CITY OF EDINBURG SOLID WASTE MANAGEMENT

PERMIT AMENDMENT APPLICATION

Part IV

SITE OPERATING PLAN

Edinburg Regional Disposal Facility

Edinburg, Hidalgo County, Texas

TCEQ Permit MSW-956C

Submitted To: City of Edinburg
Department of Solid Waste Management
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INTENDED FOR PERMITTING PURPOSES ONLY

July 2017

Project No. 1401491

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EXECUTIVE SUMMARY

30 TAC 330.121(a) & §330.127

This Site Operating Plan (SOP) includes provisions for site management and the site operating personnel to meet the general and site-specific requirements of 30 Texas Administrative Code (TAC) Subchapter D, Operational Standards for Municipal Solid Waste Landfill Facilities. The Edinburg Regional Disposal Facility (facility) shall be operated in accordance with the requirements of this SOP and other applicable local, state, and federal regulations. This approved SOP and the site development plan, the final closure plan, the post-closure maintenance plan, the landfill gas management plan, and all other required documents and plans are operational requirements and shall be considered a part of the site operating record (SOR) of the facility. Any deviation from TCEQ Permit MSW-956C (permit) and the incorporated plans or other related documents associated with the permit is considered a violation of the TCEQ's municipal solid waste regulations.

1.0 RECORDKEEPING REQUIREMENTS

The following sections outline the facility's recordkeeping and records retention requirements.

1.1 Records

1.1.1 Permit and Plans

30 TAC §330.125(a)

Upon permit issuance, a copy of the permit, this SOP and the approved site development plan, the final closure plan, the post-closure maintenance plan, the landfill gas management plan, and any other required plans or related documents shall be maintained at the facility in the SOR.

1.1.2 Records Management

30 TAC §330.125(b) – (g) & (d)

Documents will be added to SOR within 7 working days of completion of the item or receipt of analytical data. It shall be the responsibility of the landfill manager to retain all required records, either paper copy or electronic format, and maintain the SOR in an organized format that allows the information to be easily located and retrieved. All information contained in the SOR shall be furnished upon request to the TCEQ and must be made available for inspection by the TCEQ. The different plans required for the facility and all information contained within the SOR, will be retained for the life of the facility, including the post-closure care period. In addition, the TCEQ may set an alternate recordkeeping and notification schedule.

Recordkeeping requirements and recommendations are further summarized on the table below:

Table IV-1: Recordkeeping Requirements and Recommendations

Records Needed	Frequency	30 TAC Rule Citation or SOP Section
Approved SOP, SDP, Closure Plan, Post-closure Maintenance Plan, Landfill Gas Management Plan, and Other Required Plan(s) and Related Documents	Permit Issuance	§330.125(a)
Location Restriction Demonstrations	Permit Issuance	§330.125(b)(1)
Prohibited Waste Inspection Records, Training and Receipt Notification Procedures	Per Occurrence	§330.125(b)(2)
Gas Monitoring Results	Quarterly	§330.125(b)(3); §330.159
Remediation Plans for Explosive and Other Gases	Per Occurrence	§330.125(b)(3)
Unit Design Documentation for Leachate or Gas Condensate Placement	As Required	§330.125(b)(4)
Groundwater Monitoring and Corrective Action Demonstration, Certification, Monitoring, Testing, & Analytical Data	Per Occurrence	§330.125(b)(5)
Closure and Post-Closure Care Plans	Permit Issuance	§330.125(b)(6)
Post-Closure Monitoring, Testing, and Analytical Data	Per Occurrence	§330.125(b)(6)

