

**SECTION 2.6**

**OPERATING PLAN**

**Introduction**

This operating plan addresses the procedures for waste disposal operations for the Site 2 East expansion of the Veolia E.S. Zion Landfill, and for maintenance and monitoring of the engineered systems at the Site. Many of these procedures are currently in place and have been reviewed and permitted by the IEPA for the existing Site 2 landfill.

It is noted that the IEPA has granted separate operating permits for the operation of the Site 1 Phase A and B units, which are located within the Facility Boundary. Veolia is the owner of these units, while BFI Waste Systems of North America, LLC (BFI) serves as the permitted operator. The IEPA operating permits outline specific operating requirements for the Site 1 Phase A and B landfill units, which shall continue to remain the responsibility of BFI. Veolia is familiar with the operating plan for these units, is in frequent communication with BFI, and coordinates the inter-related activities at the site.

It is also noted that the Cleveland Corporation operates a demolition and recycling center on Green Bay Road that is within 500 feet of the Facility. While Veolia E.S. Zion Landfill, Inc. (Veolia) does not share in operations with the Cleveland Corporation, Veolia does communicate with the Cleveland Corporation, as well as its other neighbors regarding site operations, as needed.

This operating plan for the Site 2 East Expansion is based on the applicable landfill requirements contained in 35 Ill. Admin. Code, Part 811 and the federal regulations. Landfill management will be responsible for assuring that employees comply with the plan. A copy of the operating plan will be maintained at the Facility office along with applicable regulations for reference by landfill management and employees to ensure management of landfill operations is consistent with the plan and applicable regulations. The Facility will operate in a manner to protect the public health, safety and welfare under the direction of an experienced landfill operator licensed by the IEPA.

**Personnel Requirements and Training**

Facility employees will be trained on operating procedures and safety practices prior to starting their duties and on a regular basis thereafter. The specific areas of training for an employee will vary depending on the responsibilities of their job category. Personnel will be proficient in the following areas necessary for safe operation of the Facility.

- Safety Procedures;
- Emergency Procedures;
- Fire Control;
- Load Checking Requirements;
- Operating Procedures;
- Disposal of Special Waste;
- Scalehouse and Scale Procedures;



- Vector, Litter, and Dust Control;
- Equipment Operation and Maintenance; and,
- Construction Techniques.

Worker protection and safety will be further assured by complying with the standards and guidelines of the federal Occupational Safety and Health Administration's (OSHA) worker safety regulations. In addition, Veolia has developed numerous health and safety policies, as well as an Emergency Preparedness Program, for the Site 2 East Expansion (refer to Section 5 of this application).

Supervision and daily operations at the Site 2 East Expansion will be performed by the personnel identified below. Staffing levels will vary depending on incoming waste volumes, season, and the level of construction activity during a given period. It is anticipated that, at a minimum, one person will be employed for the position identified. There will be some overlap in the duties of each position to account for vacation/sick periods and changes in employment. Either the General Manager or the Operations Manager will be licensed in Illinois as a Certified Landfill Operator.

#### *General Manager*

The General Manager has overall responsibility for development and operation of the Facility. The General Manager will supervise the Operations Manager activities to assure that they are performed in accordance with the Operating Plan. Along with a corporate compliance staff, the General Manager verifies all incoming waste is handled properly, that all routine tasks necessary for proper operation of the landfill are performed, and that sufficient equipment is available.

#### *Operations Manager*

The Operations Manager is responsible for the day-to-day operations of the Facility. This includes supervising personnel, directing equipment and maintenance activities, and ensuring that the Facility is operated and maintained in accordance with the permit. All landfill personnel will receive direction from the General Manager.

#### *Scalehouse Attendant*

The Scalehouse Attendant operates the Facility scales, maintains scale tickets and ensures proper manifesting of all special waste loads and performs load inspections. The Scalehouse Attendant will also perform office-related activities including administrative tasks. The Scalehouse Attendant will be stationed at the scalehouse during operating hours to process and record all entering waste vehicles and scale transactions, and to inform vehicle drivers of the location of the active face.

#### *Equipment Operators*

Heavy equipment operators will be employed to construct, operate, and maintain the Facility. Operators will be utilized as necessary depending on the season, volume of incoming waste, and level of construction activity. Adequate personnel will be made available to properly meet the needs of the site. The equipment operators will also be responsible for daily maintenance of their landfill equipment.



Certain activities such as major earth moving, cell construction and final cover construction may be performed by qualified subcontractors. The qualifications of subcontractors will be determined by Veolia based on the subcontractors' experience record, equipment and manpower capacities, required insurance to complete the required tasks, and qualifications to business within the state. In the event that the subcontractor does not meet performance requirements defined by Veolia, Veolia will communicate and document items of concern. Veolia reserves the right to terminate any subcontractor that does not meet contractual terms.

#### *Laborers*

General labor duties such as litter control and mowing will be performed by laborers.

#### *Landfill Administrators*

A sufficient number of administrators will be employed to perform the administrative support functions necessary to operate the Facility.

#### **Equipment**

The equipment required for construction and operation of the Facility will vary depending on the level of construction activity, season, and incoming waste volumes. The current equipment used at the facility includes:

- Volvo A-25 C Articulated Dump Truck
- Columbia Tipper
- MACK Water Wagon
- CAT 416-C Backhoe Loader
- CAT 140-G Motor Grader
- CAT 330-B Excavator
- CAT 836G Compactor (2)
- CAT 836H Compactor
- CAT D8-T Dozer
- CAT D6-R Dozer
- CAT D#-B Dozer
- CAT D8-R Dozer
- Ford CF&000 Sweeper

As noted previously, qualified subcontractors may be hired to perform all or a portion of the landfill earthwork. The subcontractors may provide additional equipment to complete tasks, at the discretion of Veolia and the subcontractor. This equipment may include dump trucks, water wagons, loaders, graders, compactors, dozers, or other equipment as necessary.

#### **Utilities**

The following utilities are currently active and will be maintained at the Facility unless replaced by an equal or improved utility service:

- Electrical service to office/maintenance building, leachate/condensate pumps, landfill gas flare station, and scalehouse.
- Phone service to office/maintenance building and scalehouse.



- Two-way radio or cellular communication between supervising equipment operator(s), General Manager, and office.
- Water supply to the office and maintenance building.
- Sanitary service to the office and maintenance building.

