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Respectfully Submitted by: Lakeridge Citizens for Clean Water

We are pleased to submit these comments regarding the Ministry of the Environment's document entitled: **Soil Management – A Guide for Best Management Practices**.

We appreciate and respect the complexity of soil management issues in Ontario and are pleased to understand the Ministry's attempt to put forth some guidance. However, specific **regulation** is needed going forward. **There are policy and knowledge gaps when dealing with excess soils that need to be addressed.**

Please note that we will be referring frequently to requirements in Reg. 153/04 (as amended) while commenting on such considerations as soil testing frequencies, soil quality parameters and site condition concerns. We are well aware that this regulation is not prescribed for sites that are not completing a Record of Site Condition. However, we believe that "clean sites" should be given at least the same level of protection that "Brownfield Sites" are afforded under Reg. 153.

From the BMP Page 1:

Regarding Definitions

Please provide a definition for "**commercial fill site**".

Reuse of excess soil is encouraged provided "analysis of the soil is determined that soil is appropriate." Please indicate **what protocol is to be followed regarding the analysis and how to determine if the soil is "appropriate"**. Please list the criteria in which to judge "appropriateness".

From Page 3:

Regarding Determination of Existing Conditions at Receiving Sites

We feel there should be **stronger wording here as existing soil and groundwater quality baselines are needed** in order to determine if one is indeed contaminating the natural environment.

Specific direction is needed on **how to assess the existing conditions on a receiving site**. What are the recommendations if the site is a significant recharge area or high aquifer vulnerability area or well-head protection area, for example? What are the Ministry requirements if the receiving site is considered prime agricultural farmland or is contained in a sensitive part of the Oak Ridges Moraine?

Specific requirements for Groundwater Monitoring Programs should be stressed in this section as well.

From Page 4:

Regarding Appropriate Characterization of Excavated Soils

Further **direction is needed on how to appropriately characterize the soil in terms of sample frequency** related to volume of fill excavated.

We note that for Brownfield excavation for example, Reg. 153 does not indicate any required testing of excavated materials that are removed from the site never to return.

Although some testing is being done of excavated material at these sites, it is well documented that there is uncertainty regarding how the amount and location of testing done on these sites relates to what is actually being excavated. The *Geologic Report, Project No. G023256E1*, concerning the fill from Pier 27 that was deposited at Sideline 14 in Pickering clearly indicates the significant discrepancy on the quality of fill that was deposited on sideline 14 property and the soil tests results from fill tested on the actual Pier 27 property.

A Director's Order (3333-8FN29D-1) for a large fill on Morgan's Rd. in Clarington documented, "...The amount of the sampling was not sufficient and how the sample information relates to the material that was, in fact, deposited at the Site is not clear..." which further illustrates the need to clearly indicate a **minimum** sampling protocol at source sites in the BMP. It is clear that there needs to be accompanying regulation to Reg. 153 so that excavated materials are properly tested. Until that happens, **the BMP should clearly indicate testing frequency for excavated material coming from these Brownfields.**

We agree that:

Soil from the source site should be "accompanied by documentation signed by the QP."

However, the **Ministry needs to develop this document** so the wording is definitive and meaningful, much like the **signed attestations** the QP has to make for certain requirements in the Record of Site Condition.

We agree that:

The source site should "...make available all past environmental site assessment information... ". This will help to ensure regulators understand the potential for contaminated fill originating from certain source sites and ensure there is proper due diligence when dealing with fill from these sites.

From Page 5:

Regarding Public Consultation

Specific direction should be given on what “sufficient public consultation” should entail. Fill operations are often of significant magnitude so as to require the same kind of public consultation that would be required by an environmental assessment for a landfill or the like. They often take place in locations that did not see or were not zoned for that level of industrial activity. The public needs to be given fair time and opportunity to comment.

Regarding Establishment of Pre-fill Site Conditions

And again, specific direction and requirements should be given on how to establish pre-fill site conditions for soil and groundwater quality at a receiving site.

Regarding the Services of a QP

Include the **necessity** to have **regulating agencies** (like municipalities and CAs) **hire their own consultants** to **peer review** any environmental reports, source site reports and soil testing analyses reviewed and approved by the source site QP.

