

ENVIRONMENTAL REVIEW TRIBUNAL

Submission by Participant Lakeridge Citizens for Clean Water

Comments on proposed settlement agreement (June 21, 2011) between 2241960 Ontario Inc. and Director MOE

Various documents including the Phase II report¹ and the Amended Work Plan² describe the Earthworx site at 13471 Lakeridge Road as “a former aggregate extraction pit”. However, the location had been rehabilitated into a grassland ranch with three wetlands or ponds frequented by local wildlife. The Oak Ridges Moraine Conservation Plan places the site within an Area of High Aquifer Vulnerability. Regulation 153/04 classifies³ the site as an environmentally sensitive area because the property immediately to the south is Oak Ridges Moraine natural core area. Along the roads to the south and east of the site are a dozen or more homes that rely on wells.

As such, the Lakeridge Citizens for Clean Water (LCCW) contend that waste soil should not be dumped at the site, and if it is, it must be closely monitored. With respect to the three items before the ERT, LCCW provides the following comments.

Order item 10 – weekly audit samples

If dumping were to resume, it would be reasonable to assume an average of 250 trucks a day could be dumping soil on the site 6 days a week⁴. A weekly sample, if all trucks were from the same site, would represent a sampling rate of 0.07%. The sampling and analysis cost for a weekly sample would be two thousand dollars at most, representing only 1.6% of the site’s weekly revenue⁵. MOE’s fact sheet⁶ on bringing soil to a RSC property says there must be one sample analyzed per 160 cubic meters. As this site was a clean site, surely it deserves at least the same level of protection and requires one sample per 160 cubic meters, dropping to one per 300 cubic meters after 5000 cubic meters.

Order item 13 – segregating new soil deposits

LCCW agrees with the necessity of this requirement. Previous experience⁷ has shown that if an audit sample does reveal heavy contamination, it can be difficult to locate the offending load(s) for additional testing and removal.

¹ Phase II Environmental Site Assessment Report; prepared by D.L. Services Inc; March 15, 2011

² Amended Work Plan dated June 14, 2011 as submitted with the settlement agreement

³ Ontario regulation 153/04 (a) and Subsection (3) - 8

⁴ Decision of Divisional Court May 18, 2011 paragraph 11

⁵ *ibid*

⁶ PIBS 8429e – April 2011

⁷ Provincial Officer’s Order – Amendment No. 3 March 7, 2011– page 2 – para 1

Order item 15 – additional sampling requirements

The original site alteration permit provided to Earthworx by Scugog allowed for soils of Table 1 to 3 to be dumped. Except for a cessation of 6 weeks, dumping of 250 trucks a day occurred from May 2010 until the end of October when Earthworx committed⁸ to dump only Table 1&2. The Provincial Officer noted in his first report⁹ that Earthworx did not record the location of where loads were deposited and that the soil reports Earthworx relied on to assess soil quality were “incomplete, inadequate and inaccurate.”¹⁰ One of four soil samples collected September 29 for the township and reviewed by MOE exceeded Table 3¹¹. Therefore, LCCW contends that approximately 25,000 truckloads of soils up to and possibly exceeding Table 3 were dumped before the site was under the orders of MOE. This is significant because Table 3 soils create a non-potable groundwater property, which is permitted¹² only if it and neighboring properties are serviced by a municipal drinking water system, which they are not, and not likely ever to be. Therefore, Table 3 soils must be located and removed.

The MOE Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario¹³ describes¹⁴ the main types of sampling plans for soils to be a) simple random sampling, b) stratified random sampling, c) systemic sampling, d) judgment sampling, and e) combination of above. The plan described in the new proposed work plan appears to be a judgment sampling plan. The MOE Guide says, “this method may be useful when the sampler has excellent knowledge of the site”, which LCCW contends is not the case, and “it is usually prudent to combine it with other designs”, which does not appear to be the case. The new proposed work plan places 14 borehole sampling locations at approximately 25 meter spacing over the previously unsampled surface of the pads and analyzes only 1 soil sample from each. The site is non-homogeneous as evidenced by the lack of similarity between the stratigraphy of neighboring boreholes as shown in the Phase II report. The sampling plan does not include the unconsolidated slopes, which especially in the case of pad 3, represents a significant area. Because a dumped load is only a few meters wide LCCW requests a denser sampling pattern that is scientifically defensible. Visual Sample Plan¹⁵ from Pacific Northwest National Laboratory is one of many tools that may be applicable.

