

**ENVIRONMENTAL ASSESSMENT
REGISTRATION DOCUMENT**

**J-1 CONTRACTING LIMITED
PROPOSED CLARENVILLE QUARRY-SHOAL
HARBOUR RIVER, NL**

Prepared by:

AMEC Environment & Infrastructure

133 Crosbie Road
St. John's, NL
A1B 4A5

January, 2012

TF1154203

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1.0 NAME OF UNDERTAKING

Clarenville Quarry – Shoal Harbour River, NL (DNR File # 7119112)

2.0 PROPONENT

2.1 Name of Corporate Body

J-1 Contracting Limited

2.2 Address

P.O. Box 9068
261 Trans Canada Highway
Clarenville, NL
A5A 2C2

2.3 Chief Executive Officer

Mr. Jim Brown
P.O. Box 9086
261 Trans Canada Highway
Clarenville, NL
A2A 2C2
709.466.2515

2.4 Principal Contact Person

Mr. Jim Brown
P.O. Box 9086
261 Trans Canada Highway
Clarenville, NL
A2A 2C2
709.466.2515

3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

The proposed project (Department of Natural Resources File # 7119112) involves the development of a 29.1 hectare sand and gravel pit site approximately 130 m east of Shoal Harbour Pond. The proposed undertaking will involve material extraction (sand and gravel) for use as asphalt and concrete aggregate, and Granular A and B material for projects in the Clarenville area.

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 asphalt aggregate, concrete aggregate and Class A and Class B granular material for projects in the Clarenville area.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 Geographic Location

The proposed project is located approximately 130 m east of Shoal Harbour Pond on NTS Map Sheet 02D01 (Figure 4.1).