Utilities will be provided and maintained at the site during the operating period of the landfill for safety and compliance with the requirements of 35 Ill. Admin. Code, Part 811.

### **Operation Controls**

The following restrictions and guidelines will be implemented at the site to maintain security, safety, and cleanliness.

#### *Operating Hours*

The proposed Facility will maintain the hours of operation currently permitted by the IEPA. Hours of waste acceptance will not operate outside of the hours of 6:00 am to 4:30 pm on Monday through Friday, or 6:00 a.m. to 1:00 p.m. on Saturday. Hours of waste acceptance on Saturday may be extended from 6:00 a.m. to 4:00 p.m. when any of the following holidays are observed on a weekday during the preceding week: New Years Day, Independence Day, Labor Day, Memorial Day, Thanksgiving, and Christmas Day. The Facility will typically remain closed on Sundays and major holidays. However, there may be certain situations that require the Facility to be open beyond the posted hours of operation. Veolia must obtain advance approval by the City each time it intends to stay open beyond the above operating hours. Veolia will contact the Mayor or the Director of Public Works and Engineering to obtain permission. Additionally, Veolia must notify the IEPA that it stayed open beyond posted hours by 5:00 p.m. the next business day. The notification will contain a detailed description of the situation requiring extended hours, such as facilitating clean-up after a natural disaster, the extended days and hours of operation.

Consistent with the current permit and practices, landfill operations, including landfill construction activities, application of daily cover, maintenance, etc. may occur until no later than 8:00 pm except under extreme conditions. Mechanics may be working in the off hours.

#### *Operating Life*

The proposed waste expansion described in this Application has been designed to provide additional disposal capacity to the proposed service area for approximately ten years. The proposed Site 2 East Expansion will provide approximately 8.95 million air space cubic yards of capacity. The estimated operating life of the Facility may vary due to changes in incoming waste volumes and waste compaction rates, but is estimated to continue until approximately 2022. Additional information and calculations on the operating life is provided in Section 1 and Appendix E of this Application.

#### *Cell Development*

The Facility will be developed in phases. The phasing will begin with the vertical expansion and move forward to Cells 9 and 10. Once active, each phase of the Facility will generally be filled to final proposed grades. Drawing No. D5 shows the landfill cell layout design.



Landfill design and construction phasing are described in Section 2.3 of the Application. The site development phasing provides for sequential construction, filling, and closure of parts of the unit throughout the operating life. The final cover will be placed contemporaneously with landfill development when possible. This will be accomplished by constructing the final cover in phases as portions of the landfill achieve final grade.

#### *Access Controls*

The primary access to the Facility will be a gated entrance located on Green Bay Road north of its intersection with 9<sup>th</sup> Street. This entrance will be used for all customers, leachate tankers, and visitors. A secondary entrance is located on 9<sup>th</sup> Street in the vicinity of the maintenance shop, as shown on Drawing No. D3. This entrance is primarily used by Facility employees and is not used by customers or leachate tanker trucks.

Both Facility personnel and signs placed at the Facility entrances will direct landfill customers, vendors, and visitors to the appropriate areas during operating hours.

A permanent sign will be posted in a visible location near the Facility's primary entrance with the following information:

- A statement that disposal of hazardous waste is prohibited,
- A statement that Special Wastes must be permitted by the IEPA and must be accompanied by a manifest,
- The landfill permit number issued by the IEPA Bureau of Land,
- The landfill hours of operation,
- The prohibition of unauthorized dumping and trespassing,
- A telephone number to call in case of an emergency, and
- The name, address and telephone number of the Landfill Operator.

#### *Litter Control*

A number of operating procedures will be employed at the Veolia E.S. Zion Landfill to minimize and control litter. Incoming refuse vehicles will be required to be fully-enclosed or to have covers or tarps to prevent waste from blowing out of the vehicles. The active fill area will be kept as small as possible (while still allowing safe operation), and will be covered at the end of each day with daily cover materials that include soil, synthetic covers, or other alternate daily cover materials as approved by the IEPA. The Facility will use portable fences, a perimeter litter fence and a Facility fence to contain litter.

Laborers will patrol the Facility and surrounding property to collect any litter escaping the active fill area, including litter caught by the portable and perimeter fencing. The collected litter will be placed in plastic bags and transported to the active face for disposal.

#### *Mud Tracking*



The perimeter access roads at the Facility will have either a paved or an aggregate surface to help control mud tracking. Approximately over a mile of paved road between the entrance

and active disposal area will allow trucks to remove excess mud from their tires prior to exiting the Facility. A street sweeper or other methods will be used to remove mud from the paved roads, as necessary.

#### *Air Quality Plan*

The Facility will be operated in a manner that minimizes the impact to air quality by:

- Prohibiting open burning of waste,
- Operating the landfill gas control system in accordance with appropriate permit conditions and regulations,
- Maintaining a hard-surface entrance road to minimize dust, and
- Monitoring in accordance with the Facility's air permit.

#### *Dust Control*

Dust originating from unpaved access roads will be controlled by periodic watering of the roads, as necessary, using water obtained from the stormwater detention basin areas. Areas of final cover will be vegetated as soon as possible. Soil stockpiles that are not intended for near-term use will also be vegetated.

#### *Noise Control*

The Facility will be operated in accordance with 35 Ill. Admin. Code Section 900. Machinery designated for operations at the landfill will be equipped with mufflers or other sound dissipative devices as required for compliance with 35 Ill. Admin. Code, Sections 901.101 through 901.103 and Section 901.121. In addition, earthen berms surrounding the Facility will serve to dampen noise from operational activities. Berm locations are shown on Drawing No. D12.

#### *Odor Control*

Veolia is committed to control and mitigate odor that may emanate from the Facility. As such, Veolia has developed a comprehensive Odor Control Plan for the Site 2 East Expansion. The Odor Control Plan includes the following measures:

- Spreading and compaction of waste after it is unloaded at the active face;
- Applying 6-inches of soil cover or other approved daily cover material at the end of each work day;
- Routine load checking for unauthorized wastes and odorous wastes;
- Immediate application of approved cover material for any loads exhibiting strong odors following compaction in the landfill;
- Limiting the working face of the active area of the landfill so that it is not larger than necessary, based on terrain and equipment, to conduct operations in a safe and efficient manner;



- Installing of an active gas collection system;
- Implementation of a landfill gas air monitoring program consistent with IEPA regulations, including ambient air monitoring;
- Application of an odor control product to neutralize any difficult odors that cannot be controlled using the above outlined measures.
- Open and direct communication with the City of Zion and the surrounding neighbors to address any odor related problems associated with the landfill.

