



ALPHA ENVIRONMENTAL SERVICES INC.

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July 12, 2012

Mr. Dave Bell
Lindsay Environmental Services Group
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RE: AES Hydrogeological Assessment Response to
Severn Sound Environmental Association Peer Review of
Location of Watertable at Sibthorpe Pit
North ½ Lot 80, Concession 1 WRP
Township of Tiny, County of Simcoe
AES File 12-16

Hi Dave:

I have reviewed the above noted Peer Review that was forwarded to me recently. The review states that "The status of the surrounding private wells has not been investigated with respect to existing well construction issues, quality and quantity problems as a 'pre-survey'. It is recommended that a pre-survey of private wells in the vicinity be completed prior to commencement of Phase 1. This should be helpful in dealing with any well interference complaints in future."

The Alpha Environmental Services Inc. (AES) Letter of Opinion states, "If there is a well interference complaint (water quantity and/or water quality), Cedarhurst should be notified immediately and an investigation should be undertaken to determine the cause of the problem." Unknown to the reviewer is the fact that the proponent applied for and received from the Ministry of the Environment (MOE) a Permit to Take Water (PTTW) to operate a wash plant and well to supplement wash water from the wash pond at the adjacent Teedon Pit shown on the site plan. A copy of that PTTW (Number 4317-87CNZN) is included. The concept is to use the wash plant on the Teedon site to wash aggregate removed from both the Sibthorpe and Teedon sites.

Under Section 5. Impacts of the Water Taking, the PTTW indicates the following:

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

Also unknown to the reviewer, Under Section 4. Monitoring, the PTTW (Number 4317-87CNZN, Appendix A) indicates the following:

- 4.1 The Permit Holder shall install and maintain flow meters on each source listed in Table A. Meter readings for each source shall be recorded daily and available for inspection by a Provincial Officer upon his or her request.
- 4.2 The Permit Holder shall install and maintain a continuous water level recorder within production well, PW1-09 prior to the start of any taking of water from that source. Additional water level recorders shall be installed and maintained in at least one onsite well of comparable depth to PW1-09 and one onsite well terminating within the shallower aquifer unit underlying this site. Data collected shall be available to Ministry staff at any time upon request.

To satisfy these conditions of the PTTW, flow meters have been installed on the wash pond pump and on PW1-09 (MOE Well ID Number 7124734). Meter readings from each source are recorded daily and available for inspection by a Provincial Officer upon his or her request. A continuous water level recorder was installed within production well PW1-09, reading water levels every four hours. In addition, MW1-09 (MOE Well ID Number 7124729) and MW1 (MOE Well ID Number 7054134) have had Leveloggers reading water levels at least every 4 hours since June 3 and July 7, 2009, respectively.

MW4 (MOE Well ID Number 7150631) was installed in the shallower aquifer to a depth of 17.68m (58 feet) on August 5, 2010 and a Levellogger was installed on August 19, 2010 collecting water level data every 4 hours. A deep well was installed on the former Sibthorpe property (MOE Well ID

Number 7150632) on August 4, 2010 to a depth of 79.2m (260 feet) and a Levellogger was installed on August 19, 2010 collecting water level data every 4 hours. While not required by the PTTW, Levelloggers that were installed in private wells (MOE Well ID Numbers 5717709 and 5725425) on Darby Road during the pumping test have remained in place, collecting water level data every 4 hours. All of this data has been provided to the MOE on an annual basis. Insignificant variations in the watertable elevation have been recorded over the past three years of operation. This has been going on for the last three years as part of the MOE PTTW monitoring program that will continue as long as the site is in operation.

The reviewer states that a pre-survey should be used to locate domestic wells in the vicinity of the site. This survey should include existing well construction issues, quality and quantity problems.

The domestic wells in the vicinity of the site have been located using both MOE well records and a door-to-door survey. If any complaint does arise, which is highly unlikely, an investigation, as per the PTTW conditions, will be undertaken to determine the cause of the problem. If activity at the pit is found to be the cause of the complaint, an appropriate remediation plan will be implemented to the satisfaction of the MOE and the MNR.

Hopefully the above remarks will clarify the issues raised by the reviewer. If you have any further questions or comments, please contact the undersigned at your convenience.

Yours truly

ALPHA ENVIRONMENTAL SERVICES INC.



ROSS CAMPBELL
HYDROGEOLOGIST

c. Doug Leslie; Les Selby; Dennis Simmons; AES