY

Submitted by:

Pennecon Ltd.
1309 Topsail Road
P.O. Box 8274, Station A
St. John's, NL AIB 3N4

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1.0 NAME OF UNDERTAKING

Goose Bay Sand and Gravel Quarry

2.0 PROPONENT

2.1 Name of Corporate Body

Pennecon Limited

2.2 Address

1309 Topsail Road

P.O. Box 8274, Station A
St. John's, NL AIB 3N4

2.3 Chief Executive Officer

Larry Puddister, P.Eng.

President and COO
1309 Topsail Road
P.O. Box 8274, Station A
St. John's, NL AIB 3N4
Tel: (709) 782-3404
Fax: (709) 782-0129

2.4 Principal Contact Person

Roderick Mercer, P. Geo.

Aggregate and Mineral Resources Manager
1309 Topsail Road
P.O. Box 8274, Station A
St. John's, NL AIB 3N4
Tel: (709) 782-3404
Fax: (709) 782-0129

3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

The proposed project involves the development of approximately 15 hectares of land roughly 20 km southwest of the town of Happy Valley-Goose Bay. Site access will be via the Trans Labrador Highway and an access road (~ 800 m), which will be developed upon approval. The proponent proposes to develop the area as a pit operation, mining, and transporting sand and gravel materials for use as raw materials in concrete production.

3.2 Purpose/Rationale/Need for the Undertaking

The purpose of this project is to produce a product (sand and gravel) for future use as raw materials in concrete production.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 Geographic Location

The project is located approximately 20 km southwest of the town of Happy Valley-Goose Bay along the Trans Labrador Highway NTS Map Sheet 13F01. Refer to Figure 1 Proposed Site Location and Figure 2 Proposed Quarry Location for details.

4.2 Physical Features

4.2.1 Project Site Description

The primary physical feature of this project will be the pit itself, a sand and gravel pit. Access to the site will be via a 200 metre long access road, which will be constructed from the TLH. The pit boundary is sited to ensure a minimum 30 m buffer zone around all water bodies and streams adjacent to the proposed site.

4.2.2 Existing Biophysical Environment

The proposed site is located within the *High Boreal Forest - Lake Melville Ecoregion* of Labrador. This ecoregion encompasses the Churchill River Valley and the coastal plain surrounding Lake Melville. The main community is Happy Valley-Goose Bay. This ecoregion is a narrow extension of the boreal forest into the Taiga Shield ecozone.

This ecoregion has humid, cool summers and cold winters, with a mean annual temperature of around -2°C. The mean annual precipitation ranges from 800 mm to 1000 mm. The growing season is 120 to 140 days.

Its mixed forests are closed-canopied, highly productive, and dominated by balsam fir, black spruce, white birch, and trembling aspen. This ecoregion provides logs for the timber industry. It has suitable conditions for animals such as caribou, moose, birds, and waterfowl. Hunting, trapping, and recreation are common land-use activities.

Much of this ecoregion is an irregular lowland, greatly dissected by river valleys. River terraces are composed of coarse-textured, alluvial soils, and uplands have shallow, well-drained soils. Elevations range from around sea level to about 500 m asl. Permafrost is found in isolated patches, primarily in wetlands west of Lake Melville.

Figure 1. Proposed Site Location

Figure 2. Proposed Quarry Location

4.3 Construction

The construction phase of site development will consist of the following main components:

- site access development;
- annual clearing and grubbing; and
- annual pit development.

4.3.1 Site Access

Access to the site will be from the Trans Labrador Highway. An approximately 200 m access road will be developed.

4.3.2 Salvageable Timber (Clearing) and Grubbing

Merchantable timber removed during pit development will be salvaged. All grubbed materials will be stockpiled for future use.

4.3.3 Pit Development

The proposed pit site covers a total area of approximately 15 hectares. Initial construction activities will involve the removal of vegetative cover, as required, in order to advance the working face. Surficial organics and topsoil, where present, will be set aside for future use (eg. pit rehabilitation).

4.4 Potential Sources of Pollution during Construction

The construction phase of the development will consist of earth-moving activities. The potential sources of pollution include site drainage, noise, air emissions, waste and litter, and potential release of hydrocarbons.