Please see the Odor Control Plan in Appendix R for a complete description of odor control measures to be applied for the Site 2 East Expansion.

#### *Vector Control*

Vectors (e.g., rodents, birds, insects, etc.) are controlled through cover placement, maintenance of vegetation, and maintaining good drainage to eliminate ponding of water. Daily cover, including soil and permitted alternate daily cover materials, are used to provide a physical barrier and to prevent vectors from accessing the buried waste for nesting places or food sources. Maintaining positive drainage minimizes breeding habitats for insects. Vegetative grasses discourage birds from loafing.

#### *Open Burning*

Open burning of municipal solid waste will be prohibited at the Facility. Flaring of landfill gas will be in compliance with the permitting requirements, emissions standards and air quality standards contained in 35 Ill. Admin. Code Subtitle B: Air Pollution Regulations.

#### *Salvaging*

Salvaging will be prohibited at the site unless it is permitted in compliance with 35 Ill. Admin. Code, Section 811.108.

#### **Transportation Plan**

The Facility's main entrance and exit is located along Green Bay Road. Over a mile of the main access road is paved. The remaining perimeter road surface will be all-weather gravel. The main access road is a minimum of 24 feet wide to allow meeting vehicles to safely pass. Traffic speed will be clearly stated on signs along the perimeter road and will be minimized by the use of speed bumps.

Vehicles leaving the active disposal area will travel on the hard-surfaced road prior to exiting the Facility via the main entrance road. This distance of travel prior to entering public road will prevent the tracking of mud onto public roads.

#### **Waste Acceptance Procedures**

Waste will be reviewed to verify that it is an authorized waste that is acceptable for disposal in the Site 2 East Expansion. Accurate and up to date records will be maintained on-site for all wastes received and accepted at the landfill.



### *Type of Waste Accepted*

Waste materials accepted for disposal will consist only of general municipal refuse, construction and demolition debris, contaminated soil, certified non-special waste, and non-hazardous special waste. A comprehensive load checking program will be implemented to detect and eliminate the attempted disposal of any unauthorized wastes. A detailed description of the load checking program is provided in a subsequent section of this plan.

The following is a list of wastes that will not be accepted for disposal at the proposed Site 2 East expansion of the Veolia E.S. Zion Landfill.

- Hazardous Waste as defined in accordance with 35 Ill. Admin. Code 721.103;
- Radioactive Waste as defined in accordance with 32 Ill. Admin. Code 310, and 35 Ill. Admin. Code 1000;
- PCB containing waste prohibited from disposal at a RCRA Subtitle D landfill by 40 CFR 761;
- Potentially Infectious Medical Wastes as defined in accordance with 35 Ill. Admin. Code 1420.102;
- Universal Waste Batteries as defined and restricted in accordance with 35 Ill. Admin. Code 733.102;
- Universal Waste Pesticides as defined and restricted in accordance with 35 Ill. Admin. Code 733.103;
- Universal Waste Thermostats as defined and restricted in accordance with 35 Ill. Admin. Code 733.104;
- Universal Waste Lamps as defined and restricted in accordance with 35 Ill. Admin. Code 733.105;
- Universal Waste Mercury-Containing Equipment as defined and restricted in accordance with 35 Ill. Admin. Code 733.106;
- Landscape Waste in accordance with Section 22.22 of the Illinois Environmental Protection Act;
- Whole Tires, in accordance with Section 55 of the Illinois Environmental Protection Act, and 35 Ill. Admin. Code 848;
- White Goods in accordance with Section 22.28 of the Illinois Environmental Protection Act;
- Grease Trap Sludge in accordance with Section 22.30 of the Illinois Environmental Protection Act; and
- Used Motor Oil in accordance with Section 21.6 of the Illinois Environmental Protection Act, and 35 Ill. Admin. Code 739;



RCRA-empty drums will only be accepted as long as they are either intact with one end open, or crushed with both ends open. Drums containing waste must be available for inspection.

This list of unauthorized wastes may change as the result of future legislation. The General Manager and operations personnel will be made aware of any modifications to waste classifications that result from such legislation.

#### *Weighing and Control of Waste Volumes*

The Facility will maintain accurate and up to date records of wastes that are accepted for disposal. A scale will be provided near the entrance to the Facility so that trucks may be weighed. The scale will be certified on a regular basis, and proof of certification will be maintained on-site. A functioning radioactive waste detector will be located in the scalehouse to detect radioactive materials for all loads entering the Facility. Calibration and testing of the radioactive waste detector will be completed annually. Also, an elevated platform or camera system will be installed at the scalehouse in order to inspect special waste trucks. Daily records of the total tons of municipal solid waste, construction and demolition debris, and nonhazardous special waste delivered to the Facility will be kept on file at the Facility for inspection by the IEPA.

#### *Record Keeping*

The landfill operator will maintain an accurate record of operations at the Facility for compliance with local, state, and federal requirements. At a minimum, the following information will be maintained at the Facility or an alternative location specified to the IEPA:

- Information submitted to the Agency pursuant to 35 Ill. Admin. Code, Parts 812 and 813;
- Records of daily and weekly receipts;
- Records of nonhazardous special waste acceptance;
- Annual Facility report (per 35 Ill. Admin. Code, Section 813.501);
- Documentation of compliance with location standards;
- Load checking records, training records;
- Construction acceptance reports;
- Leachate disposal information;
- Demonstration, certification, monitoring results, testing, analytical data, or remediation plans pertaining to the groundwater, leachate and landfill gas monitoring programs;
- Maintenance information pertaining to landfill equipment, facilities, survey inspections and repairs;
- Closure and post-closure care plan and monitoring, testing, or analytical data required by 35 Ill. Admin. Code, Parts 811 or 812; and



- Cost estimates and financial assurance documentation required by 35 Ill. Admin. Code, Part 811, Subpart G.

The above records will be submitted to the IEPA as required.

