



**CANADIAN ENVIRONMENTAL  
RESOURCE MANAGEMENT INC.**

# **OFF-SITE FILL ACCEPTANCE PROTOCOL**

*This Protocol has been developed for use  
in the rehabilitation of Greyridge Metals Inc.*



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# 1

## DEFINITIONS

For the purpose of this **Protocol**, the following shall have the meanings described below:

- 1.1 **“Acceptable Fill”** has the meaning set out in Section 2 following
- 1.2 **“EPA”** means the Environmental Protection Act, R.S.O. 1990, c.E.19, as from time to time amended
- 1.3 **“Generating Location”** means the location from which **Acceptable Fill** originates
- 1.4 **“Generator”** shall mean the operator of the **Generating Location** as defined in O.Reg. 334/13 (Environmental Protection Act) as amended from time to time.
- 1.5 **“Licensee”** means the person or company and its successors and assigns to whom the Aggregate Resources Act licence is issued or the person or company authorized to import **Acceptable Fill** to the **Site**.
- 1.6 **“Protocol”** means this Off-Site Fill Acceptance Protocol, as may be amended from time to time
- 1.7 **“Qualified Professional”** means a Qualified Person as defined in O.Reg. 153/04 (Environmental Protection Act) as from time to time amended.
- 1.8 **“Quality Assurance” / “Quality Control” (QA/QC)** herein shall mean a program for the systematic monitoring and evaluation of the various aspects of the process to ensure that standards of quality are being met.
- 1.9 **“Reviewing Professional”** means a **Qualified Professional** retained by the Licensee as required by this **Protocol**, and who is a professional geoscientist or professional engineer experienced in environmental site assessment and peer review.
- 1.10 **“Site”** means the relevant property licensed under the Aggregate Resources Act that receives imported **Acceptable Fill** and/or **Topsoil**.
- 1.11 **“Table 2 Standards”** means the standards set out under the column entitled “All Other Types of Property Uses” in Table 2 of the “Soil, Ground Water and Sediment Standards for Use under Part XV1 of the Environmental Protection Act” published by the



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MOE and dated April 15, 2011, as may be amended or replaced pursuant to the provisions of the **EPA**.

**1.12 "Ticket"** has the meaning set out in Section 4.3 following

**1.13 "Topsoil"** shall have the meaning set out in c. 25, s.142 (1) of the Municipal Act, 2001, as may be amended, which currently is: "Those horizons in a soil profile, commonly known as the "O" and the "A" horizons, containing organic material and includes deposits of partially decomposed organic matter such as peat."

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## 2 ACCEPTABLE FILL

**2.1** The Licensee shall place at the **Site** only **Acceptable Fill** which, for the purposes of this **Protocol**, is defined as being material that meets the following criteria, provided that the material does not contain any putrescible materials:

- Soil / earth that meets **Ontario Regulation 153/04 - Table 2 Full Depth Generic Site Condition Standards for Industrial/Commercial/Community Property Use criteria for a site in a potable groundwater condition**, including SAR and Electrical Conductivity impacted soil, as long as placed greater than 1.5m below final grade and passes a slump test as outlined in the General Water Management Regulation (O. Reg. 347 pursuant to the **EPA**), as may be amended; or

In addition to **Acceptable Fill**, **Topsoil** may be imported for use as final cover. See Section 8 for guidelines for topsoil.

# 3

## APPLICATION FOR SHIPMENT OF ACCEPTABLE FILL

**3.1** Any person wanting to ship **Acceptable Fill** or **Topsoil** to the **Site** will be provided with a copy of Section 1, 2 and 3 of this **Protocol**.

**3.2** Any person wanting to ship **Acceptable Fill** or **Topsoil** to the **Site** must receive written approval from the Licensee that the material proposed to be shipped has been accepted in accordance with this **Protocol**.

- An example of written approval can be found in **Appendix A-1: Acceptable Fill Acceptance Form**

**3.3** An application to ship **Acceptable Fill** or **Topsoil** to the **Site** shall include at least the following:

- Name of the owner of the **Generating Location** and the representative of the **Generating Location** authorized to sign any Acceptance Form or other documentation relating to shipments of **Acceptable Fill** to the **Site**.
- One or more reports, prepared by a **Qualified Professional** from the **Generating Location**, to include the following information
  - i. A description of the **Generating Location** and its history, including the location, past and present uses of the land, and current activities.
  - ii. A description of the material to be shipped to the **Site**, including the processes involved in its generation.
  - iii. Where some or all of the material to be deposited is soil/earth, a record of the results of a comprehensive soil testing program for the **Generating Location**, including a description of the sampling locations, sample collection procedures, and parameters analyzed. An explanation or rationale for the selection of the sampling locations and the parameters for testing must be included.
  - iv. A statement from a **Qualified Professional** stating that in his/her opinion the material satisfies the requirements of the **Protocol** and is suitable for placement at the **Site**. Additionally, it must identify which MOE Table it satisfies.
  - v. The anticipated volume of material to be shipped to the **Site**.
  - vi. An estimated time frame in which the material will be shipped.