First, it is clear that many municipalities lack the resources and technical expertise in order to understand and analyze soil reports or to determine information that is needed from source site in order to determine acceptability. For example, Pickering staff members reviewed and approved soil reports from Pier 27, and soils from this source site were then deposited at Sideline 14 in Pickering. However, it was later determined by Geologic Inc., the consulting firm hired by the City of Pickering, that the **reports submitted were not representative of the area excavated at Pier 27.** (*Please see Geo-Logic Report Project No. G023256-E1, pgs. 4 and 6*)

Second, it is well documented that despite the best efforts of “Qualified Persons” at receiving sites reviewing and accepting soil reports, there have been numerous instances of unacceptable levels of contamination in soils being discovered at fill sites despite having gone through the approval process of the receiving site QP. The best example of this is the Earthworx site in Scugog where a QP was hired and approved soil reports for incoming soils starting from the beginning of the operation. It was later documented in the *Provincial Officer’s Order 7671-8AGPMT*, that the approved soil reports were “incomplete, inaccurate and inadequate.” In fact, two Phase 2 Site Assessment reports done on the Earthworx property have revealed significant exceedances of soil quality parameters resulting in the recommendation of several hundred truckloads of fill having to be removed. The Ministry is in possession of these Phase 2 Site Assessments for the Earthworx property on Lakeridge Rd. in Scugog.

Regarding Dust and Noise Controls

Specific protocols for dust and noise controls should be listed. Understanding that these factors pose significant social implications, this section needs to be more specific and more considerate of the tremendous impact these conditions have on communities in the vicinity of these industrial operations.

Regarding the Fill Management Plan and Determination of Appropriate Soil Quality Control Parameters

Specific direction should be given on what appropriate soil quality parameters are for “clean fill sites”. We note that various QPs and even Ministry staff differ in their opinions on what constitutes acceptable soil quality parameters at various receiving sites not under reg. 153. It is a reality that the Ministry’s Soil, Groundwater and Sediment Tables are being used outside of reg. 153 as no other tables exist. **In this section of the BMP**, the Ministry should clearly state how these tables are used in the Regulation. The Ministry should indicate that if QP’s are going to use these Tables outside of their prescribed use, than they are to be used, at a minimum, how they are prescribed for the Reg. 153. This would include only Table 1 soils for “clean sites”, as indicated by the MOE Fact Sheet mentioned earlier. As well, Table 1 should be applied for lands containing or adjacent to “Environmentally Sensitive Sites” as defined in Reg. 153. If the Tables are going to be used, a rationale should be given as to how they are being implemented and a Risk Assessment should be done if they are used contrary to how they would normally be used in Reg. 153.

We understand that the MOE has not developed any tables for use with large fill sites outside of Reg. 153. It is also our understanding that the MOE Standards Development Branch has not determined **if** the MOE tables are used **without maintaining** the **assumptions** made when they were created-i.e. volume of soil considered, or distance to groundwater, etc. (*Please see the Rationale for the Development of Soil and Groundwater Standards for use at Contaminated Sites pgs. 15 and 16, 307, and 343 and pg. iv under “additional notes” of the MOE Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act Ministry of the Environment July 27, 2009*) that they **would still be protective** of human and ecological health. As MOE officers are continually recommending MOE Tables for use in fill sites outside Reg. 153 and are not themselves following Table usage in keeping with Reg. 153 requirements, (*Please see Provincial Officer’s Order , 7671-8AGPMT, pg.3 and Director’s Order 333-8FN29D-1 pg.2 –both orders indicate table 2 even though areas , by Reg. 153 definition , would be considered “environmentally sensitive”*) , we feel the MOE has a **responsibility** to work with the models and determine if in fact the concentration levels indicated in the Tables would still be protective of human and ecological health(considering groundwater implications in particular)

From Page 6:

Regarding Audit Sampling Protocols:

MOE should clearly delineate what the minimum sampling protocol should be that would be in keeping with minimum testing frequencies for incoming soils for Reg. 153 sites. The Reg. 153 protocol establishes, at a minimum, at least 1 test for every 160 cubic metres of imported fill from a single source site. "Clean fill sites" should receive no less consideration for the testing of incoming soils than do the "remediated" lands under Reg. 153.

We are not in agreement that the minimum standard should be at least 1 monthly audit sample from each source site. This is not at all in keeping with the testing protocols the Ministry has established for sites receiving fill that are under Ministry regulations. The testing frequencies are further clarified in the MOE Fact Sheet, "Bringing Soil to an RSC Property".

