



August 23, 2013
CB709.0

City of Burlington
426 Brant Street
Burlington, ON
L7R 2G2

Attention: Mr. Scott Stewart, C.E.T.
General Manager
Development & Infrastructure Division

Re: **Comments on MOE Letter
Imported Fill Quality
Burlington Executive Airpark**

Dear Mr. Stewart:

Further to your request, Terrapex Environmental Ltd. (Terrapex) is pleased to provide the following comments with respect to the July 23, 2013 letter from the Ministry of the Environment (MOE) regarding fill quality issues at the Burlington Executive Airpark (the Airport). Itemized comments from the MOE letter are provided below in bold italics followed by respective comments by Terrapex.

Item #1

"Ministry Legislation

The City has indicated that the Airpark is not operating in compliance with Ontario's Brownfields Regulation (O.Reg. 153/04) and General – Waste Management Regulation (O.Reg. 347) made pursuant to the Environmental Protection Act (EPA).

The Brownfields regulation is intended for the redevelopment of brownfields, for example, when a property's use is changing from a "less sensitive" to a "more sensitive" land use. In this case, the airport has been in operation since the 1960's and there is no proposal to change it to a more sensitive land use. As such, the Brownfields regulation does not apply and a Record of Site Condition is not required for this property."

While we agree that Ontario Regulation 153/04 does not strictly apply to conditions at the Airport site, as there is no Record of Site Condition required or proposed change of land use, Terrapex re-iterates that procedures and protocols contained in O.Reg.153/04 are the industry standard by which environmental assessment and remedial works are conducted, and the generic risk-based Site Condition Standards referenced by the regulation are the industry standard for evaluation for soil, ground water, and sediment quality in Ontario.

O.Reg. 153/04 is the *de facto* regulation governing placement, testing, and quality of fill materials in Ontario, in lieu of any other suitable provincial or federal regulation, and therefore has relevance to fill quality at this site. In fact, from our review of the Phase I and II environmental assessment reports prepared by Pinchin Environmental Ltd., it appears Airpark's own consultant has considered O.Reg. 153/04 applicable to the site.

While a small percentage of environmental assessment or remediation projects actually culminate in filing of a Record of Site Condition, it is our experience that O.Reg. 153/04 remains the standard of practice. For instance, the Technical Standards and Safety Authority (TSSA) *Environmental Management Protocol* specifically cites O.Reg. 153/04, as does the MOE's own *Soil Management – A Guide for Best Management Practices* discussed in Item #3 below.

Neither of these technical documents pertains to Records of Site Condition, yet both incorporate at least some portion of O.Reg. 153/04. Within the private sector, financial institutions in Ontario recognize O.Reg. 153/04 as the definitive guidance for determining the environmental quality of a given site in examining risks with respect to lending. In federal jurisdictions, the federal government advocates the use of O.Reg.153/04 in situations where pertinent federal regulations are absent in Ontario. Finally, it is our experience that in dealing with the MOE itself, environmental issues are consistently considered within the context of O.Reg.153/04 by the Ministry, if not by the letter, then at least within the spirit of the regulation.

“With respect to O.Reg.347 (General – Waste Management), Terrapex has provided the City with an interpretation that the fill brought to the Airpark is considered a waste and that the deposit of this fill at the Airpark site has resulted in the establishment of an unlicensed waste disposal site. Terrapex indicates that the fill is classified as a waste because sample results exceed the Table 1 standards.

The Table 1 standards represent the background concentrations of metals and other substances in typical Ontario soil not affected by industry or other sources of contamination. Exceedance of soil standards found in the Brownfields regulation is not sufficient to deem soil to be a waste. Further, it is not correct to refer to the Airpark as an unlicensed waste disposal site simply on the basis that it has accepted soil.”

The EPA (Part V Section 25) defines a “waste” as:

“includes ashes, garbage, domestic waste, industrial waste, or municipal refuse and such other materials as designated in the regulations”.

Ontario Regulation 347 (General – Waste Management) (Section 2) designates several categories and types of waste, including “inert fill” which is defined (Section 1) as:

“...earth or rock fill or waste of a similar nature that contains no putrescible material or soluble or decomposable chemical substances”.

O.Reg.347 (Section 3) actually exempts “inert fill” from Part V of the EPA and O.Reg.347; however, the MOE has clarified on several occasions during conversations with this Qualified Person (QP) and other QPs at Terrapex over the years, that “inert fill” is further defined as soils with chemical concentrations of contaminants meeting the Table 1 Background Site Condition Standards, and only in this case is the fill material considered inert and exempt from Part V of the EPA. It therefore follows logically that earth fill, the quality of which does not meet these standards, is not considered inert, and is indeed considered a waste which is not exempt from Part V of the EPA or O.Reg.347.