The proposed work plan assumes testing to meet Table 2 standards. LCCW contends that Table 1 would be appropriate and the Canadian Council of Ministers of the Environment agree with us.

Soil standards are for the cleanup of contaminated sites and must not be used to judge the contamination of clean sites. They represent “clean down to” levels at contaminated sites and not “pollute up to” levels for less contaminated sites. (CCME 1996)

⁸ letter Oct 29, 2010 – Mr. Tidball to MOE

⁹ Provincial Officer Report October 25, 2010

¹⁰ ibid – page 3 – last sentence

¹¹ ibid - Page 4 para 5

¹² Ontario Regulation 153/04 page 26

¹³ 1996 edition and 2006 draft

¹⁴ ibid pages 19-20

¹⁵ http://www.pnl.gov/main/publications/external/technical_reports/PNNL-16939.pdf

The following three paragraphs are additional justifications for permitting only Table 1.

Effective July 1, MOE will allow soils more contaminated than Table 1 to be deposited at RSC sites **if** there was an historic potentially contaminating activity. Prior to April 2010, the site did not have a potentially contaminating activity, and although not a RSC site, LCCW believes it deserves the same protection.

The Certificate of Approval¹⁶ that MOE granted to Direct Line Environmental Corp, which provided material dumped at the site, prohibits **any** soil processed by Direct Line from being deposited in a sensitive area, one definition¹⁷ of which fits this site as it is located adjacent to Oak Ridges Moraine natural core area. Surely, this implies that Table 2 soils would not be suitable for such an area.

As noted previously, the site is an Area of High Aquifer Vulnerability in the Oak Ridges Moraine Conservation Plan. The Oak Ridges Moraine regulation¹⁸ prohibits a waste disposal site in such an area. The Waste Management regulations of the EPA¹⁹ designate inert fill as a waste, then further define it as inert if it contains no soluble chemical substances. LCCW argues that soils other than Table 1 contain soluble chemical substances and therefore could be considered as a waste in this case and thus prohibited from this site.

The work plan relies on Earthworx and the driller to assess when the borehole reaches the native soil. There does exist a pre-dumping topographic survey of the site that should be used to determine drilling depths.

MOE had requested of Earthworx “a groundwater characterization program including intrusive investigation to characterize the depth to groundwater, groundwater flow direction and a survey of on and off site groundwater uses and/or the relation to surface water features for all groundwater aquifers at the Site that may be impacted by the Earthworx activities at the Site.”²⁰ LCCW contends that the groundwater characterization done in the Phase II report and planned in the new proposed work plan to be inadequate in the following points:

- survey of off-site groundwater uses;
- relating the elevation of the fill to the elevation of the water table;
- consideration of the groundwater information beyond the site boundaries;
- identification of aquifers and aquitards;
- estimation of hydraulic conductivity of the fill and the aquifer; and
- relationship of the water table to the ponded surface water at the foot of pad 3.

Because this is an aquifer at the top of the Oak Ridges Moraine that potentially services many people, LCCW contends that these items must be addressed in the new work plan.

LCCW further contends that given the hydraulic conductivity of gravels as found in this aquifer, can be in hundreds of meters per year, taking one set of groundwater

¹⁶ October 9, 2009 Amendment To Provisional Certificate Of Approval - Waste Disposal Site Number A680301 - clause 35.

¹⁷ Ontario Regulation 153/04 section 41 subsection (3) 8

¹⁸ Ontario Regulation 140/02 clause 29. (1)

¹⁹ EPA – R.R.O. 1990, REGULATION 347

²⁰ Amendment 2 – December 8, 2010 – item 11

samples between now and October 1 is inadequate. LCCW proposes that the work plan require monthly water elevations and groundwater samples be taken.

We leave this in the hands of the Environmental Review Tribunal to review and consider in its deliberations whether or not the agreement between Earthworx and MOE is consistent with legislation and is in the public interest. If elements of this submission have some merit but are inadequately presented, LCCW is prepared to provide additional references and/or submit expert reports.

A handwritten signature in black ink, appearing to read "Ian McLaurin". The signature is fluid and cursive, with the first name "Ian" being larger and more prominent than the last name "McLaurin".

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