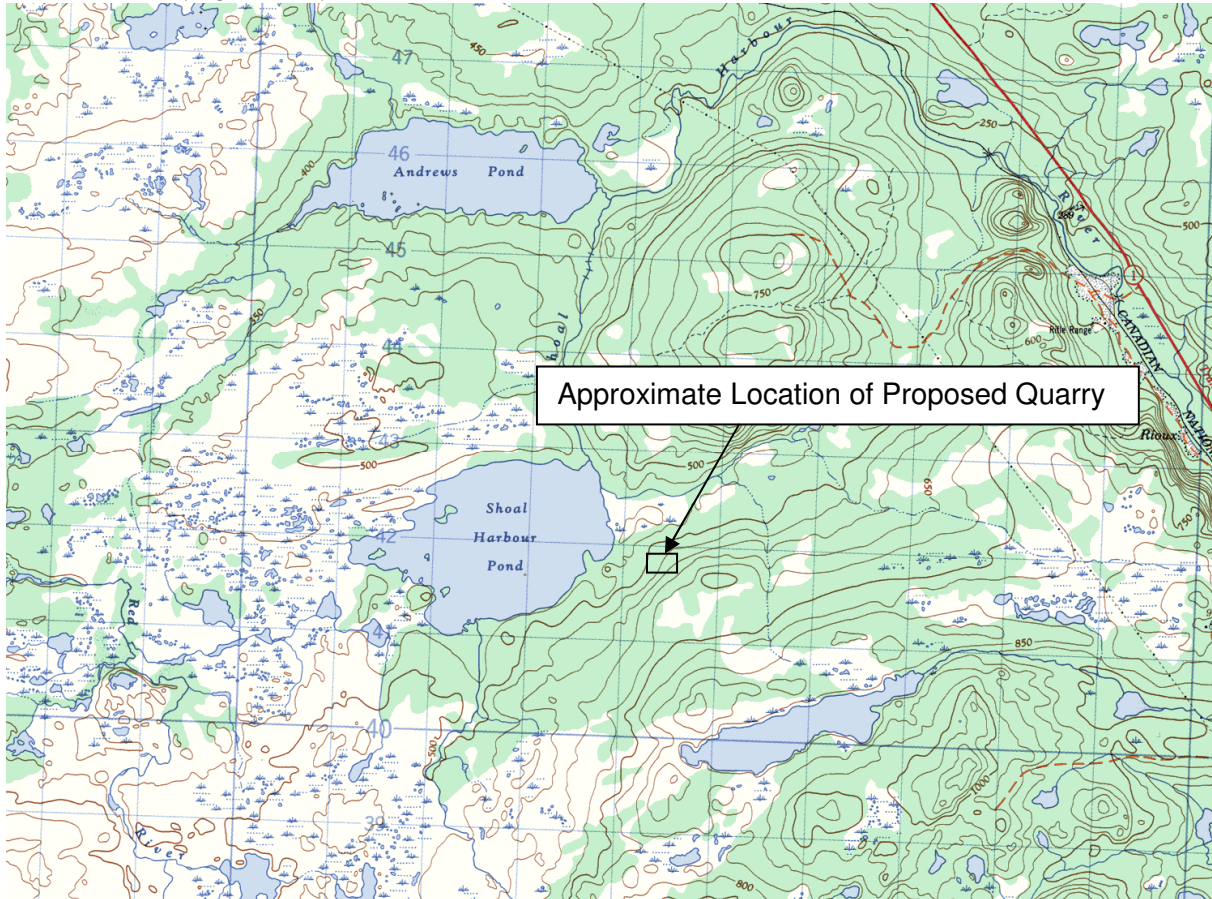


Figure 4.1: Topographic map showing the approximate location of the proposed quarry

4.2 Physical Features

4.2.1 Project Site Description

The primary physical feature for this project will be the pit itself. There will not be any work camps or maintenance facilities on site. Access to the site will be by means of an existing road, which will be upgraded.

4.2.2 Existing Biophysical Environment

The proposed site is located within the Central Newfoundland Ecoregion, Northcentral Subregion. It has the highest summer temperatures and the lowest winter temperatures. The mean annual temperature is approximately 4.5°C, with a mean summer temperature of 12.5°C and a mean winter temperature of -3.5°C. The mean annual precipitation ranges from 1000 mm to 1300 mm.

Balsam fir and black spruce dominate on steep, moist, upland slopes. Black spruce, white birch, and aspen grow on disturbed sites. Kalmia heath and lichens are found on drier sites. Some areas lack good forest growth due to exposure to winds and poor soil conditions. Forest fires have played a more important role in this ecoregion's natural history than in other regions. Thus, much of the Balsam Fir-Feathermoss forest types have been converted to black spruce and some of the richer site types are dominated by white birch and aspen. In areas that have been burned repeatedly, dwarf shrub (Kalmia) barrens have replaced forest stands. Raised bogs are the characteristic wetland type in this ecoregion.

Black bear, caribou, moose, lynx, snowshoe hare, and red fox are typical types of wildlife found in the area.

The rivers and ponds in the area are host to a number of fish species, including stickleback, brook trout, American eel and Atlantic salmon. Rainbow smelt, rainbow trout and Arctic charr are also known to inhabit waterbodies in the ecoregion.

4.3 Construction

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

- Site access upgrades,
- Clearing and grubbing and
- Pit development, including sediment control.

4.3.1 Site Access

Access to the site will be from an existing gravel access road that extends to the proposed quarry site.

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 29.1 hectares of land. Construction of the pit will start from the existing access road and move toward the center of the pit. Activities include the removal of vegetation cover and installation of sedimentation control structures such as settling ponds and water collection ditches. All topsoil and surficial organics will be set aside for pit rehabilitation.

4.4 Potential Sources of Pollution during Construction

The construction phase will involve vegetation clearing and earth moving activities. The potential sources of pollution during construction include noise, air emissions, waste and litter, site drainage, and accidental release of hydrocarbons from heavy equipment.

4.4.1 Air Quality/Noise

There is the potential that construction activities will result in an increase in noise, emissions and dusting. Disruptions related to air quality or noise is expected to be minimal and not likely significant with the following mitigation measures implemented:

- Construction will be carried out during daylight hours to avoid disturbances to local users.
- Machinery will be well muffled and comply with all applicable provincial and municipal noise bylaws.
- All equipment will have appropriate emission controls.
- All machinery will follow designated project routes and be properly maintained.
- Dust control measures, such as water applications, will be provided if required.

4.4.2 Waste and Litter

Construction of the quarry will result in the generation of domestic waste. The effects of waste and litter on the surrounding environment are not likely significant with the following mitigation measures implemented.