### **Nonhazardous Special Wastes**

Nonhazardous special wastes will be accepted at the Facility in accordance with regulations. General procedures for managing nonhazardous special waste and maintaining related records are outlined below. However, the General Manager may impose additional requirements for the transportation, disposal and handling of special wastes to ensure protection to the environment, employees, and the Facility.

#### *Facility Sign*

A prominent sign is maintained at the entrance to the Facility stating that disposal of hazardous waste is prohibited. The sign will also state that special waste will be accepted only if accompanied by an identification record and a manifest (unless the waste is exempt from manifest requirements).

#### *Profile Identification Record*

Generators of special waste (including special wastes generated by site operations) must obtain the Landfill's acceptance of the waste prior to transporting the waste to the Facility. The first step in obtaining the Facility's acceptance for special waste consists of the generator providing to the Facility a special waste profile identification sheet. The special waste profile identification sheet shall be supplied by the generator and certify the following, per IEPA 811.409:

- The generator's name and address,
- The transporter's name and telephone number,
- The name of the waste,
- The process generating the waste,
- Physical characteristics of the waste (e.g. color, odor, solid or liquid, and flashpoint),
- The chemical composition of the waste,
- The metals content of the waste,
- Absence of hazardous characteristics, including identification of wastes deemed hazardous by the USEPA or the IEPA,
- Absence of PCB and dioxin containing wastes prohibited from disposal at a RCRA Subtitle D landfill by 40 CFR 761, and
- Any other information, such as the results of tests performed in accordance with 35 IAC 811.202, that can be used to determine whether 1) the special waste is regulated as a hazardous waste as defined by 35 IAC 721, 2) the



special waste is of a type that is permitted for, or has been classified in accordance with 35 IAC 809, for disposal at the Facility, and 3) whether the method of disposal at the Facility is appropriate for the waste.

Each subsequent shipment of a special waste from the same generator must be accompanied by a special waste manifest, a copy of the original special waste profile identification sheet, and either of the following:

- A special waste recertification by the generator describing whether there have been changes in the following: laboratory analysis (copies to be attached), raw material in the waste-generating process, the waste-generating process itself, the physical or hazardous characteristics of the waste, and new information on the human health effects of exposure to the waste, or
- Certification indicating that any change in the physical or hazardous characteristic of the waste is not sufficient to require a new special waste profile.

#### *Special Waste Manifests*

Special wastes accepted for disposal (excluding special wastes generated by the Facility Operator at the site) shall be accompanied by a manifest. Manifests shall include the following information as a minimum, per IEPA 811.403:

- The name of the special waste generator,
- When and where the special waste was generated,
- The name of the special waste transporter,
- The name of the solid waste management unit while it is shipped as a final destination point,
- The date of delivery to the landfill,
- The name, special waste stream permit number, and quantity of special waste delivered to a transporter,
- The signature of the person who provided the special waste to the transporter, acknowledging such delivery,
- The signature of the special waste transporter, acknowledging receipt of the special wastes, and
- The signature of the person who accepted the special waste at the landfill, acknowledging acceptance of the special waste.

The special waste transporter must present four (three plus the original) copies of the manifest. The transporter will retain one copy, and the Facility will:

- Retain the original;



- Send one copy of the completed transportation record to the person who delivered the special waste to the special waste transporter (usually the generator, or another special waste management facility);
- Send one copy of each signed manifest to the IEPA in accordance with the requirements of 35 Ill. Adm. Code Part 809; and
- Send information on rejected loads to the IEPA in a quarterly report, as required by 35 IAC 809.

The Facility will retain the records of special waste transactions for a period of three years. Such records shall be made available for inspection and photocopying by the IEPA pursuant to Section 4(d) of the Act.

#### *Waste Analysis Plan*

Except for special wastes for which the Facility has a generic permit, a representative sample of each special waste stream must, at a minimum, be analyzed for the following parameters:

- Paint filter,
- Flashpoint,
- Reactive sulfide,
- Reactive cyanide,
- Total phenols,
- pH, and
- The organic and inorganic Toxicity Characteristic Constituents listed in 35 IAC 721.124 by the Toxicity Characteristics Leaching Procedure (TCLP).

The following exceptions apply to the above analytical requirements:

- Total sulfide analysis may be substituted for reactive sulfide, only if the total sulfide concentration does not exceed 10 parts per million (ppm),
- Total cyanide analysis may be substituted for reactive cyanide, only if the total cyanide concentration does not exceed 10 parts per million (ppm),
- Total concentration analyses may be substituted for TCLP analyses except where the total concentrations exceed the TCLP limits specified in 35 IAC 721.124,
- Analysis of the eight pesticide Toxicity Characteristic Constituents (D012, D013, D014, D015, D016, D017, D020, and D031) can be waived if the Generator certifies that they are not expected in the waste based on the nature of the waste and generator's business,



- Petroleum-contaminated media and debris from Leaking Underground Storage Tank (LUST) sites subject to corrective action under 35 IAC Parts 731 and 732 are only required to be analyzed for flash point, paint filter test, and TCLP lead,
- An MSDS for off-specification, unused or discarded commercial or chemical products may be used to determine the presence of hazardous constituents in lieu of analytical results,
- Complete TCLP analysis is not required in the case of an emergency cleanup provided: 1) the IEPA Emergency Response Unit (ERU) authorizes the waste stream analytical exemption, 2) the Landfill obtains assurance that the Generator has received an incident number from the Illinois Emergency Management Agency, and 3) the waste was analyzed for the chemical constituents required by the IEPA ERU.

Special waste streams will be required to be re-analyzed at least once every 5 years and whenever the composition of the waste changes.

Test methods employed for detailed analysis to characterize and to identify waste are provided in the following reference materials:

- EPA-600/4-79-020: "Methods for Chemical Analysis of Water and Wastes",
- SW-846: "Test Procedures for Evaluating Solid Waste, Physical/Chemical Methods", and
- "Standard Methods for the Examination of Water and Waste Water," 15th Edition, American Public Health Association, 1980.