**3.4** Copies of any application to ship **Acceptable Fill** or **Topsoil** to the **Site**, together with the related report or reports, will be forwarded to the Licensee and the **Reviewing Professional**.



- 3.5 The application will be reviewed by the **Reviewing Professional** to determine whether the material proposed for shipment is suitable for acceptance. The **Reviewing Professional** will consider the results of the sampling program, including but not limited to, whether the sampling locations and number of samples are representative of the material proposed to be shipped, whether the test results include the full range of parameters of potential concern relating to the **Generating Location** and whether a suitable **Quality Assurance/Quality Control (QA/QC)** program was implemented.
- 3.6 The **Reviewing Professional** will advise the Licensee in writing whether or not the material proposed to be shipped is suitable for acceptance and provide any terms or conditions of acceptance. The Licensee or the **Reviewing Professional**, if so authorized by the Licensee, will communicate the approval or rejection, in writing, together with any terms or conditions of approval to the person making the application and confirm the approximate times of shipment of any off-site material.
- 3.7 Once written approval has been provided by the **Reviewing Professional**, the Licensee will proceed to issue an Acceptance Form, as found under Appendix A, to the **Generator**.
- 3.8 The Master List of Acceptance Forms (Appendix B) will be updated for each **Generating Location** by the Licensee prior to the shipment of any materials. The master list will enable the **Tickets**, as described in Section 4.3 below and on Appendix D and D1 ("**Ticket**"), to be linked by number to the specific **Generating Location**, haulage company(ies) and site assessment report. The master list will be updated as required so as to remain current.
- An example of the Master List of Acceptance Forms can be found under **Appendix B: Master List of Acceptance Forms**
- 3.9 The Licensee will keep at the **Site**, or at some other secure place, a copy of the documentation referred to in this Section 3 and shall provide a copy thereof promptly upon request to authorized authorities.

# 4

## CONTROLS AT THE SITE

**4.1** The **Site** will be fenced and gated to prevent unauthorized access to the **Site**. The **Site** will be manned by the gatekeeper, who has been appropriately trained by the **Reviewing Professional** or by the Licensee, during the times that any material is being received at the **Site**.

**4.2** On a daily basis, the Licensee will identify a location on the **Site** where filling activities will occur. The location of loads will be tracked and recorded on a daily basis.

- An example of the site filling and tracking can be found under **Appendix C: Load Acceptance Log**

**4.3** An executed Acceptance Form from a **Generating Location** will be filed at the **Site**, before any fill from the **Generating Location** can be accepted at the **Site**. Each load to the **Site** will be accompanied by a completed **Ticket** indicating:

- the name of the **Generator**,
- **Generating Location**,
- the name of the hauling company
- license plate number and truck identifier (if one exists)
- the date and time of the shipment,
- An example of a **Ticket** can be found under **Appendix D-1: Acceptable Fill Sample Ticket**

Each Acceptance Form will be signed by an authorized representative of the **Generating Location** and/or **Generator**.

**4.4** The gatekeeper will cross-reference the information on the **Ticket** against the Master List of Acceptance Forms (Appendix B), which will include **Ticket** numbers issued by the **Licensee** for each **Generating Location**.

**4.5** Untested/undocumented fill or fill with no Acceptance Form will not be accepted under any circumstances.

**4.6** The gatekeeper, who must be trained for such purposes, will complete a visual inspection of each load prior to permitting access to the **Site**. Loads containing unacceptable material or





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exhibiting evidence of possible chemical impact (e.g., unusual odours or staining) will not be permitted access to the **Site**. Repeated situations of material being rejected by the gatekeeper from a particular **Generating Location** will give rise to an investigation. No further material will be accepted from **Generating Location** until such investigation is complete and acceptable corrective measures are implemented. An investigation report will be prepared within 30 days, giving a full account of the reasons the quality control system on the part of the **Generating Location** failed and the corrective actions taken and a copy shall be provided to **MNRF**. The report will be retained by the **Licensee** at the **Site**, or at some other secure place.

- Visual acceptance records shall be tracked on the **Load Acceptance Log (Appendix C)**

**4.7** Once the gatekeeper approves the load, the gatekeeper will sign the **Ticket**, and direct the driver to a specific dumping location at the **Site**.