- All waste materials will be recycled or be disposed of according to Provincial Waste Management Regulations.

4.4.3 Site Run-off

Construction activities could result in the mobilization of onsite soils, especially during heavy precipitation events. The implementation of the following mitigative measures will reduce the effects to levels that are not likely significant.

- Work will be scheduled to avoid periods of anticipated/known heavy precipitation.
- Erosion control structures (e.g. temporary matting, geotextile filter fabric, settling ponds) will be used, as appropriate to prevent erosion and release of sediment and/or sediment laden water.
- Exposed soil areas will be minimized by limiting the area exposed at any one time and by limiting the amount of time that any area is exposed.

4.4.4 Accidents and Malfunctions

Accidents and/or malfunctions of heavy equipment could result in a spill of fuel, engine oil, or hydraulic fluid. The implementation of the following mitigative measures will reduce the effects to levels that are not likely significant.

- Servicing will be carried out off site on level terrain and 150 m from any water bodies.
- Emergency response spill kits will be onsite at all times to respond to any accidental spills of deleterious substances in a quick and effective manner (details provided in Permit for Development (Appendix A)).
- Petroleum products will be handled as per *Storage and Handling of Gasoline and Associated Products Regulations, 2003* under the *Environmental Protection Act (O.C. 2003-225)*.
- Spill response training will be provided to employees operating heavy equipment.

4.5 Operation

Typical excavation methods will be employed to collect the overburden materials (sand and gravel) at the proposed site. The operation of the quarry will include the excavation and loading of the native sand and gravel materials at the working face of the pit, crushing/screening, and transportation of these materials for use off site for various projects in and around the Clarenville area. Waste and oversized rock will also be stockpiled for future use.

Appropriate ditching and settling basins, as required, will be maintained on site to ensure silt and general site run-off is controlled and does not adversely affect the surrounding environment. In addition, perimeter ditching, as required, will be located to prevent migration of surface water drainage from non-operating and off-site areas into operating areas. The ground and facilities will be maintained according to provincial and municipal environmental health and safety standards and regulations.

Equipment on site will include:

- Tracked excavator (access road upgrade and loading at the working face)
- Tandem dump trucks (material dump trucks)
- Front end loader (material handling)
- Mobile crusher-screener

The pit operation will typically run from April to November, in accordance with demand for quarry products. The quarry could potentially operate for 20 years, which is the maximum term for which a quarry lease can be granted.

4.6 Potential Sources of Pollution during Operation

The potential sources of pollution during operation of the quarry include noise, air emissions, waste and litter, site drainage, and accidental release of hydrocarbons from heavy equipment.

4.6.1 Air Quality/Noise

There is the potential that Operation activities will result in an increase in noise, emissions and dusting. Disruptions related to air quality or noise is expected to be minimal and not likely significant with the following mitigation measures implemented:

- Operational activities will be carried out during daylight hours to avoid disturbances to local users.
- Machinery will be well muffled and comply with all applicable provincial and municipal noise bylaws.
- All equipment will have appropriate emission controls.
- All machinery will follow designated project routes and be properly maintained.
- Dust control measures, such as water applications, will be provided if required.

4.6.2 Waste and Litter

Construction of the quarry will result in the generation of domestic waste. The effects of waste and litter on the surrounding environment are not likely significant with the following mitigation measures implemented.

- All waste materials will be recycled or be disposed of according to Provincial Waste Management Regulations.
- Sewage will be handled by an approved portable facility and the holding tanks will be emptied by a pump truck on a regular basis and disposed of in an appropriate manner.

4.6.3 Site Run-off

Operational activities could result in the mobilization of onsite soils, especially during heavy precipitation events. The implementation of the following mitigative measures will reduce the effects to levels that are not likely significant.

- Work will be scheduled to avoid periods of anticipated/known heavy precipitation.
- Erosion control structures (e.g. temporary matting, geotextile filter fabric, settling ponds) will be used, as appropriate to prevent erosion and release of sediment and/or sediment laden water.
- Exposed soil areas will be minimized by limiting the area exposed at any one time and by limiting the amount of time that any area is exposed.