#### *Acceptance Criteria*

Non-hazardous special waste shall meet the following criteria prior to acceptance:

- Does not contain a listed hazardous waste,
- Does not contain PCBs at concentrations greater than 50 mg/L except as specifically allowed by RCRA and/or TSCA regulations for disposal at a RCRA Subtitle D landfill,
- Does not exhibit the characteristics of ignitability, reactivity, corrosivity, or toxicity as defined by 35 IAC 721 Subpart C,
- Does not contain any contaminant at a concentration greater than the respective value specified in 35 IAC 721.124 (when the waste contains less than 0.5% filterable solids, the waste itself shall be considered the extract for the purpose of 35 IAC 721.124);
- Does not contain reactive cyanide concentrations greater than 250 parts per million unless specific information to show it does not present danger to human health or the environment is provided. Wastes with between 10 and 250 parts per million reactive cyanide can only be accepted if the Generator provides a signed certification that none of the following have occurred:



- The waste has never caused injury to a worker because of HCN generation,
  - That the OSHA work place air concentration limits of HCN have not been exceeded in areas where the waste is generated, stored, or otherwise handled, and
  - That air concentrations of HCN above 10 parts per million have not been encountered in areas where the waste is generated, stored, or otherwise handled.
- Does not contain reactive sulfide concentrations greater than 500 parts per million unless specific information to show it does not present danger to human health or the environment is provided. Wastes with between 10 and 500 parts per million reactive sulfide can only be accepted if the Generator provides a signed certification that none of the following have occurred:
- The waste has never caused injury to a worker because of H<sub>2</sub>S generation,
  - That the OSHA work place air concentration limits of H<sub>2</sub>S have not been exceeded in areas where the waste is generated, stored, or otherwise handled, and
  - That air concentrations of H<sub>2</sub>S above 10 parts per million have not been encountered in areas where the waste is generated, stored, or otherwise handled.

RCRA empty containers received as a special waste shall meet the following criteria:

- Have a rated capacity less than 110 gallons,
- Meet the definition of empty as provided in 35 IAC 721.107(b), and
- For drums, at least one end must be removed and the drums must be intact, or both ends must be removed and the drums must be crushed flat prior to disposal.

Where possible, a copy of the material safety data sheet for products last contained in the drum shall be obtained and kept on file. Containers that formerly held "P"-listed hazardous wastes or TSCA regulated quantities of PCBs will not be accepted. Compressed gas cylinders will not be accepted.

#### *Special Waste Record Keeping*

The Facility will retain copies of all special waste profile identification sheets, special waste recertifications, certifications of representative sample, special waste laboratory analyses, special waste analysis plans, and any waivers of requirements (prohibitions, special waste management authorization, and operating requirements) at the Facility or other location acceptable to the IEPA until the end of the post-closure care period.

#### *Declassification of Special Waste*

On August 19, 1997, Public Act 90-502 created Section 22.48 of the Illinois Environmental Protection Act to exclude certain nonliquid, nonhazardous industrial process wastes and pollution control wastes from the definition of special waste provided that generators certify that these wastes meet the following requirements:



- The waste material is nonliquid (as determined by paint-filter test SW-846 Method 9095) and is nonhazardous.
- The waste is not regulated asbestos-containing material as defined in 40 CFR 61.141.
- The waste does not contain polychlorinated biphenyls (PCBs) regulated in accordance with CFR 761.
- The waste is not formerly a hazardous waste that has been rendered nonhazardous.
- The waste is not a result of shredding recyclable material (e.g., auto fluff).

Additionally, each certification provided by a generator must include:

- A statement explaining how the generator determined the waste is neither hazardous nor a liquid.
- A description of the process that generates the waste.
- Any relevant material safety data sheets.
- Results from analytical testing (signed and dated by the person who completed the analysis) or explanation why testing was needed.

Certification allows qualifying nonliquid, nonhazardous industrial process wastes and pollution control wastes to be transported as nonspecial waste without manifesting or using licensed special waste haulers. Waste disposal facilities do not require special waste authorization from IEPA to accept certified wastes.

Certifications must be signed and retained by the generator for 3 years following termination of the process that generated the waste. Certifications must be provided when requested by the IEPA, the waste hauler, or the waste disposal facility.

### **Load Checking Program**

A comprehensive load checking program will be implemented at the Facility to detect and eliminate attempts to dispose of unauthorized wastes. The program includes: 1) customer education; 2) employee training; 3) regular inspection checkpoints; 4) random load inspections; 5) special waste load checks, 6) record-keeping; and, 7) guidelines for handling hazardous or unauthorized wastes. The following paragraphs describe these components of the load checking program in more detail.

#### *Customer Education*

Commercial/industrial and construction and demolition haulers that utilize the Site 2 East Expansion will be subject to a pre-approval process. The haulers will be notified by the Facility of the types of materials that are acceptable and unacceptable for disposal. The haulers will be required to properly instruct their drivers to reject unauthorized waste materials at the curb or other point of collection.



## *Employee Training*

Facility employees involved with the load checking program will be familiar with the list of unauthorized wastes and load inspection procedures. Employees will be trained in the identification of unauthorized wastes, including familiarity with typical containers, markings, labels and placards that might aid in recognizing unauthorized wastes. Trained personnel will be provided with literature in this regard. Periodic personnel meetings will be held to ensure that staff members involved with the load checking program remain aware of waste acceptance criteria, including any additions to the list of unauthorized wastes.

## *Regular Checkpoints*

Routine load checking will be the responsibility of employees, particularly those that work at the entrance area and those that work at or near the active fill area. Employees will monitor vehicles entering the Facility, watch for any potentially unauthorized waste, and alert management if suspect wastes are observed. For each load there will be several checkpoints (in addition to the curbside checkpoint discussed above):

- Scalehouse checkpoints. Only authorized vehicles will be allowed beyond the scalehouse. The scalehouse attendant will refuse entry to any unauthorized vehicle or any vehicle observed to contain unauthorized waste;
- Active face checkpoints. Material will be observed by the equipment operators as it is discharged at the active face; and
- Checkpoints during compaction at active face. Material will be inspected by the landfill compactor operator as it is compacted at the active face.

## *Random Inspections*

Random inspections will be conducted for a minimum of three loads of waste per week as required by the IEPA. The General Manager may designate an employee to be responsible for conducting the inspections. Trucks selected for random inspection will be directed to deposit their loads in a location near the active fill area where the inspection can occur without interfering with the landfilling operations. Assuming no unauthorized waste materials are found during the inspection, the driver will be allowed to leave and the inspected waste material will be promptly moved to the active fill area for proper disposal.

