

**TERMS OF REFERENCE
FOR THE PREPARATION OF A
FOCUS REPORT**

CleanEarth Technologies Incorporated

**Research & Development and Soil Treatment Facility - A Permanent
Commercial Facility for the Handling of Waste Dangerous Goods
Enfield, Nova Scotia**

NOVA SCOTIA ENVIRONMENT AND LABOUR

November 21, 2006

Introduction

The Research & Development and Soil Treatment Facility (Undertaking) proposed by CleanEarth Technologies Incorporated (Proponent) was registered for environmental assessment (EA) as a Class 1 undertaking pursuant to Part IV of the Environment Act on October 2, 2006. Under the *Environmental Assessment Regulations*, a permanent commercial facility for the handling of waste dangerous goods is a Class I undertaking.

On October 27, 2006, following a review of information submitted by the Proponent, and review agencies, the Minister of Environment and Labour (NSEL) decided that there may be limited adverse effects or significant environmental effects related to the proposal. In accordance with section 13(1)(c) of the EA Regulations, the Minister directed the Proponent to provide a focus report to examine issues which were raised during the review, including but not limited to: groundwater contamination; surface water supply and discharge; wetlands; storage and the treatment of soils contaminated with PCB's and chlorinated solvents; and municipal zoning.

The Proponent is required to submit the Focus Report within one year of receipt of the Terms of Reference. Upon submission of the Focus Report by the Proponent, NSEL has 12 days to publish a notice in the newspaper, that advises the public where the Focus Report can be accessed for review and comment. A 30 day public review period of the Focus Report follows.

At the conclusion of the 30 day public review, NSEL has 25 days to review public, government comments, and provide a Report and Recommendations to the Minister.

The Minister of NSEL will have the following decision options, following the review of the focus report:

- (S. 18) (a)
- i. the undertaking is approved subject to specified terms and conditions and any other approvals required by statute or regulation;
 - ii. an environmental-assessment report is required; or
 - iii. the undertaking is rejected.

The following concerns identified during the screening portion of the EA are presented to the Proponent for response in the form of a Focus Report.

1.0 Project Description

1.1 Proponent

The Proponent for this Undertaking is identified as CleanEarth Technologies Incorporated (CleanEarth), yet the current NSEL Part V Approval holder is GFC Management Ltd. (GFC). This section shall disclose the nature of the agreement between the two companies with respect to this Undertaking. This section shall detail that the appropriate legal agreements are in place to permit either GFC or CleanEarth to proceed.

1.2 Location

This section shall include maps of the site that clearly show the existing and proposed facility in relation to the property boundaries and nearest buildings (commercial and residential); include active areas, storage areas and storage capacity; drainage patterns and down gradient water bodies beyond the unnamed stream. Indicate prevailing winds.

1.3 Municipal Zoning

This section shall discuss municipal zoning requirements, and provide written confirmation that Halifax Regional Municipality's (HRM) zoning by-law permits the proposed Undertaking.

1.4 Chemical Substances

In this section the Proponent shall further identify and characterize (e.g., quantities and toxicities) all chemical substances that will be used at the Project site including dust suppressants and process reagents.

2.0 Water Issues

2.1 Groundwater

The groundwater chemistry results in Appendix D of the Registration Document indicate that polyaromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH) and benzene, toluene, ethylene and xylene (BTEX)

were detected in the existing groundwater monitoring wells at the site. The existing treatment facility at the site was approved in March 2006 and these groundwater samples were collected in May 2006.

This section shall explain how the groundwater at the site has become impacted. Include a site map showing the location of the monitoring wells and the location of the areas used for soil treatment, storage and handling. The monitoring well logs and the groundwater level data used to calculate groundwater flow directions shall be provided. Slug test data for each well shall also be provided. The information shall also include a description of the possible source and migration pathway for the existing and potential groundwater impacts at the site. Include hydrogeological interpretation of data.

2.2 Surface Water

Include a site map showing: areas of storage, treatment, and handling of materials which could have potential impacts on surface waters and wetlands; drainage patterns; and any waste-water discharge locations. Water sampling locations should also be included on this map.

2.2.1 Water Supply

This section shall: state anticipated water volume requirements; identify the source of water; identify associated impacts of water withdrawal; describe proposed mitigation; identify approvals and status of approvals required.

2.2.2 Waste-water Discharge

Provide baseline water quality and quantity monitoring data, and data on the presence of aquatic life (e.g. fish, benthic organisms) and the influence of environmental factors (e.g. climate, hydrology), in the unnamed stream and Preepers Pond.

This section shall clarify where waste-water is to be discharged, and potential waste-water discharge volumes and quality. Existing uses and users of receiving watercourses shall be identified, including water withdrawals. Potential impacts of waste-water discharge on receiving waters shall be discussed, as shall proposed mitigation

measures. State which approvals are required and the status of such approvals.

2.2.3 Waste-water Treatment Residues

The treatment objectives and management plans for the contaminated solid residues or sludge for the proposed waste-water treatment plant shall be further detailed to help ensure potential impacts are understood, and appropriate mitigation measures identified. State which approvals are required and the status of such approvals.

2.3 Wetlands

This section shall identify all wetlands that might be impacted by the Undertaking, and shall assess the potential impact of a planned release or an uncontrolled spill, and identify appropriate mitigation measures.

3.0 Treatment and Storage of PCB or Chlorinated-Solvent Contaminated Soil

This section shall supply adequate information or evidence to demonstrate the technology application for the treatment of soils impacted with PCB's and chlorinated-solvents. Provide additional details on the treatment of PCB and chlorinated-solvent impacted materials including the following:

- the predicted recovery rates of PCB's and chlorinated contaminants in the concentrated treatment residue;
- an indication of the expected losses of PCB's and chlorinated contaminants through air emissions and process soil-washwater effluent;
- predicted limitations associated with the treatment process;
- provide details on the protocol to carry out a field treatment study.

This section should also clarify details regarding the storage of PCB-contaminated soils, and PCB-laden process soil-washwater, residues and waste-water and adherence to the requirements of the *Storage of PCB Material Regulations* made under *Canadian Environmental Protection Act*. A revaluation of the site liner and control systems shall be included, to evaluate risks of groundwater and surface water contamination.

Supply adequate information or evidence to demonstrate the technology application for the treatment of soils impacted with chlorinated-solvents. Confirm the full list of chlorinated-solvents which will be treated and describe their decomposition products.

4.0 Air Quality

This section shall provide an anticipated air emissions summary, including but not limited to: speciated volatile organic compounds (VOC's) and particulate matter and associated contaminants, expected while the contaminated soils are in storage, or being processed. Describe potential impacts to the environment and proposed mitigation measures. This assessment shall take in to account the influence of environmental factors (e.g. climate).

5.0 Contingency

This section shall present a contingency plan in accordance with NSEL's Guideline for Contingency Planning dated September 2004. Provide an estimate of third party disposal costs (out of province).