



6.0 SITE OPERATIONS

6.1 General Site Operations

6.1.1 Hours of Operation

It is proposed that the Site will be open for material and waste receipts between 6:00 a.m. and 6:00 p.m., Monday through Saturday. Operating hours for the MRF and C&D processing facilities will be between 7:00 a.m. and 11:00 p.m. Monday through Saturday, although it is expected they will generally operate between 7:00 a.m. and 5:00 p.m.; the evening hours provide the flexibility to run two shifts during high demand periods. Landfill operations, organics processing in the building, composting and PHC soils treatment are proposed to be between 6:00 a.m. to 7:00 p.m. Monday through Saturday. Operations related to organics processing at the primary reactor cells will occur between 7:00 a.m. and 7:00 p.m. Monday through Saturday. The Site is expected to operate a maximum of 312 days per year.

6.1.2 Site Staffing

The Site is expected to employ up to 80 to 100 staff at any given time. Each operating scale will have an attendant and each facility (including the landfill) will have a person designated to direct vehicles to the unloading areas. Equipment operators, mechanics, facility operational managers, facility workers and administrative staff will also be employed.

6.1.3 Waste Acceptance Procedures

Waste acceptance procedures are as follows:

- 1) The Site attendant registers all vehicles entering the Site. The vehicles are weighed and the attendant records the origin of the waste, type of waste, driver identification, truck identification and to which facility the waste is going. After being registered, the vehicle is directed to the appropriate facility/area or to the secondary scales if there appears to be no recoverable materials in the load. Clear signage directs vehicles to the unloading areas at the appropriate facilities;
- 2) If the load contains asbestos it will be sent directly to the landfill via the secondary scales where staff will be prepared to bury the waste immediately in the landfill. Procedures for handling and disposing asbestos waste are described in Appendix I;
- 3) Loads bound for the landfill will be sent to the secondary scale and another Site attendant will record the weight of the vehicle. The vehicle is then directed to the active face of the landfill. Clear signage directs vehicles to the unloading areas. Another attendant monitors appropriate waste placement at the tipping face and directs the traffic at the working face of the landfill;
- 4) The scale attendants and the employee at each facility designated as the person to direct incoming vehicles to unloading areas will be instructed as to the types of waste allowed on Site and the types of waste not allowed. At the facility, loads will be checked to verify that no liquid waste is present. Unacceptable waste that is inadvertently dumped at the Site is either placed back into the vehicle in which it was hauled to the Site, or temporarily stored in one of the Site's containers for future off-Site removal; and,
- 5) All weigh tickets are kept on-Site along with daily and monthly summaries of waste received. Materials rejected from the landfill will be reported at the required frequency to the local MOECC District Office. Records of rejected waste and material removed from the Site are maintained at the Site office.



6.1.4 Handling of Suspect Waste

In the unlikely event that unacceptable or prohibited waste is not detected until the waste hauler has left the Site, the waste will be segregated, characterized and managed in accordance with O.Reg. 347 (MOE, 1990). Effort will be made to identify and contact the customer and/or generator to ensure that prohibited wastes will not be delivered to the Site in the future.

6.1.5 Leachate Detection and Secondary Containment System

The LDSCS will be pumped out on a regular basis after the results of the spring, summer and fall monitoring sessions are reviewed to assess if the groundwater within the surficial silty sand layer has been impacted by landfill leachate. If the groundwater from the LDSCS is not impacted, the system will be pumped out to the stormwater management ponds. If the groundwater is found to be leachate impacted, it will be handled as leachate.

6.1.6 Housekeeping and Controls

6.1.6.1 Dust (Dust Management Plan)

The main source of dust will be on-Site access roads, particularly if unpaved, and from equipment movement around the landfill working area. To deal with dust, a number of best practice dust control measures are proposed:

- All roads in the north part of the Site will be paved, with the exception of the road running along the east side of the Site connecting the landfill to the maintenance garage. The landfill perimeter road and the temporary haul roads on the landfill will be gravel surfaced;
- Trucks using the Site will be restricted to a maximum speed of 20 kilometres per hour to avoid excess amounts of airborne dust or SPM. This is important on the unpaved roads;
- To avoid excessive dust generation, on-Site roads will be routinely maintained as part of the normal Site operations. During dry periods, water will be applied on a regular basis on unpaved roads. Calcium chloride or oil will not be used for dust control within the Site area because the chemicals could affect groundwater or surface water quality. Other MOECC approved dust suppressants could be used, when required; and,
- A tire wash area is available for trucks as they leave the landfill on their way to the exit.