## *Special Waste Load Checks*

Loads of special waste will be checked for the presence of unacceptable materials. The special waste load checking procedures are described below:

- All loads stop at the scalehouse,
- Scalehouse attendant inspects the manifests and the load to confirm that the waste appearance is similar to that described on the Profile Identification Record.
- Scalehouse attendant evaluates whether load is acceptable and conforms to the IEPA permit and Facility pre-authorization,



- Scalehouse attendant notifies the General Manager if the load is suspected to be unacceptable, and obtains authorization to reject the load. The Generator is notified and arrangements are made to return the load to the Generator. Information regarding rejected special waste loads will be promptly reported to the IEPA.
- Scalehouse attendant signs the manifest if the load is acceptable. The manifests are then distributed appropriately.

#### *Record Keeping*

Formal load inspections and rejections involving suspect waste materials will be documented in writing by the inspector and retained by the Facility for a minimum of five years. At a minimum, the following information will be logged for each formal inspection and rejection that takes place:

- Date and time of inspection;
- Name of the hauling firm;
- Name of the driver;
- Vehicle license plate number;
- Source of the waste as reported by the driver;
- Inspector observations; and
- Signatures of inspector and driver.

#### *Handling of Unauthorized Wastes*

If any regulated unauthorized wastes are identified during the load checking programs, or are otherwise discovered to be improperly deposited at the Facility, the Facility will promptly notify 1) the Illinois Environmental Protection Agency (no later than 5:00 pm the next business day after the day it is detected), 2) the person responsible for shipping the wastes to the Facility, and 3) the waste generator (if known). Waste loads that appear similar to loads suspected of containing regulated unacceptable waste will not be accepted.

If the unauthorized waste has not been unloaded, it will remain on the transportation vehicle. If the suspect waste has already been unloaded, the Facility will coordinate the cleanup and the removal of the waste, consulting with the IEPA and the generator during the process. A photographic and written record of the unauthorized waste incident will be made, with copies of the report placed in the Facility records.

Special precautionary measures will be undertaken prior to accepting subsequent waste loads from the person or source responsible for previously shipping unacceptable wastes to the landfill. Special precautionary measures may include, but not necessarily be limited to, questioning the driver regarding the waste contents and origin prior to allowing its discharge at the Facility, not allowing repeat offenders and visually inspecting the waste as it is discharged at the Facility.



### **Temporary Waste Storage**

As is currently permitted by IEPA, frozen loaded roll-off containers may be stored at the Facility with the following conditions, unless otherwise approved by the IEPA:

- No more than 15 loaded containers will be stored at one time,
- all containers shall be emptied at the active fill area of the Facility within three business days from when the containers arrive at the Facility,
- the containers will be tarped at all times,
- the containers will be stored in the designated storage areas, and
- no containers with putrescible waste that may harbor vectors or have offensive odors may be stored.

As also currently permitted by IEPA, loaded waste transfer trailers may be parked at the Facility with the following conditions, unless otherwise approved by the IEPA:

- Trailers will be parked in an area with certified liner and close to the active fill area of the Facility,
- no more than 20-trailers will be parked overnight,
- waste within the parked trailers will be disposed during the next operating day
- trailers will remain tarped overnight, and
- the Facility will use odor control methods to control and eliminate odors.

### **Survey Controls**

A grid coordinate system has been established at the Facility for horizontal control as shown on the Facility drawings. Vertical control is based on established elevation control benchmarks. Additional survey monuments will be established by a Licensed Surveyor as appropriate to maintain onsite horizontal and vertical control.

Onsite survey control monuments will be inspected annually. Damaged monuments will be replaced. Onsite survey control monuments will also be resurveyed by a Licensed Surveyor no less frequently than once every 5 years, unless otherwise approved by the IEPA.

Record drawings of newly constructed features will be prepared at regular intervals coinciding with the preparation of construction reports. The record drawings will document the location, size, and elevation of the constructed features. The record drawings will be included with the IEPA acceptance reports required by 35 Ill. Admin. Code, Section 811.505 (d).

### **Waste Placement and Compaction**



Solid waste will be landfilled in lifts, each having a thickness of approximately 15 feet. Solid waste will generally be placed at the toe of the active face and pushed upwards in relatively thin lifts using a compactor, bulldozer, or other appropriate heavy equipment. Heavy equipment will not be allowed to operate directly above the liner and leachate drainage and

collection system until at least 5 feet of waste covers the landfill floor in order to not overstress these landfill components. Therefore, the initial lift of solid waste over the landfill floor will be pushed over the top of the active face.

The first 5 feet of solid waste on the landfill floor will be free of construction and demolition debris or other debris that could damage the underlying liner and leachate collection system. The waste will be compacted using landfill compactors or bulldozers to minimize void space and settlement to meet the requirements of 35 IAC 811.105.

The waste will be covered at the end of each operating day with daily or intermediate cover, as required by IEPA regulations. The regulations currently require waste that will not be covered by an additional lift of waste or final cover within 60 days of placement will be covered with intermediate cover.

Prior to placing waste over previously placed waste, the operator will remove at least a portion of the previously placed daily or intermediate cover to ensure that leachate will drain to the collection system. Waste slopes will be no steeper than 2 horizontal to 1 vertical.

### **Size and Slope of the Active Fill Area**

The size of the active fill area will vary and be dependent upon the amount of waste received during any particular day. The active fill area will be limited to that necessary to receive the waste and to ensure that the landfill will be operated in a safe and efficient manner. Daily cover soil or alternate daily cover materials will be used on areas where waste has been disposed and to which intermediate or final cover has not been applied. At no time will the side slopes of the active fill area be steeper than 2 horizontal to 1 vertical. The typical size of the active face for the current Site 2 is 60,000 square feet or less.

### **Cover Materials and Placement**

The use of daily, intermediate, and final cover layers serves to control vectors and minimize blowing litter, odor, and moisture infiltration.

#### *Daily Cover*

As required by 35 Ill. Admin. Code Part 811.106, a minimum of six inches of clean soil or an approved alternative daily cover will be placed over the active face at the end of each working day, typically within 1 hour of receipt of the last load of waste.