Records Needed	Frequency	30 TAC Rule Citation or SOP Section
Cost Estimates and Financial Assurance Documentation for Closure and Post-Closure	Annually	§330.125(b)(7)
Facility Operation, Permit Modification, Approvals, and Technical Assistance Correspondence & Responses	Per Occurrence	§330.125(b)(9)
Special Waste Manifests, Trip Tickets and All Other Documents Relating to Special Waste (maintained electronically)	Per Occurrence	§330.125(b)(10)
Other Documents Specified in the Permit or by the TCEQ	As Needed	§330.125(b)(12)
Personnel Training Records per §335.586(d)-(e)	As Needed	§330.125(e)
Personnel Operator License	As Needed	§330.125(f)
Annual Waste Acceptance Rate Documentation	Rolling Quarterly	§330.125(h)
Quarterly Solid Waste Summary Report (STEERS)	Quarterly	§330.675(a)
Annual Solid Waste Summary Report (STEERS)	Annually	§330.675(b)
Unauthorized Material Removal	Per Occurrence	§330.133(b)
Landfill Marker Inspections	Monthly	§330.143(a)
Landfill Gas Management Reports and Submittals	Per Occurrence	§330.159
Cover Inspection Record	Daily	§330.165(h)
Regulated Asbestos-containing Materials (RACM) Acceptance Records	Per Occurrence	§330.171(c)(3)(B)
Site Access Road Records	Monthly	§330.153
Access Control Inspections and Maintenance	Monthly	§330.131
Notices for Access Control Breaches and Repairs	Per Occurrence	§330.153
Fire Occurrence Notices	Per Occurrence	§330.129
Ponded Water Records	Weekly	§4.23 of this SOP
Site Inspection and Maintenance Records	Per Occurrence	§4.5 of this SOP
Daily Log of Litter and Debris Pickup along Public Roads	Daily	§4.12 of this SOP
Additional Temporary Operating Hours	Per Occurrence	§4.7 of this SOP

1.1.3 Training and Licenses

30 TAC §330.125(e)-(f), §335.586(d)-(e), & §30.213

The owner or operator must maintain the following documents and records at the facility:

- the job title for each position at the facility related to waste management, and the name of the employee filling each job;
- a written job description for each position listed. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;
- a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position; and
- records that document that the training or job experience required under 30 TAC §335.586 (a) - (c) has been given to, and completed by, facility personnel.

Training records on current personnel must be kept until closure of the facility and training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

The City shall maintain personnel operator licenses issued in accordance with 30 TAC §30, Subchapter F and shall employ at least one Class A licensed operator who supervises or manages the operations of the facility.

1.1.4 Annual Waste Acceptance Rate

30 TAC §330.125(h) & §330.675

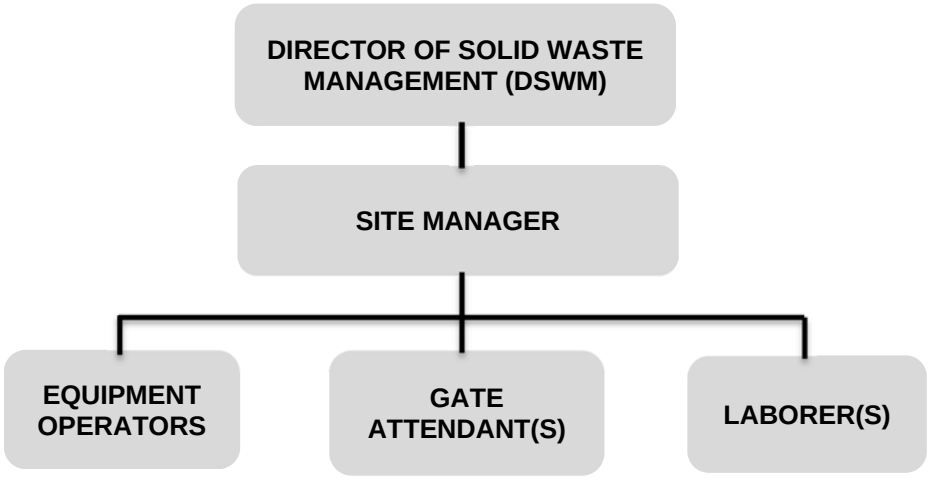
The City shall maintain records to document the annual waste acceptance rate for the facility. Documentation must include maintaining the quarterly solid waste summary reports and the annual solid waste summary reports required by 30 TAC §330.675 through the State of Texas Environmental Electronic Reporting System (STEERS). Whenever the annual waste acceptance rate, as established by the sum of the previous four quarterly summary reports, exceeds the estimated operating rate upon which equipment and personnel staffing has been based, the landfill manager shall make any necessary changes in personnel and equipment as specified in Table IV-3, Waste Volume Equipment and Staff Schedule, to ensure that the site personnel and equipment necessary to safely manage the waste are available. If the annual waste acceptance rate increases beyond the scope described in the current approved permit application and the waste increase is not due to a temporary occurrence, the City shall file an application to modify the permit, including the revised estimated waste acceptance rate, in accordance with 30 TAC §305.70(k), within 90 days of the exceedance as established by the sum of the previous four quarterly summary reports. The modification application will propose any needed changes in the SOP necessary to manage the increased waste acceptance rate in terms of equipment and manpower to protect public health and the environment that are beyond the scope addressed in the current approved permit application. The increased waste acceptance rate may justify requiring permit conditions that are different from or absent in the existing permit. The current and any future estimated waste acceptance rate is not a limiting parameter of the facility's permit.