Part V (Section 25) of the EPA defines a “waste disposal site” as:

“(a) any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed, and (b) any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing referred to in clause (a)”.

Part V (Section 40 – Prohibition as to deposit of waste) indicates that:

“No person shall deposit, or cause, permit or arrange for the deposit of, waste upon, in, into or through any land or land covered by water or in any building that is not a waste disposal site for which an environmental compliance approval or renewable energy approval has been issued or a registration under Part II.2 is in effect and except in accordance with the terms and conditions of the approval or the regulation made for the purposes of Part II.2. 2010, c.16, Sched. 7, s. 2 (30).”

Based on these definitions of “waste” and “waste disposal site”, it is Terrapex’s suggestion that, by the letter of the law and contrary to the MOE’s statement that **“Exceedance of soil standards found in the Brownfields regulation is not sufficient to deem soil to be a waste”**, exceedances of the Table 1 standards are indeed sufficient to characterize at least some of the soil as waste.

Furthermore, we conducted additional review of the 55 Airpark soil quality reports that were originally provided to Terrapex. At least some of the soil samples from roughly 70% of shipping sites exceeded the Table 1 standards (residential/parkland/institutional/industrial/commercial/community property use) for one or more of the following contaminants of concern: electrical conductivity (EC), sodium adsorption ratio (SAR), petroleum hydrocarbons in the F1, F2, F3, and F4 fraction ranges, antimony, lead, zinc, copper, cadmium, acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, indeno(c)pyrene, and naphthalene. Based on our additional review, soil samples from roughly 32% of shipping sites exceeded the Table 2 standards (industrial/commercial/community property use) for one or more of EC, SAR, lead, benzo(a)pyrene, and fluoranthene. Concentrations of similar analytes in these same samples also exceeded the Table 3 standards (industrial/commercial/community property use) which are generally only applicable to sites in non-potable groundwater situations. It should be noted that, while this body of data was considerable, the frequency of samples was considered significantly inadequate and Terrapex has no assurance that these data represent worst-case soils placed at the site.

Terrapex acknowledges that in the past the MOE has advocated movement of soil between 'like-to-like' sites, however, at most the Airpark and surrounding lands are considered to be in a potable groundwater situation (Table 2 standards), and our review of the fill quality data has demonstrated several exceedance of the Table 3 standards applicable to non-potable groundwater situations.

With respect to the MOE's comment that ***"...it is not correct to refer to the Airpark as an unlicensed waste disposal site simply on the basis that it has accepted soil"***, Terrapex suggests that it is indeed correct to refer to the Airpark as an unlicensed waste disposal facility on the basis that it has accepted CONTAMINATED soil.

Based on this analysis it is apparent that contaminated soils, exceeding even the least stringent standards considered (Table 3), have been placed at the Airpark site. No evidence has been provided to suggest that these contaminated soils do not represent the potential for an adverse effect at the site. Placement of contaminated soils also contradicts the general spirit of the MOE mandate preventing intentional degradation of the environmental quality of a property.

Item #2

“Stop Order

With respect to the City’s request that the ministry take immediate action such as issuing a “stop work order” to the Airpark, note that municipalities such as the City of Burlington, along with Conservation Authorities, have the authority to develop by-laws and issue permits for fill placement. We encourage the City to use its authority to ensure that fill brought onto the site is of an acceptable quality.”

It is Terrapex’s understanding that the City has required the Airpark to comply with its by-laws by filing a Site Alteration Permit Application, yet the Airpark has declined to do so.

Item #3

“Excess Soil Management

With regard to controlling the quality of excess soil, municipalities have the authority to develop by-laws and issue permits for fill placement and to enforce compliance. The ministry has developed a proposed guidance document – “Soil Management – A Guide for Best Management Practices,” that provides guidance to stakeholders, including municipalities, to consider when issuing these permits or establishing by-laws for managing excess soil. We have encouraged the City of Burlington to incorporate these best practices when issuing permits and approvals to anyone involved in soil management activities. The ministry has also previously met with staff at the City and discussed the best management practices guide that is available on the EBR website at <http://www.ebr.gov.on>.”

As above, it is Terrapex’s understanding that the City has examined the fill placement issue at the Airpark within the context of “Soil Management – A Guide for the Best Management Practices” and has deemed the placement of contaminated fill at the Airpark property contrary to these best practices, as per the content of the City’s July 12, 2013 letter.

I trust this information meets your current requirements. If there are any questions or comments, please do not hesitate to contact me.

Sincerely,

TERRAPEX ENVIRONMENTAL LTD.


Jeff Stevenson, P. Geo.
Senior Project Manager