

MOE rejects quarry pump test results
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Unacceptable data results from pump tests conducted by St. Marys Cement (SMC) three months ago have prompted the Ministry of Environment (MOE) to instruct the aggregate company to repeat the tests.

Excessive rainfall during the eight-day test period in July was “probably the main reason” that the results of the Phase 1 testing are not acceptable “in providing an adequate baseline to help characterize local conditions of groundwater,” said Carl Slater, technical support manager for the MOE’s West Central Region office in Hamilton. The tests were conducted at the site of the proposed quarry on the corner of the 11th Concession East and Milbrough Line to help determine the impact the quarry could have on water resources in the area. The data is also needed to establish a baseline against which predictions on the benefit of remedial proposals, such as a Groundwater Recirculation System (GRS), can be compared.

SMC has proposed a GRS as a way of mitigating the effects that dewatering the quarry will have on area groundwater levels. The system, scheduled to be tested in the final phases of the pump tests, involves two procedures, one assessing the passive return of water pumped out of the quarry into the groundwater system through a trench and the other, using pressurized injection wells to return the water to the groundwater system.

The tests, which are to be done in three phases, are being conducted under a Permit To Take Water (PTTW) granted to St. Marys by the MOE. The permit expires on June 30, 2009.

Given that the Phase 1 tests must now be repeated as Phase 2, the process has been set back and the MOE is now asking the aggregate company for assurances that the remaining tests can be completed before the permit expires. Considerable time elapses between each phase as data collected from the tests must be reviewed by various agencies and the ministry must give written approval before each phase proceeds.

Slater told the Review Tuesday that no extensions will be granted to the permit’s term. “If the necessary work cannot be completed (by June 30), they’ll have to apply for another permit,” he said.

As a result of the MOE’s decision, St. Marys has sent technical data and the rationale of the ministry’s decision to its hydrogeology consultants, Gartner Lee, asking that they review the information and suggest how to proceed on the next two phases of testing.

Asked whether she was surprised by the turn of events, St. Marys policy and planning manager Jennifer Tuck said, “At this point, nothing is surprising. We’ll work through the process and respond to agencies’ concerns.” Company officials hope to meet with MOE representatives after St. Marys hears from its consultants, and then decide how to proceed, she said.

Not surprised by the decision are members of FORCE (Friends of Rural Communities and the Environment). “It was clear to our community from the start, given the weather conditions, that the test data would be unreliable,” FORCE chair Graham Flint said, commending the ministry

for “taking decisive action to ensure sound science.”

The Phase 1 tests were done during a period of significant rainfall, with 155mm of rain falling during the course of the testing. FORCE’s hydrogeologist, Dr. Ken Raven of Intera Engineering Ltd., noted that figure is nearly 50 per cent higher than the 93mm of rain that fell during a November 2004 pumping test by St. Marys, the results of which were questioned by the MOE.

But excessive rainfall wasn’t the only factor affecting test results, Flint charged. The low volume of water pumped during the tests also calls the data into question, he said. While the permit allowed for water to be pumped from the ground at 50 litres per second, the tests were conducted at 10 litres per second. Even at 50 litres, the amount of water to be pumped was dropped substantially from the 150L/sec that had been talked about in earlier discussions, he argued.

Slater, however, said the volume of water pumped during the tests was not a factor contributing to the unacceptability of the data. Technical experts, including the peer expert consulted, said it wasn’t necessary to pump large quantities of water to get acceptable data. The need is for “a measurable impact (that can be used) to model and develop characteristics of the local groundwater setting,” he said.

Also causing concern in the anti-quarry camp is St. Marys’ recent request to change its GRS testing, which was to be done during the final two phases. Slater said the ministry has yet to receive a definitive plan on the revised proposal, but Tuck said the company is only asking to switch the order of the testing, proceeding with the pressurized injection well testing first, followed by the trench system testing. The requested change in sequence was in response to residents’ concerns that the recharge trench technology is unproven, she said, while the recharge well system is currently being employed at two other locations, including the Dufferin Quarry in Milton.

If St. Marys proceeds with the change, the MOE has indicated that it will post the proposal on the Environmental Registry for 30 days to provide an opportunity for public input. If approved, the proposal would constitute Phase 3 of the pumping test.