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July 26, 2007

Your file *Votre référence*

Our file *Notre référence*

07-EIA-065

Mr. Peter Geddes
Environmental Assessment Officer
Nova Scotia Department of Environment and Labour
5151 Terminal Road
PO Box 697
Halifax, NS
B3J 2T8

Dear Mr. Geddes:

Subject: “Proposed Glenholme Gravel Pit Expansion Development, M.S.D. Enterprises, Glenholme, Colchester County, NS”.

Fisheries and Oceans Canada (DFO) – Habitat Protection and Sustainable Development (HPSD) Division has completed the review of the document “Environmental Assessment Registration- Glenholme Gravel Pit Expansion Development, FINAL Report, AMEC Earth and Environmental, June 2007”, (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
 - Throughout the document the Proponent suggests that excavation will not occur below the groundwater table and this is the basis for several conclusions in the Report with respect to impacts to fish habitat. Notwithstanding this, data presented in Section 5.0, Table 5-1 on page 43 shows that minimum, average and median depth for groundwater in the area for the proposed pits ranges from 0.3 to 9 meters below surface. With a pit depth of 6-12 meters it is unclear how the proponent will ensure that the groundwater table is not excavated.
 - From data presented in the Report it is clear that both pit sites serve as groundwater recharge areas whereas McCurdy Creek is identified as the groundwater discharge zone. Therefore, groundwater and surface waters from the proposed pit areas serve to support fish habitat and are considered to be connected. In previous comments, DFO requested that the groundwater monitoring well system for local domestic wells take into account potential

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groundwater impacts to McCurdy Creek. Often, disruptions to groundwater flows can adversely affect surface water regimes such that impacts to fish habitat occur. DFO has previously suggested that 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. This would include monitoring stations within the watercourses themselves to assess flow velocities, upwelling, wetted perimeter of watercourse (base flow) and temperature. While DFO appreciates the Proponent's intention to not excavate the floor of the pit below the water table, this Department still recommends that a baseline assessment of these parameters be undertaken in McCurdy Creek and assessed by DFO prior to expansion of the quarry.

- There is no mention of contingency plans for water requirements during the summer and fall months when groundwater seepage and surface water runoff into the pit may be minimal or non-existent. Furthermore, given the Proponent's intention to not excavate below the pit floor and to divert surface waters away from the pit, where will the water come from for the closed, re-circulating wash facilities? Are water withdrawal permits being considered for nearby watercourses or for groundwater extraction?
- Sediment Erosion and Control
 - DFO appreciates efforts to ensure that appropriate erosion control measures are in place. Throughout the document reference is made to the construction of swales, berms and ditches however plans have not been provided. DFO awaits final designs for on-site and offsite (outside the active pit area) sediment and erosion control measures.
- 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.

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.: C. Hominick– AHC ENS