Site run-off will be directed to vegetated areas which will filter suspended solids. In addition, sediment fence will be installed as required to prevent siltation of water bodies/streams.

Domestic waste generated during construction will be collected and disposed of at the local landfill, as per the *Waste Material Disposal Act*.

All equipment will have appropriate emission controls. All vehicles will follow a designated project route and be properly maintained to minimize noise. All vehicles will have exhaust systems regularly inspected and mufflers operating properly.

Dust control measures, such as water applications, will be provided on an as-required basis.

Petroleum products will not be stored on site during construction; petroleum products will be handled as per *Storage and Handling of Gasoline and Associated Products Regulations,* under the *Environmental Protection Act.*

4.5 Operation

The operational phase will consist of typical sand and gravel operation: aggregate will be excavated, crushed, washed, and screened to produce concrete sand and stone for the local market.

The grounds and facilities will be maintained according to environmental health and safety standards and regulations.

The pit operation will typically run from June to November, in accordance with demand for the product. The pit will potentially operate for 25 years.

4.6 Potential Sources of Pollution during Operation

The potential sources of pollution include dust, noise, waste (domestic and human waste), site run-off, or an accidental spill of fuel.

Site run-off, generated through rain events as there are no streams or rivers associated with the working area, will be directed to vegetated areas which will filter suspended solids. In addition, sediment fence will be installed as required to prevent siltation of water bodies/streams.

Domestic waste generated during construction will be collected and disposed of at the local landfill, as per the *Waste Material Disposal Act*. Sewage will be handled by an approved portable facility during operation. The holding tanks will be emptied by a pump truck on a regular basis and disposed of in an appropriate manner.

All equipment will have appropriate emission controls. All vehicles will follow a designated project route and be properly maintained to minimize noise. All vehicles will have exhaust systems regularly inspected and mufflers operating properly.

Dust control measures, such as water applications, will be provided on an as-required basis.

All fuel handling and storage will comply with the *Storage and Handling of Gasoline and Associated Products Regulations*. Vehicles and mechanical equipment will be

maintained in good working order to prevent leaks and spills. There will be no on-site bulk storage of fuel or oil. All waste oil generated at the quarry will be disposed of by a licensed disposal agent.

4.7 Potential Resource Conflicts during Operation

Resource conflicts are not expected. A literature review did not reveal reference to historic sites in the immediate area. If, however, historic resources are encountered, work in the area of the discovery will stop and the foreman will notify the proper authorities, in accordance with the *Historic Resources Act* (1985).

4.8 Decommissioning/Rehabilitation

Site decommissioning and rehabilitation shall be in accordance with standard quarry operations, including:

- Upon completion of all quarrying activities, all pit and quarry slopes shall be graded to less thank 20º or to the slope confirming to that existing prior to quarrying;
- Waster overburden will be used for sloping;
- Stockpiled topsoil or other organic material will be spread over the entire quarried area and seeding will be completed to produce plant growth.

4.9 Occupations

Site construction and operations for the proposed quarry will include the following occupations, classified as per *National Occupational Classification, 2006,* and equipment.

<u>Construction Phase</u>
1 Site Foreman/Supervisor (7217)
1 Heavy Equipment Operator (7421)

<u>Pit Operations</u>
1 Pit Manager (0811)
1 Pit Foreman/supervisor (8221)
7 Heavy Equipment Operators – 2 Excavators, 1 Loader, 1 Crusher, 1 screener (7421)
6 Truck Drivers (7411)
2 Heavy Equipment Mechanics (7312) – located offsite

4.10 Project Related Documents

A quarry permit application has been submitted to the Department of Natural Resources for approval.

5.0 APPROVAL OF THE UNDERTAKING

Environmental Protection Act – Assessment Regulations: Permit to Proceed
Quarry Materials Act and Quarry Minerals Regulations: Quarry Permit

6.0 SCHEDULE

Registration Document Submission	January, 2012
Government Review and Decision	March, 2012
Access Road Upgrades	May 2012
Quarry Operations	June 2012

7.0 FUNDING

The funding for this project will be provided by Pennecon Limited.

8.0 SUBMISSION

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Date *Name:* Roderick Mercer, P. Geo.
Position: Aggregate and Mineral Resources Manager