2.0 PERSONNEL

30 TAC §330.127(1)

The landfill personnel shall include, at a minimum, a landfill manager, one equipment operator, one gate attendant, and at least one laborer for other assigned tasks. The organizational chart below provides the positions and chain-of-command of personnel necessary to operate the facility. The Director of Solid Waste Management for the City (DSWM) will be licensed in accordance with 30 TAC, Part I, Chapter 30, Subchapter A.

Organizational Chart



2.1 Director of Solid Waste Management (DSWM)

The DSWM is responsible for the overall landfill management and general direction of the facility's operations. The DSWM may not maintain a permanent office at the landfill. The DSWM has the authority to hire necessary supervisory and operating personnel for the landfill and to arrange or provide for their training and orientation. This individual also ascertains the facility's equipment needs and initiates requests to replace or obtain additional equipment. The DSWM may also engage outside contractors, as needed, to provide necessary supplemental equipment or services as deemed necessary for site operation. The DSWM, or a person designated by the DSWM, is the designated regulatory contact individual.

The DSWM or designated alternate must be knowledgeable and experienced in aspects of solid waste disposal operations, including relevant regulations, permit requirements, waste-handling, and safe management practices for disposal of MSW and non-hazardous industrial waste and special waste, and will have the required qualifications for licensing under 30 TAC §30.210.

2.2 Site Manager (SM)

The SM or designated alternate shall be responsible for day-to-day activities at the landfill. The site manager shall provide on-site management of the landfill operations. The SM will have the authority and responsibility to reject unauthorized loads, require unauthorized materials to be removed by the transporter, and/or assess appropriate surcharges.

The SM will be responsible for ensuring compliance of day-to-day operations with TCEQ operating requirements and with the SOP. The SM will ensure adequate staffing to provide facility operation in accordance with the SDP, the SOP, and the TCEQ regulations, and will supervise equipment operators,

gate attendants, and laborers, and assign duties as necessary. The SM will coordinate for fire protection training of landfill employees according to §4.4.2.2 Fire Protection Training of this SOP. The SM will be responsible for ensuring the inspection and/or maintenance of all equipment and operating systems required under the permit (i.e., leachate collection system, methane gas collection system, etc.). The SM will serve as the emergency contact and coordinator for the facility, and will be responsible for ensuring the maintenance of the SOR and required logs. The SM must be an experienced personnel manager, who is familiar with and has the aptitude to implement operational aspects of solid waste disposal operations, including knowledge of relevant regulations and permit requirements, waste-handling, and safe management practices for disposal of solid waste, health and safety, and waste identification.

2.3 Equipment Operator

Equipment operators shall be trained in the safe operation of landfill vehicles and heavy equipment. Duties to be performed may include spreading and compacting waste and cover soil as needed to place and contain waste, maintaining access roads, establishing and maintaining stormwater drainage, excavating soils, and completing construction activities in accordance with the SDP. The equipment operators shall also be responsible for daily inspection of equipment for operational and safety conditions. The equipment operators will be trained in prohibited waste identification and will visually observe waste loads as they are placed to help ensure that prohibited wastes are not deposited within the disposal unit. If prohibited wastes are observed, the equipment operators shall immediately notify the site manager or designated alternate. The equipment operators shall also assist other landfill personnel in fire protection operations, moving of litter fences, and other duties, as directed by the SM or designated alternate.

The minimum qualifications for an equipment operator include a demonstrated proficiency in operating heavy equipment and the ability to comprehend and implement the training included in §4.1 Personnel Training of this SOP.

2.4 Gate Attendant

The gate attendants shall be responsible for monitoring, documenting, and measuring incoming waste and collecting appropriate fees. Duties may include selecting random loads for waste inspections in accordance with §4.2 Prohibited Waste Detection and Prevention of this SOP, and directing waste loads to the appropriate disposal area(s). The gate attendant will be trained in safety procedures and in identifying prohibited wastes. If prohibited wastes are observed, the attendant shall not allow the waste into the landfill and shall immediately notify the SM.

The minimum qualifications for a gate attendant include a demonstrated ability to communicate with the customers regarding applicable requirements and the ability to comprehend and use the gatehouse equipment (i.e., scales, computers, etc.) and the training included in §4.1 Personnel Training of this SOP.