Alternate cover materials may be used only upon demonstration to the IEPA that minimum daily cover performance standards will be met. If used, alternate daily cover materials will be placed so that they provide litter control, vector control, odor control, and minimize the threat of fires, all in a manner which meets or exceeds the performance of soil daily cover. All runoff from the alternate daily cover material shall be directed to the leachate collection system and treated as leachate.

Alternate cover materials currently permitted at the existing Facility include:

- Geotextile fabric;
- Reinforced rubber membrane panels ("Night-Cap");
- Polypropylene non-woven fabrics;



- Polypropylene membranes;
- Plastic Film;
- Non-Woven geotextile fabric;
- Spunbound non-woven fabric;
- Slit-film woven fabric;
- Composite geotextile/plastic membranes;
- Tarps;
- Petroleum-contaminated soils;
- Used foundry sand;
- End-product compost;
- Processed landscape waste;
- Clean construction or demolition debris (excluding C&D fines or bulk wallboard);
- Coal combustion ash (fly ash);
- Rejected paper pulp;
- Shredded tires; and
- Wood Chips.

ADC will only be used when weather conditions are conducive to its ability to prevent blowing litter, fire, odors, and access of waste materials to vectors. Geosynthetic, tarpaulin, or fabric cover systems will be adequately anchored to prevent wind damage and ADC displacement. Damage to the ADC will be repaired prior to continued use, or the damaged area will be covered with at least 6 inches of soil. ADC materials previously used as daily cover will not be reused for any purpose outside the waste boundaries. ADC materials will be used in a manner consistent with IEPA permit approvals.

#### *Intermediate Cover*

Intermediate cover will be placed on areas consistent with IEPA regulations. Intermediate cover will be sloped to provide drainage and prevent ponding of water. A minimum of one foot of compacted clean soil will be placed on surfaces that require intermediate cover. The intermediate cover will be repaired as necessary to maintain the required slopes and thickness.



### *Final Cover*

Final cover will be placed as soon as practical after the permitted waste elevations are attained. Final cover will be certified by an Illinois licensed professional engineer in accordance with the construction quality assurance program. A typical final cover will consist of a multi-layer system, as shown on Drawing No. D13. Drawing No. D12 shows the final configuration and elevations for the entire site at closure. Further information on the final cover is located in Section 2.3 of this application.

### **Maintenance Program**

Systems and structures will be inspected and maintained on a regular basis to assure proper operation. The frequency of inspection will vary based on the system or structure being evaluated as described in the following paragraphs. Generally, landfill personnel will inspect equipment, fencing, gates, roads and other systems as part of their daily operating responsibilities. Landfill monitoring systems will be inspected at each sampling event. The final cover system will be inspected periodically to ensure that the cover is in good condition. Inspection and maintenance activities will continue during the post-closure care period as described in Section 2.9 of this application.

### *Equipment*

A preventive maintenance program will be established for landfill operating equipment to maximize performance and availability. In general, equipment will be inspected and maintained in accordance with the manufacturer's recommendations. A schedule will be followed for conducting routine preventative maintenance activities such as changing filters, changing and/or adding lubricants, introducing antifreeze, etc. Standby equipment will be cleaned, recharged, etc. as soon as practical after each use in order to maintain its readiness. If any equipment or associated parts are found to be faulty or worn out, the equipment will be repaired or replaced as soon as practical. Equipment will be available for use at the Facility during all hours of operations.

### *Leachate Systems*

The leachate collection and management systems will be inspected on a routine basis for evidence of clogging or need for general system repair. Areas specifically targeted for maintenance inspections include: pumps and controls, collection points, the leachate storage system, leachate containment structures, and collection pipe. Any observed damage or deficiencies will be repaired following detection.

### *Monitoring Systems*

Landfill gas monitoring probes and groundwater monitoring wells will be inspected during regular sampling events for structural integrity and proper function. Damaged probes or wells will be repaired or replaced as soon as practical. The continuous methane detection devices located in buildings at the Facility will be inspected based on manufacturer recommendations. A log of the inspections will be maintained on-site.

### *Cover Systems*



Daily, intermediate and final cover will be constructed and maintained in accordance with specifications approved by the IEPA. Any intermediate cover that becomes excessively

eroded or damaged will be regraded and compacted to ensure the waste is covered as required.

As part of the normal maintenance activities, the final cover will be monitored for settlement. If areas of differential settling are observed that could cause ponding of water on the cover, the area will be regraded.

#### *Drainage/Erosion Control Systems*

Stormwater basins, diversion ditches, perimeter ditches, terrace berms, and culverts will be routinely inspected for siltation and erosion. As necessary, these structures will be cleaned, regraded, relined, rip-rapped or otherwise repaired to restore design capacities and correct problem areas.

Erosion control devices will be routinely inspected in accordance with the site NPDES permit and Lake County Watershed Development Permit. As necessary, silt accumulations will be removed and the devices repaired or expanded to maintain adequate erosion/siltation control and runoff water quality. Further information on the maintenance program for the drainage and erosion control system is provided in Section 2.4 of this application.

#### *Access Controls*

Structures such as fences that are used to restrict access to the Facility will be inspected regularly to ensure their continued integrity. Structures exhibiting signs of collapse or damage will be repaired.

#### *Roads*

On-site roadways will be kept in good operating condition. Roads will be graded and potholes will be filled as necessary. Mud accumulations and debris which may fall from outgoing vehicles will be removed. Snow will be cleared during and/or following heavy snowfalls. Dust will be controlled by periodic watering of the roads, as necessary, using water obtained from the stormwater detention basin areas.

### **Leachate Management and Monitoring Procedures**

The proposed Site 2 East Expansion will use a leachate collection system to remove liquid from the landfill. The leachate collection system will tie into the currently permitted system that is currently used at the Site 2 Expansion. The design of this system is detailed in Section 2.3 of this application. Section 2.3 also describes the chemical and physical processes that occur in a landfill that may result in the formation of leachate. A leachate recirculation system is also incorporated in the design to manage leachate that is generated.

#### *Operation of the Leachate Collection and Recirculation System*

Leachate will flow by gravity through the leachate drainage blanket into perforated HDPE collection pipes spaced at intervals along the bottom of the landfill. The collection pipes will be sloped to extraction points located along the perimeter of the waste boundary. Leachate will be removed from the collection points using an appropriate pump (refer to Appendix K for information on typical pumps). A force main will be used to pipe leachate from the collection points to the leachate recirculation system and/or leachate storage tank.



