



Fisheries and Oceans Pêches et Océans
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April 10, 2007

Your file *Votre référence*

Our file *Notre référence*

07-EIA-8072

Ms. Vanessa Margueratt
Environmental Assessment Officer
Nova Scotia Department of Environment and Labour
5151 Terminal Road
PO Box 697
Halifax, NS
B3J 2T8

Dear Ms. Margueratt:

**Subject: “SHAW RESOURCES- A Member of the Shaw Group Limited-
Proposed Lovett Road Aggregate Pit Expansion, February 5, 2007”.**

Fisheries and Oceans Canada (DFO) – Habitat Protection and Sustainable Development (HPSD) Division has completed the review of the aforementioned document (the Report). DFO’s review has focused on potential impacts to fish and fish habitat.

The following comments are related to information, planning or contingency planning deficiencies that should be addressed by the proponent:

- Water Budget, Groundwater and Surface Water Management
 - The proximity of the proposal to Tupper Brook is a concern. Tupper Brook is a tributary to the Cornwallis River and supports inner Bay of Fundy Atlantic salmon, a species listed as endangered pursuant to the *Species at Risk Act*.
 - The groundwater monitoring well system (to be finalized) should take into account potential groundwater impacts to Tupper Brook and the Cornwallis River which may in turn affect surface flows (velocity, temperature and volume). The monitoring well system should be designed to ensure that changes in groundwater flow patterns and water quality are detected proactively such that mitigation measures can be employed, prior to any adverse impacts to fish habitat occur. This would not only include monitoring of groundwater flows to the respective water bodies but also monitoring stations within the watercourses themselves to assess flow, up welling, wetted perimeter of watercourse (base flow) and temperature. A baseline assessment of these attributes should be undertaken and assessed by DFO prior to any expansion of the quarry.
 - The intent of the groundwater monitoring program as described on pg. 172 of the Report should reflect fish and fish habitat management objectives.

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- What is the contingency plan for water requirements during the summer and fall months when groundwater seepage into the pit may be minimal or non-existent? Are water withdrawal permits being considered for nearby watercourses?
- Sediment Erosion and Control
 - DFO appreciates efforts to ensure that appropriate erosion control measures are in place. The primary mitigation measure to avoid impacts of this nature (sedimentation of fish habitat) is to ensure that dirty water is not allowed to mix with clean. Ensuring suitable measures to contain water on site is critical and DFO awaits final designs for site sediment and erosion control.
- Adaptive Management- Phased Development
 - A phased approach to project development would allow for an adaptive approach to monitoring and management of potential effects to surface water and groundwater resources which in turn may impact fish habitat. Linking site expansion to environmental effects management performance criteria is an effective mitigation strategy to deal with uncertainties and ensure sustainable development. DFO looks forward to further dialogue with the proponents and the NS Department of Environment in this regard.
 - It is recommended that the performance indicators listed on pg. 67 of the Report are re-visited to more clearly define what undesirable impacts may be (i.e. for fish habitat, reductions in base flow of 10% would provide a caution to the Proponent that activities are impacting groundwater supplies to fish habitat. Conversely, a reduction of 30% would indicate an impact has occurred). DFO is available to discuss performance indicators for fish and fish habitat.
- Additional Information
 - As indicated on pg. 64 of the Report, little knowledge of groundwater gradients is available to the proponents and requires further study. DFO awaits final site designs (proposed pit areas, overburden, stockpiles etc...) hydrology reports and groundwater monitoring plan prior to making determinations pursuant to the *Fisheries Act* and *Species at Risk Act* with respect to fish and fish habitat.

Should you have any questions or comments, please contact myself directly by telephone at (902) 426-1269, by fax at (902) 426-1489, or by e-mail at crockerj@dfo-mpo.gc.ca.

Yours sincerely,

Original Signed by
Joe Crocker
Habitat Assessment Biologist

c.c.: T. Wheaton- AHC SWNS