6.1.6.2 Noise

Waste processing operations are sufficiently set-back from residential dwellings to minimize noise. In addition, the berms described in Section 5.3 will be constructed as noise mitigation.

Any complaints regarding the operations will be noted and receive a prompt response.

Landfill Operations Equipment

Table 5 below summarizes the primary sources of noise associated with the landfill operation.



Table 5: Sound Power Data for Landfilling Operations Noise Sources

| Source | Quantity | Overall Sound Power Level (dBA) |
|-------------|---------------------------------|---------------------------------|
| Loader | 1 | 109 |
| Excavator | 1 | 103 |
| Backhoe | 1 | 92 |
| Grader | 1 | 116 |
| Dozer D6 | 1 | 110 |
| Dozer D8 | 1 | 114 |
| Compactor | 1 | 108 |
| Water Truck | 1 | 107 |
| Haul Trucks | 35 (total peak hour in and out) | 103 |

The noise prediction models have assumed that these pieces of equipment operate during the busiest hour of the day when the landfill will receive a maximum of 17 trucks bringing waste and impacted/surplus soil for use as daily cover or other uses within the landfill.

Ancillary Equipment

The Site will also include a MRF, C&D processing, organics processing, PHC contaminated soil treatment, surplus soil management, compost processing and storage, flare and power generation, maintenance facility, leachate pre-treatment facility, exhaust fans and heating, ventilation and air conditioning (HVAC) equipment.

The table below summarizes the primary sources of noise associated with the ancillary equipment operation.

Table 6: Sound Power Data for Ancillary Facilities Noise Sources

| Source | Quantity | Overall Sound Power Level (dBA) |
|----------------------|----------|---------------------------------|
| HVAC | 17 | 83 |
| Large Exhaust | 19 | 87 |
| Ventilation Openings | 24 | 83 |
| Dust Collector | 2 | 102 |
| Welding Fume Hood | 1 | 91 |
| Biofilter | 2 | 90 |
| Pump | 1 | 106 |
| Diesel Generator | 1 | 117 |
| Loader ³ | 5 | 109 |
| Chipper | 1 | 118 |
| Conveyor | 2 | 94 |
| Compost Turner | 1 | 111 |
| Screen | 1 | 104 |
| Air Classifier | 1 | 111 |



| Source | Quantity | Overall Sound Power Level (dBA) |
|---------------------------------------|---------------------------------|---------------------------------|
| Compost Aerator Fan ¹ | 4 | 95 |
| Waste Truck Movements | 47 (total peak hour in and out) | 103 |
| Truck Idling | 5 | 98 |
| Flare ¹ | 1 | 104 |
| Dump Truck | 1 | 108 |
| Grader | 1 | 116 |
| Dozer | 1 | 110 |
| Leachate Truck Movements ¹ | 2 | 104 |
| Leachate Truck Pumping ¹ | 1 | 111 |
| Excavator ⁴ | 2 | 103 |
| Skid-Steer | 1 | 92 |
| Electrical Generator ^{1, 2} | 7 | 105 |

Notes:

¹ Equipment operates 24 hours per day, 365 days per year.

² Generators will be equipped with silencers and they will be housed in containers. Generator containers designed not to exceed 55 dBA at 10 m.

³ The number of loaders modelled is 5, though a total of 4 loaders are shared by ancillary facilities and may operate at one time.

⁴ The number of excavators modelled is 2, though 1 excavator is shared by ancillary facilities and may operate at one time.

6.1.6.3 Litter

The proper containment of waste within the diversion facilities and the daily application of cover material to the working face of the landfill will be used as a means of litter control. Litter fencing at the active landfill face and other temporary fencing will be used as required. CRRRC staff will pick up litter from around the Site whenever required as a result of specific events such as high winds.

6.1.6.4 Vectors and Vermin

Animals may be attracted to a landfill or waste processing site because it provides a suitable foraging habitat. Consequently they could move onto the landfill or into a facility temporarily or permanently. Because the working area of a landfill is compacted and covered daily with soil, rodents and insects do not survive at modern landfills. If required, vermin will be controlled at the landfill or diversion facilities by trapping or a pest management company.