Leachate will be recirculated by pumping leachate from the force main to a series of distribution trenches. The leachate will flow in a solid header pipe and discharge into a

perforated pipe (lateral distribution piping) located in trenches that have been backfilled with a pervious material such as stone. The trenches will be located between lifts of solid waste. The horizontal pipes will contain perforations appropriately spaced to provide reasonably uniform distribution along the length of the pipe.

Pumps, meters, valves, and monitoring stations that control and monitor the flow of leachate are part of the Facility and will be accessible to the Operator.

#### *Automatic Extraction and Recirculation System Operations*

The leachate extraction pumping systems are designed to operate automatically. These systems will rely upon mechanical and electrical components that will require routine system checks and maintenance to ensure satisfactory performance. Maintenance will depend upon the specific components that are selected, but generally will be performed in accordance with the manufacturers' recommendations.

A manifold and valving system at each leachate extraction sump will be manually operated to direct leachate into the leachate recirculation system, or to a storage tank. While recirculating leachate, the areas receiving recirculated leachate shall be inspected for evidence of excess leachate, notably leachate seeps, each operating day. If observed, leachate recirculation into the area exhibiting excess leachate will be curtailed.

Landfill gas condensate drains directly into the leachate collection system via landfill gas condensate drip legs. These drip legs require no mechanical parts.

#### *Response Plan to Potential Leachate Runoff*

The Operator will immediately respond to leachate seeps to prevent leachate from commingling with storm water runoff. Response procedures will include the following as appropriate:

- Identify the source of the leachate and take action to prevent additional leachate from escaping.
- Contain leachate runoff prior to being discharged beyond the site boundary. Containment can consist of placing earthen berms, constructing diversion ditches, adsorbing the leachate with soil or other adsorbents, etc.
- Remove and properly dispose soil contaminated by leachate.

#### *Leachate Disposal*

Tanker trucks will be parked over a primary spill containment pad while transferring leachate. This pad is designed to catch and contain minor spills. These pads can be drained into the secondary containment of the leachate tanks by opening a valve. In the event of a significant spill, the valve will be opened so that the leachate is contained and can be removed efficiently. Once loaded the leachate tanker transports the leachate to a waste water treatment plant for treatment.



### *Leachate Monitoring*

Leachate monitoring will take place at each of the installed leachate sampling points in accordance with IEPA permit requirements. The depth of leachate will be monitored at each leachate sump through the use of pressure transducers. Leachate head on the liner will not exceed one foot per IEPA regulations.

Leachate test results will be submitted to the IEPA. Leachate collection and sampling will continue after closure of the landfill for as long as deemed necessary by the IEPA to sufficiently protect the public health and the environment in accordance with 35 Ill. Admin. Code Section 811.309(h).

### **Landfill Gas Management and Monitoring Procedures**

Landfill gas is a natural by-product of the decomposition of waste in a landfill. The Site 2 East Expansion has been designed with systems to collect and monitor landfill gas. Section 2.3 of this application provides a more detailed description of the conceptual landfill gas systems, as well as the physical and chemical characteristics of landfill gas. The conceptual landfill gas system will tie into the existing landfill gas collection system.

#### *Landfill Gas Collection*

The current Site active landfill gas collection system is fully anticipated to be expanded as a part of the Site 2 East Expansion. The existing Site 2 has an active landfill gas collection system to control odors and landfill gas migration. An "active" system means that blowers are used to withdraw landfill gas into the pipes comprising the collection system, causing the Facility to operate under a vacuum.

The Facility has implemented a Startup, Shutdown, and Malfunction Plan for the gas collection and control system. All incidents involving startups, shutdowns, and malfunctions are recorded and reported to the state semiannually. The Facility is subject to and complies with NESHAP as it relates to startups, shutdowns, and malfunctions. A SSM Plan is maintained at the site and updated as required by regulations.

A detailed design will be submitted to the IEPA prior to or at the time that any of the conditions outlined in 35 Ill. Admin. Code Section 811.311 (a)(1-3) occur. An appropriate end-use for the landfill gas (e.g., flaring, energy recovery) will be determined based on the quantity and quality of the gas that is collected. Currently, a portion of the collected landfill gas from Site 2 is utilized in engines to generate electricity.

#### *Landfill Gas Monitoring*

Landfill gas will be monitored at the Facility to ensure that landfill gas is not migrating off-site through subsurface or surface routes. Landfill gas probes will be installed at locations around the perimeter of the Facility as shown on Drawing No. D22. These probes will allow a representative sample of landfill gas to be collected and tested for composition. Continuously-monitored methane detection devices will also be installed in on-site buildings. Collected landfill gas must meet the vacuum, temperature, and constituent requirements outlined by NSPS and CAAPP permits. Landfill gas monitoring will continue after closure in accordance with IEPA requirements.



## **Groundwater Monitoring**

A comprehensive groundwater monitoring program has been developed for the Site 2 East Expansion to verify that the Facility is functioning as designed and to provide an early warning system in the unlikely event of a release from the Facility.

Tested groundwater parameters and sampling frequencies will be in accordance with IEPA regulations. Sampling results will be submitted to the IEPA. A more detailed description of the groundwater monitoring program is provided in Section 2.8 of this application.

## **Stormwater and Erosion Control**

A Stormwater Management Plan has been developed for the Site 2 East Expansion to ensure the safe and efficient conveyance of stormwater runoff. Runoff from the completed landform will flow into a series of perimeter ditches. These perimeter ditches will convey the stormwater into detention basins. Drainage ditches and culverts will safely convey the minimum 100-year, 24-hour storm flows without overtopping as described in Section 2.4 of this application.

A comprehensive erosion control plan has also been developed that will utilize a variety of best management practices (BMPs) to prevent erosion. These BMPs include temporary and permanent seeding, fabric filters, and terrace berthing. Detention basins will be used to facilitate sedimentation and improve water quality prior to discharge. A complete description of the stormwater management plan and erosion control plan is included in Section 2.4 of this application.

## **Health and Safety Policies**

Veolia has developed numerous Health and Safety policies that emphasize site safety training and proper safety procedures during day-to-day operations and during emergency situations. These policies are included in Section 5 and Appendix T of this application.

