

Assessment Section
Oceans and Habitat Division
Gulf Region
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VIA FAX

Our file #:
5303-3-03-001

Mrs. Cheryl L. Benjamin
Environmental Assessment Officer
Nova Scotia Department of Environment
and Labour
P.O. Box 697
Halifax, NS
B3J 2T8

Dear Mrs. Benjamin:

**RE: ENVIRONMENTAL ASSESSMENT REGISTRATION – TROY QUARRY EXTENSION,
TROY, INVERNESS COUNTY**

This office has reviewed the S.W. Weeks Construction Ltd., Troy Quarry, Environmental Assessment Registration Document prepared by Jacques Witford and submitted by S.W. Weeks Construction Limited for the Troy quarry extension at Troy, Inverness County, N.S.

Based on the information that has been provided for our review, it is our understanding that the proposed works is to extend an existing quarry. The quarried operation will take place over several decades and the extension will require 20.2 ha of land on the Northeast side of the existing quarry. The proposed work will require drilling, blasting and stockpiling of rock material such as rhyolite and quartzite. Along and on the proposed quarry land, there is an unnamed brook that drain into St Georges Bay. It is anticipated that the quarry extension will go beyond the brook that is located on the quarry lot. The drilling and the blasting operation will take place twice a year between the months of April to December.

Based on the review of available information, we have noted that the proposed designs for the quarry extension may likely result in the harmful alteration, disruption or destruction of fish habitat. Therefore, this work would contravene under subsection 35(1) of the *Fisheries Act*, which stipulates that: “**No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat**”.

Thus, on page 19, section 5.4.2, Potential Effects and Proposed Mitigation, it is stated, “As the quarry development advances beyond the top of the approach slope to the watercourse, groundwater flow to watercourse will be redirected toward the quarry as the local groundwater divide shifts to the Northeast. Eventually, the quarry will advance through and beyond this low flow and non-fish bearing portion of the watercourse.”

Since the quarry expansion will go beyond the existing watercourse on the existing lot, a 300 meter-breach will be made in the existing watercourse and will destroy that portion of the brook. Moreover, the surface water that feeds that brook will be directed to the pit. As the head of the watershed drainage could be destroyed, there is a possibility that approximately 1.25 km of the brook could be harmfully altered and disrupted. In addition, the change in the drainage water regime at the head of the

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watershed could have an impact on the brook downstream and therefore could result in the harmful alteration, disruption or destruction of fish habitat downstream of the proposed project.

We recommend that the expansion of the quarry does not go beyond the watercourse that is located on the existing lot even though the survey has demonstrated that this portion of the brook is marginal fish habitat. It is still part of the whole watershed water flow regime. Therefore, we recommend that the quarry should not be closer than 30 meters from any watercourse. We recommend that the quarry extension plan be redesigned to avoid any impact on any watercourse.

In addition, we would like to have more information on the sedimentation pond. We would like to know on a plan where exactly the pond is located? Where will the surface water runoff be directed? An Environmental Protection Plan should be developed and should address all mitigation measures taken to control the surface water runoff. We would require more information on how the watershed water flow regime will be impacted if the extension of the quarry extension goes beyond the existing watercourse on the quarry lot. The hydrological impacts on fish and fish habitat downstream of the quarry operation will have to be described.

Therefore, as guided by our national policy, the preferred approach is to redesign and/or to relocate the quarry extension to avoid the impact on the watercourse. As an alternative, an authorisation may be issued under subsection 35(2) of the *Fisheries Act*, which stipulates that: **"No person contravenes subsection 35(1) by causing the alteration, disruption or destruction of fish habitat by any means or under any conditions authorised by the Minister or under regulations made by the Governor in Council under this Act"**.

We request that the proponent complete the attached application for the harmful alteration, disruption or destruction of fish habitat (subsection 35(2)). The proponent should complete and return this document as early as possible. Consequently, we will begin a more thorough evaluation of the fish habitat impacts. The information required above and below will have to be part of this application. This will allow us to determine if an authorisation is required or warranted.

The request for the proponent to submit an application does not imply that an authorisation will be issued. The final decision will be based on site-specific conditions, the sensitivity of local habitats, potential impacts, opportunities for mitigation and the suitability of habitat compensation proposals.

Furthermore, as you are probably aware, the detonation of explosives in or adjacent to fish habitat may result in a number of adverse impacts on fish and their habitats. The use of explosives could cause disturbance, injury and/or death to fish and/or the harmful alteration, disruption or destruction of their habitats, sometimes at a considerable distance from the point of detonation.

Therefore, based on the Section 32 of the *Fisheries Act* which stipulates that: **"No person shall destroy fish by any means other than fishing except as authorised by the Minister or under regulations made by the Governor in Council under this Act."**, the use of explosives in or nearby the unnamed brook that drain into St Georges Bay might require an authorisation under Section 32 of the *Fisheries Act*.

Therefore, in order to make a determination under section 32 of the *Fisheries Act*, we would require more information on the blasting plans, specifications, studies, procedures, samples or other information

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required to permit an assessment of the potential impact of the proposed use of explosives on fish and fish habitat.

- We would like to have the proposed starting and completion dates of each blasting proposal.
- A description of fish species and their habitats likely to be affected by the detonation and an assessment of potential impacts arising from the proposed use of explosives;
- Engineering specifications, Dimensional Drawing, Detail on explosives such as the type; Total weight of explosive to be used (kg), Weight of individual shots/Weight per delay, Shot pattern, Detonation depth, Delay periods (msec), Method of detonation should be provided.
- An assessment of potential impacts arising from the proposed use of explosives and a description of proposed mitigation and/or compensation measures should be part of an Environmental Protection Plan.
- We would like to have a contingency plan developed. In that plan we would require proposed measures to mitigate potential damage to fish and fish habitat.

We encourage the proponent to consult with Denis Haché, DFO Engineer, 506-851-6252 in their blasting planning process. The planning of the project should follow the recommendation of the report Wright, D.G., and G.E. Hopky. 1998, Guidelines for the use of Explosives in or near Canadian Fisheries Waters, Can. Tech. Rep. Fish. Aquat. Sci.2107: iv+ 34p.

Also, the proponent has to be aware, that if authorisations under section 32 and/or 35(2) are needed, the Canadian Environmental Assessment Act (CEAA) is triggered and a CEAA screening of the undertaking could be required.

This office would be pleased to review additional project information, as it becomes available. Please feel free to contact me at (506) 851-2993 should you have any questions or require further clarification.

Sincerely,

Guy Robichaud
Habitat Assessment Biologist

/sa

Attachment

cc Charles MacInnis