4.6.4 Accidents and Malfunctions

Accidents and/or malfunctions of heavy equipment could result in a spill of fuel, engine oil, or hydraulic fluid. The implementation of the following mitigative measures will reduce the effects to levels that are not likely significant.

- Servicing will be carried out off site on level terrain and 150 m from any water bodies.
- Emergency response spill kits will be onsite at all times to respond to any accidental spills of deleterious substances in a quick and effective manner (details provided in Permit for Development (Appendix A)).
- Petroleum products will be handled as per *Storage and Handling of Gasoline and Associated Products Regulations, 2003* under the *Environmental Protection Act (O.C. 2003-225)*.
- Spill response training will be provided to employees operating heavy equipment.

4.7 Potential Resource Conflicts during Operation

The proposed quarry site is located within the Shoal Harbour River Protected Public Water Supply Area. With the proper environmental protection measures in place, the proposed quarry will not have an impact on the protected water supply area. Environmental protection measures include:

- Site drainage will be controlled by ditching.
- Erosion will be prevented/mitigated by only clearing off land in a progressive manner as the quarry advances.
- Sedimentation will be controlled by using silt fences along and waterbodies and around grubbing stockpiles.
- A buffer zone of at least 50 m will be maintained around waterbodies.
- No fuel will be stored on site.
- Sewage disposal systems will be approved by the Department of Government Services.
- Waste materials will be taken away on a daily basis.
- Spill kits will be maintained throughout the site.
- Spill response training will be provided to employees operating heavy equipment.

A permit for development has been obtained from the Water Resources Management Division permitting the development of the quarry in the Shoal Harbour River Public Water Supply Area. All terms and conditions associated with the permit will be adhered to (Appendix A).

4.8 Decommissioning/Rehabilitation

As per general conditions of the permit for development, (Appendix A), the project will be restored to a state that resembles local natural conditions (PWSA General Condition #2). Site decommissioning and rehabilitation shall be in accordance with standard pit operations, including:

- Upon completion of all pit activities, all pit slopes will be graded to a 30° slope.
- Waste overburden will be used for sloping.
- Stockpiled topsoil or other organic material will be spread over the entire excavated area and seeding will be completed to revegetate the area.

4.9 Occupations

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

4.9.1 Construction Phase

- 1 Site Foreman/Supervisor (7217).
- 1 Heavy Equipment Operator (7421)

4.9.2 Operations Phase

- 1 Pit Manager (0811)
- 1 Pit Foreman/supervisor (8221)
- 5 Heavy Equipment Operators – 2 Excavators, 1 Loader, 1 Crusher (7421)
- 3 Truck Drivers (7411)
- 2 Heavy Equipment Mechanics (7312) located offsite

4.10 Project Related Documents

Appendix A provides a copy of a previously issued Permit for Development in a Protected Water Supply Area.

5.0 APPROVAL OF THE UNDERTAKING

The following permits and approvals will be required for this project to proceed:

- *Environmental Protection Act – Assessment Regulations*: Permit to Proceed
- *Quarry Materials Act and Quarry Minerals Regulations*: Quarry Permit/Lease
- *Water Resources Act*: Permit for Development in a Protected Water Supply Area
- *Forestry Act*: Commercial Cutting and Operating Permit

6.0 SCHEDULE

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

7.0 FUNDING

The funding for this project will be solely provided by J-1 Contracting Limited.

8.0 SUBMISSION

Date

Name: Jim Brown

Position: Chief Executive Officer

9.0 CLOSURE

This document has been prepared for the exclusive use of J-1 Contracting Limited by AMEC Environment & Infrastructure, a division of AMEC Americas Limited (AMEC). The project was conducted using standard practices and in accordance with the Standard Terms and Conditions made as part of our contract with J-1 Contracting Limited, as well as verbal and written requests from the client. No further warranty, expressed or implied, is made. The conclusions presented herein are based solely upon the scope of services and time and budgetary limitations described in our contract. Any use which a third party makes of this document, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. AMEC Environment and Infrastructure accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this document.