Birds such as gulls may become a nuisance by attending the Site and adjacent or nearby properties, creating noise and fouling those lands. It is best to deter birds from visiting the Site in the first place. The landfill will operate with a program to exclude/deter birds from the Site. The program will be based on habitat management. Other contingency measures will be discussed with the MOECC and the Site community liaison committee (CLC) as required.



Specific control measures include:

- Daily cover of waste;
- Minimize size of working face;
- Minimize areas of bare ground;
- Encourage growth of tall grass (discourage loafing);
- Vegetated banks at the stormwater management ponds;
- Obtaining a Canadian Wildlife Service – Scare Permit;
- When and if required, and in consultation with MOECC and Site CLC, use of scare pistols (bangers, crackers) to discourage gulls at the active faces, overhead, and in loafing areas; and,
- Observation and recording of approximate number of gulls. If necessary, depending on observations, a more formal gull monitoring program could be designed and implemented.

6.1.7 Complaints Procedure

A formal complaint reporting procedure will be employed at the CRRRC. When a complaint is received, a complaint report will be completed, which includes the following information:

- Date and time of complaint;
- Nature of complaint;
- Name and telephone number of complainant;
- Employee receiving complaint;
- Details and circumstances of complaint;
- Corrective action taken or planned; and,
- Follow-up with complainant.

The Site CLC will be advised of all complaints and resolution of same. Ottawa Public Health will be informed when complaints regarding significant noise, odour and air quality are received. The City of Ottawa General Manager of Environmental Services and the east end Councillors or their offices will be informed of all complaints received regarding odour, litter, noise and traffic within 24 hours.



6.1.8 Record Keeping

Records (either electronic or hardcopy) will be kept of all incoming and outgoing material at the Site, including:

- Itemized record of any rejected waste;
- Type, date, time of arrival, source and quantity of waste received;
- Company name of hauler delivering the waste;
- ECA number of hauler;
- Inspection reports and complaint reports;
- Type, date, time, destination, and quantity of material shipped off-Site;
- Date of each application of aggregate to unpaved roads; and,
- Date and time of each road watering and/or dust suppressant event.

An Annual Operations Report will be submitted to the District Office of the MOECC. Each report will include, as a minimum, the following information:

- Monthly summary of the type and quantity of all wastes received at the Site and the facility to which the waste was sent;
- Monthly summary of the type and quantity of all wastes disposed of in the on-Site Landfill;
- Monthly summary of the type and quantity of all wastes shipped from the Site and the location to which it was shipped;
- A description of any material operational issues encountered;
- Any recommendations for operational changes;
- Amount of recovered material sent to market;
- Amount of waste sent to landfill from processing facilities;
- Average daily amount of waste received;
- Maximum amount of waste that was received in one day in the past year;
- Amount of waste stored on-Site as of date of preparation of the Annual Operations Report;
- Any modifications that were made to the Site should operational flexibility be afforded by an ECA with limited operational flexibility; and,
- A summary of any complaints that were received regarding any facility operation and resolution of same.



6.1.9 Winter/Wet Weather Operational Considerations

For winter operations, advance planning will take place for snow removal, icy access roads and equipment maintenance. Sand will be applied to on-Site roads as required to ensure safe-driving conditions at all times. In very cold weather periods, start-up of equipment will be facilitated through the use of engine block heaters. During wet weather conditions, adequate drainage will be provided by the on-Site ditches and culverts.

6.1.10 Site Equipment

All motorized equipment will be kept in good repair and be fitted with standard operational exhaust mufflers. Idling vehicles and areas at which vehicles idle will conform with Ontario Ministry of Labour regulations. The following table outlines the equipment used throughout the Site at the various facilities and the landfill. The details regarding where each piece of equipment is anticipated to be used are contained in Appendices D to J.