**4.8** A Load Acceptance Log will be maintained for loads shipped to the **Site**, including rejected loads. The log entry will include:

- Date
- Daily total # of trucks entering the property
- Daily total # of trucks accepted
- Daily total # of trucks rejected (and reasons for rejection)
- For each **Generating Location**:
  - i. Identification number for each **Ticket** received on that date

**4.9** All applications and related reports, Acceptance Forms, logs of material accepted at the **Site**, records of material approved for acceptance at the **Site**, etc. will be retained by the **Licensee** until the **Site** is rehabilitated and the license surrendered.



# 5

## QUALITY CONTROL AUDIT PROGRAM

**5.1** For the purpose of a quality control audit, samples of materials shipped to the **Site** will be collected by or on behalf of the **Licensee** under the supervision of the **Reviewing Professional** for every 10,000 cubic metres of imported fill and a record will be maintained of the sampling procedure.

**5.2** Samples collected for audit purposes will be submitted to an accredited laboratory for analysis and will be analyzed for inorganic parameters, volatile organic compounds, polynuclear aromatic hydrocarbons, and F1 through F4 general petroleum hydrocarbon parameters, together with any other parameters that are deemed necessary by the **Reviewing Professional**, having regard to the information contained in the reports for the **Generating Location** relating to the materials being shipped to the **Site**.

# 6

## DISCOVERY OF UNACCEPTABLE MATERIALS

**6.1** Should any unacceptable materials (i.e., material other than **Acceptable Fill**) be discovered at the **Site** (through the audit program or during, or after, dumping of a load), the **Licensee** shall do or cause to be done the following procedure. All unacceptable material will be located by way of the Load Acceptance Log and locational tracking grid and recovered and stockpiled for further assessment and/or removal from the **Site**. A record of the action taken, together with any applicable documentation (e.g. testing and analysis and/or shipment off-site) with respect to the unacceptable material will be kept in the site log (at the **Site**, or at some other secure place). A copy of the documentation referred to in this Section 6 shall be provided promptly upon request to any authorized agency. Should any unacceptable materials be discovered at the **Site**, the Owner of the **Generating Location** will be notified promptly in writing by or on behalf of the **Licensee**.



# 7

## GROUNDWATER MONITORING

**7.1** Groundwater samples collected for audit purposes will be submitted to an accredited laboratory for analysis and will be analyzed for inorganic parameters, volatile organic compounds, polynuclear aromatic hydrocarbons, and F1 through F4 general petroleum hydrocarbon parameters, together with any other parameters that are deemed necessary by the **Reviewing Professional**, having regard to the information contained in the reports for the **Generating Location** relating to the materials being shipped to the **Site**.

**7.1** The **Licensee**, in consultation with any authorized agency, will determine if a groundwater monitoring program will be required at the **Site**.

**7.2** Any such monitoring program may include documentation of the number and type of samples, the manner and timing of sampling, the parameters to be analyzed, the standards to be used for comparison purposes, the reporting requirements, and any confirmatory sampling requirements should the results indicate any exceedance of a standard established for a parameter of concern, and any further response requirements.

**7.3** As far as is practicable, existing groundwater monitoring wells will be utilized for the purposes of any groundwater monitoring program required.

**7.4** Groundwater samples will be collected by or on behalf of the **Licensee** under the supervision of the **Reviewing Professional** and delivered to an accredited laboratory to be tested, if a groundwater monitoring program is required.

# 8

## GUIDELINES FOR TOPSOIL

**8.1** All requests to import **Topsoil** for rehabilitation purposes shall include the following:

- A demonstrated need to import **Topsoil** for rehabilitation purposes
- An area identified on a drawing or sketch as to where **Topsoil** is to be placed and/or stockpiled on the **Site** for rehabilitation purposes
- Name of the owner of the **Generating Location** and the representative of the **Generating Location** authorized to sign any Acceptance Form or other documentation relating to shipments of **Topsoil** to the **Site**.
- A description of the **Generating Location** and its history, including the location, past and present uses of the land, and current activities.
- The volume of **Topsoil** anticipated to be received
- An anticipated time frame in which the **Topsoil** will be shipped
- A maximum depth of **Topsoil** to be used as top dressing.

**8.2** All requests to import **Topsoil** shall be subject to the conditions as set out in Section 4.6 to 4.9 and Section 6 of this **Protocol**.

**8.3** To the extent possible **Topsoil** will be used immediately as final cover. **Topsoil** stockpiles should be as minimal as possible and are to be used progressively in rehabilitation efforts.

**8.4** Additional testing or information may be required for the importation of **Topsoil** as deemed necessary.



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## 9 AMENDMENTS TO THE PROTOCOL

This **Protocol** has been developed for use in typical, larger scale, fill importation operations. Where any special circumstances exist or the importation of fill operation is smaller in size this **Protocol** may be reviewed and/or altered.

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