Appendix A

RECEIVED APR 11 2011

PERMIT FOR DEVELOPMENT

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, Section(s) 39

Date: MARCH 31, 2011

File No: 550-01-01-054
Permit No: PRO5751-2011

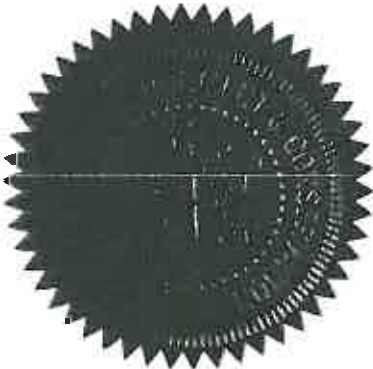
Proponent: J-1 Contracting
PO Box 9068
261 Trans Canada Highway
Clarenville NL A5A 2C2

Attention: Jim Brown

Re: Clarenville-Quarry-Shoal Harbour River PWSA-J-1 Contracting Ltd.

Permission is hereby given for: **Quarry (29.1ha) in the Shoal Harbour River PWSA (used by the Town of Clarenville) with reference to the application dated Jan 24, 2011**

- This permit does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies.
- The proponent must obtain the approval of the Crown Lands Division of the Department of Environment and Conservation if the project is being carried out on Crown Land.
- This permit is subject to the terms and conditions indicated in Appendix A (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this permit must be obtained from the Department of Environment and Conservation under Section 49 of the *Water Resources Act*.
- Failure to comply with the terms and conditions will render this permit null and void, place the proponent and their agent(s) in violation of the *Water Resources Act* and make the proponent responsible for taking any remedial measures as may be prescribed by this Department.




MINISTER

APPENDIX A
Terms and Conditions for Environmental Permit

Clarenville-Quarry-Shoal Harbour River PWSA-J-1 Contracting Ltd.

PWSA General

1. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
2. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of the Department.
3. All persons working on this project must be informed that they are within a Protected Public Water Supply Area, and must be made aware of all conditions of this Permit. A copy of this Permit must be on site during operations.
4. The attached Completion Report (Appendix B) for Permit No. 5751 must be completed and returned to this Department upon completion of the approved works.
5. An undisturbed (no cutting or ground disturbance) buffer zone of at least 50 metres shall be maintained around Shoal Harbour Pond and all other water bodies. Activity or development within these buffer zones is prohibited. All buffer zones must be marked with signs or flagging tape to avoid encroachment into the buffer zones.
6. All waste material is to be collected in refuse containers, and disposed of at an approved waste disposal site outside the Protected Public Water Supply Area in accordance with the *Environmental Protection Act, SNL 2002 cE-14.2*.
7. The permit holder shall not cross, operate in, nor disturb any body of water, either directly by any means of installing a bridge or culvert, without first obtaining a permit under Section 48 of the *Water Resources Act SNL 2002 cW-4.01*.
8. The Department reserves the right to require that the proponent follow, and cover all costs incurred by the proponent or this department, associated with any water quality monitoring program that may be ordered by the Minister for the purpose of ensuring that the water quality is maintained within acceptable guidelines.
9. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.
10. Liaison is to be maintained with the appropriate Municipal Authority and Environmental Scientist. If there are any specific problems (ie sedimentation, fuel spill, other potential water quality impairment), the appropriate Town Manager/Clerk, Mayor, Chair of the Local Service District Committee, or Chair of the Water Supply Committee must be notified immediately at (709) 466-7875. The Environmental Scientist must also be notified immediately at (709)729-4817 or (709)292-4220 or (709)637-2542.
11. Treated wood shall not be used in a water body or within 50 metres of the high water mark of any water body. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
12. The location of the work is highlighted on the Location Map for this Permit attached as Appendix C.
13. This Permit is valid until December 31, 2011.
14. Any changes in water quality resulting directly from this project, rendering the water unsuitable as a public water supply, are the responsibility of the proponent. The Minister may order the proponent to provide an alternate source of potable water to the affected community until water quality returns to an accepted level.
15. All vehicles and equipment must be in good working order with no leaking fuel or oil.
16. All stationary motorized equipment and fuel tanks shall have metal trays, absorbent pads or impervious liners under them to catch any leaking fuel or oil.
17. Drainage from roads and other disturbed areas into any body of water must first be discharged into a settling pond, a vegetated area or pass through a sedimentation fence where all suspended material can settle out before draining into any body of water.