Table 7: Site Equipment

| Equipment | Quantity |
|---------------------|-----------------|
| Loader | 8 |
| Excavator | 3 |
| Backhoe | 1 |
| Grader | 1 |
| Dozer D6 | 1 |
| Dozer D8 | 1 |
| Compactor | 1 |
| Water Truck | 1 |
| Pick-Up Truck | 4 |
| Trailer | 4 |
| Shunt Tractor | 1 |
| Skidsteer | 4 |
| Forklift | 1 |
| Dump Truck | 2 |
| Conveyor | 2 |
| Eco Mixer | 1 |
| Compost Pasteurizer | 1 |
| Chipper/Shredder | 1 |
| Compost Turner | 1 |
| Screen | 2 |
| Air Classifier | 1 |

6.1.11 Fencing

It is proposed that the perimeter of the Site will be fenced where appropriate. The primary and secondary Site access roads will have gates that can be locked.



6.1.12 Signage

A clearly visible sign will be posted at the Site entrance with the following information:

- MOECC ECA Number;
- Identification of the Site operator;
- Operating hours of the Site and diversion facilities;
- Accepted wastes;
- Prohibited wastes;
- Telephone number for emergencies; and,
- Health and safety requirements (e.g. restricted areas, required protective equipment, etc.).

Health and safety signage will be posted around the Site perimeter and work areas.

6.1.13 General Site Inspections and Maintenance

A designated competent operator will complete a daily inspection and prepare a Weekly Site Inspection Report, which will include the date and time of the inspection, and the name and signature of the person completing the inspection. If any problem areas are identified, the corrective action that is completed or planned will be noted on the inspection report. The inspection report will include the following:

- Is the Site entrance and exit clean of litter and dust?
- Is the fence line, inside and outside, clean of litter?
- Are the fence and gates in good condition?
- Is the Site clean of litter and scrap?
- Are there any unacceptable odours?
- Is the surface water drainage system functioning as intended?
- Are there any sections of the on-Site roads requiring maintenance?
- Has there been any environmentally significant event since the last inspection?
- Have there been any complaints since the last inspection?
- Is the amount of storage of waste within the allowed maximum weight?
- Are posted speed limits being complied with?
- Is dirt being tracked onto public roadways?
- How effective are the dust mitigation activities?

A copy of the Site inspection report will be kept on file at the Site.



6.1.14 Environmental Emergency and Contingency Plan

An Environmental Emergency and Contingency (E2C) Plan, specifically prepared for the Site, will be developed and provided to the local office of the MOECC for their information and comment, and a copy retained in a central location on the Site and will be accessible to all staff at all times. The E2C Plan will deal with the prevention of, preparedness for, response to and recovery from an environmental emergency. The E2C Plan will be reviewed annually by Taggart Miller and updated if needed. Copies of the E2C Plan will be provided to the MOECC District Manager, the City of Ottawa and the local fire department. The E2C Plan contains a notification protocol with names and telephone numbers of persons to be contacted, including persons responsible for the Site, the MOECC's District Office and Spills Action Centre, the local fire department, the City of Ottawa, the local Medical Officer of Health, the Ministry of Labour, and the names and telephone numbers of waste management companies available for emergency response. The E2C Plan will also provide an organized set of procedures for responding to unexpected but possible problems at the CRRRC Site, including but not limited to: power failures, labour disruptions, fires and spills. Also, the E2C Plan will outline the schedule for the inspection of emergency response equipment.

6.1.14.1 Spills

All staff will be advised to notify their supervisor if they encounter a spill. A spill is defined as a discharge to the natural environment from a vessel or container that is abnormal in quality or quantity in light of all of the circumstances of the discharge. Such a spill would be immediately contained and cleaned up as appropriate. The E2C Plan outlines the reporting procedures and actions to be taken in the event of a spill or process upset, including specific cleanup methods. Staff will be trained on spill response procedures and reporting as required. Due to the nature of the waste accepted at the Site (i.e., solid non-hazardous wastes), spills of waste are not likely to cause any off-Site environmental harm as they are easily cleaned up.

6.1.14.2 Fire

The Site design includes a fire pond at the north end of the Site. Also, the buildings will be provided with fire extinguishers and the MRF and C&D processing facility will be equipped with sprinkler systems. The fire extinguishers will be placed at every person door exit and on every piece of mobile equipment. These fire extinguishers will be inspected monthly and recharged annually, if needed, as required by the Ontario *Fire Code* (MCSCS, 2007). Additionally, the Site will have an emergency evacuation and notification plan in the event that a fire in the building cannot be easily extinguished with available fire extinguishers, and evacuation/notification is warranted. Details about response to a landfill fire are included in Appendix I.