It is apparent that a lack of sufficient monitoring and testing at receiving sites has resulted in the deposition of unacceptable soils at receiving sites. A frequent, consistent, conservative testing program is warranted. A good example to illustrate the need to test incoming fill can be found when considering the Taylor's Rd. fill site in the City of Kawartha Lakes. Fill from this site was documented as having come from a soil remediation facility. A significant amount of testing at the remediation was done and all tests were found to be acceptable. However, independent, audit testing by the MOE was done after concerns were raised by the community. Tests revealed significant exceedances that did not reconcile with the "clean" tests submitted by the facility. *(Please see the Peterborough District MOE Office letter to the City of Kawartha Lakes dated July 25th, 2012.)* Also, significant amounts of inappropriate fill had to be removed from the Clarington site on Morgan's rd. *(this site referred to in Director's Order 333-8FN29D-1) as a result of weekly (not monthly) audit samples taken on incoming soils, as explained by the MOE officer in charge of that site.*

From Page 7

Regarding Soil Banks

We are concerned about what constitutes a "beneficial reuse" of soils from a soil bank. The concern is that the Soil Bank will merely be an added stop for soils on a final destination to a private person's backyard whose actual "need" for significant amounts of soil is to be questioned. We feel specific road projects or infrastructures projects would benefit from this type of system. However, these types of projects would have to be clearly stated. Perhaps a municipally run soil bank *(or "Campus"-Please see the 2012 BLOOM Report entitled, Sustainable Solutions: A Concept for a Soil and Material Management Campus)* where soil seekers have to **pay** for soils for private use while infrastructure projects do not, may deter those whose sole intention is to acquire large quantities of fill strictly as a business for profit. If someone wants to run **a fill dump business**, zoning for that use of land needs to be determined by the

Municipality (with due process) with full consideration of applicable environmental plans and policies. As well, ideally, there should also be the requirement for Compliance Approvals by the Ministry.

We are also uncertain, if soil banks are to accept “clean soils”, why there would be the need for a paved surface on which to deposit the soils as stated in the BMP.

As well, it should be clearly stated what standards are to be used to determine acceptability of soils at a Soil Bank. If the Ministry will not suggest appropriate soil quality parameters, and they have the Standards Development Branch on their team, how will municipalities be able to determine what is acceptable with the very limited or non-existent technical expertise they possess?

Also, we still have **no legal definition from the Ministry for “clean fill” or “contaminated fill”**, only a vague definition for “inert” fill. It is understood that inert fill is exempt from the waste regulation. However, as Table 2 and 3 soils may not technically be considered “inert” according to the definition, there is confusion as to the appropriateness of depositing these soils at a Soil Bank that should only be accepting soils that do not need to be treated, in which case a compliance approval would need to be approved for the Soil Bank.

To sum up, there needs to be direction from the Ministry on what constitutes a “beneficial reuse” of soils and what the allowable soil quality standards would be at a proposed soil bank facility that would not necessitate a Ministry Compliance Approval.

From Page 8

Regarding use of the Ministry’s Soil Standards

As discussed earlier, clear requirements should be listed for those using the MOE Tables as a surrogate at large fill sites not under Reg. 153. The QP should have to document the rationale used in order to determine the appropriateness of the MOE Tables applied. Calculations should be included using the models provided in the Rational document if the assumptions differ from those listed in the Rational Document. Full Risk Assessments should be done if Tables are going to be used **contrary** to how they are prescribed by Reg. 153, i.e., Using Table 2 as opposed to the prescribed Table 1 soils for Environmentally Sensitive Lands.

We would also indicate here as well that the MOE Tables represent “clean down to tables, not pollute up to tables”, as indicated by the Canadian Council of Ministers of the Environment (CCME) Guidelines whose protocols were used in the development of the MOE Tables. *(Please see the document entitled, A Protocol for the Derivation of Environmental and Human Health Soil Quality Guidelines, Section 3, pg. 16.)*

We appreciate the opportunity to comment on this important guideline. We hope to be viewed as valued stakeholders in this process and would appreciate the opportunity to work in collaboration with

the Ministry and other stakeholders to ensure sustainable, environmentally conscious solutions to soil management in Ontario.

All references documented can be provided to the Ministry upon request.