Pits and Quarries

18. Drainage from roads and other disturbed areas must be discharged into a settling pond or a vegetated area where all suspended material can settle out before draining into any body of water.

19. Sign-posts clearly marked Jim Brown must be placed, and remain in place, at the corners of the approved area.
20. This permit is invalid in the absence of a valid Quarry Permit issued by the Mines Branch of the Department of Natural Resources. All conditions of the Quarry Permit must be strictly adhered to provided that those terms and conditions do not conflict with any terms and conditions of this Permit.
21. The area of the aggregate extraction operation is limited to 29.1 hectares. There shall be no quarry activity, nor the removal of topsoil outside the approved 29.1 hectare block.
22. Stumps, organic material and topsoil which are stripped from the site, shall be stockpiled, and used to rehabilitate the site when the operation is complete. Slopes and other disturbed areas which will no longer be used shall be graded to a slope of 2 to 1 (2 horizontal to 1 vertical) to facilitate revegetation, spread with organic material and topsoil, and seeded or Hydroseeded within 30 days of the expiry of the quarry permit.
23. The pit must be maintained and left in a manner such that there is no ponding of water in the pit. Settling ponds, filtering or other suitable treatment must be provided to remove silt and turbidity from water originating from the site before being discharged into receiving waters. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
24. The following operations and activities, associated with this project, will not be permitted anywhere within this Protected Public Water Supply Area:
 - Work Camps or Maintenance Facilities
 - Washing of Aggregate
 - Asphalt Plants
 - Waste Disposal.

Fuel Storage

25. There shall be no bulk fuel storage associated with this project within the protected water supply area. Fuel shall be brought to the operating area in no more than two (2), 205 litre barrels or one (1) 500 litre slip tank. Refueling sites shall be located at least 150 metres from any water body or wetland. The proponent is hereby informed that fuel storage and handling requires a separate approval under the *Storage and Handling of Gasoline and Associated Products Regulations, CNR 775/96*.
26. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist and the appropriate Municipal Authority or Watershed Management Committee by calling 729-4817 and (709) 466-7875 respectively. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at (709) 722-2083 (call collect) or 1-800-563-9089.
27. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refuelled. The kit must contain the following:
 - One hand operated fuel pump
 - One recovery container such an empty 205 litre drum
 - One shovel
 - One pick ax
 - Five metres of containment boom
 - Five absorbent pads
 - Twenty-five litres of loose absorbent material
28. Refueling sites shall be located at least 150 metres from any water body or wetland.

- cc: Town of Clarenville
Attn. Marie Blackmore, Town Clerk
99 Pleasant Street
Clarenville NL A5A 1V9
- cc: AMEC Earth & Environmental
Shaun Garland
P.O. Box 13216
133 Crosbie Rd.
St. John's, NL A1B 4A5
- cc: Mr. Fred Kirby
Mines Branch
Mineral Lands Division
Department of Natrual Resources
Natural Resources Building
PO Box 8700
St. John's NL A1B 4J6
- cc: Mr. Floyd Barnes
Environmental Scientist, Water Resources Management Division
Department of Environment and Conservation
P O Box 8700
St. John's NL A1B 4J6
- cc: Mr. Robert Picco, P. Eng.
Manager, Surface Water Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6

Appendix B - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, Section(s) 39

Date: **MARCH 31, 2011**

File No: **550-01-01-054**
Permit No: **PRO5751-2011**

Proponent: **J-1 Contracting**
PO Box 9068
261 Trans Canada Highway
Clarenville NL A5A 2C2

Attention: **Jim Brown**

Re: **Clarenville-Quarry-Shoal Harbour River PWSA-J-1 Contracting Ltd.**

Permission was given for: **Quarry (29.1ha) in the Shoal Harbour River PWSA (used by the Town of Clarenville) with reference to the application dated Jan 24, 2011**

I (the proponent named above or agent authorized to represent the proponent) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment and Conservation and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____

Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

APPENDIX C
Location Map for Environmental Permit