2.5 Laborer

Landfill laborers shall have responsibilities as directed by the SM or designated alternate. These duties may include on- and off-site litter control, fire protection operations, dust control, inspection and maintenance of perimeter fences, gate(s), litter fences, and other duties as necessary. Appropriate training will be provided commensurate to the duties and responsibilities of the laborer(s).

The minimum qualifications for a laborer include a demonstrated ability to comprehend the training included in §4.1 Personnel Training of this SOP.

3.0 EQUIPMENT

30 TAC §330.127(2)

Heavy equipment available for day-to-day operations of the disposal areas shall consist of at least one landfill compactor, one bulldozer, earth moving equipment, one motor grader, and a water truck. When major repairs to heavy equipment are needed, the City or its contractors will make additional equipment of similar size and function available.

The landfill compactor shall be a wheeled compactor with a minimum weight of 40,000 pounds with appropriate cleats for sufficient waste compaction. The bulldozer shall be capable of spreading MSW waste and soils for cover, and performing construction maintenance of on-site roads. The water truck shall be used to spread water for dust control and fire prevention/protection, as well as for watering vegetation for sustained growth, as necessary. The earth moving equipment (i.e., loader and dump truck and/or scraper) shall be capable of moving sufficient volumes of soil, as necessary. For additional information regarding the number, sizes, and capacities of the equipment, see Table IV-3, Waste Volume Equipment and Staff Schedule. In addition to the required equipment listed in the table below, miscellaneous pickups and/or other light utility vehicles, as well as various portable water pumps, instruments, and safety and training equipment will be on-site, as necessary. The pickup truck shall be used to haul landfill personnel within the site to conduct site duties and collect windblown and spilled litter (both on- and off-site). The portable pump shall be used to pump stormwater from excavations and ponded areas.

The number, types, and equipment manufacturers of the heavy equipment and miscellaneous vehicles and equipment may vary during site operations based on operational needs and availability.

Table IV-3: Waste Volume Equipment and Staff Schedule

Equipment Type	Waste Acceptance Rate [1][2] (Tons Per Year)				Minimum [3] Size	Function
	Less Than 350,000	350,001 to 750,000	750,001 to 1,250,000	1,250,001 to 1,750,000		
Compactor	1	1	2	2	40,000 lb.	Waste spreading and compaction, fire protection
Bulldozer	1	2	2	3	140 horsepower	Movement and placement of soil, waste spreading and compaction, fire protection
Excavator [2]	1	1	1	1	2.5 cy bucket	Excavation of soil, fire protection
Haul Truck[2]	1	2	2	2	20 cy	Hauling of soil, fire protection
Motor Grader	1	1	1	1	12-ft blades	Grading of access roads
Water Truck	1	1	1	1	1,500 gallons	Dust control, fire protection
Temporary Litter Fencing	1	3	4	4	four feet high	Active face litter control
Rotary Broom Sweeper	1	1	1	1	4-ft broom width	Road maintenance (cleaning)
Site Manager	1	1	1	1	N/A	See §2.2 Site Manager of this SOP
Equipment Operator	1	3	4	5	N/A	See §2.3 Equipment Operator of this SOP
Gate Attendant	1	2	2	2	N/A	See §2.4 Gate Attendant of this SOP
Laborer	0	3	4	4	N/A	See §2.5 Laborer of this SOP
Pump	1	1	1	1	NA	Storm water removal

Notes:

(1)The equipment size is the minimum size to be provided.
(2)The equivalent function of an excavator and a haul truck(s) working in tandem to excavate and transport soil may be met by a scraper. Thus, at the facility's discretion, the excavator(s) and haul truck(s) may be replaced by a scraper(s) that provides equivalent production rates.
(3) In the event of equipment breakdown or maintenance, backup equipment will be provided from other facilities that the City owns/operates, or from independent contractors or local rental companies, to avoid interruption of waste services and required facility operations.

4.0 GENERAL INSTRUCTIONS

30 TAC §330.127(3)

Operations will be conducted in a professional manner by qualified and trained personnel. Operational objectives will consist of placing the maximum permissible amount of waste in a specified area, properly compacting, covering and managing the waste, and operating the site in compliance with the TCEQ regulations, the site permit, and the SOP. The following Facility Operations, Inspection, and Maintenance List includes general instructions that the operating personnel will follow concerning the operational requirements of the facility.

Table IV-4: Facility Operations, Inspection, and Maintenance List

Description of Activity	Task	Frequency	Inspector	Inspection Documentation
Entrance Gate and Perimeter Fences	Conduct inspection of gate and perimeter fences to ensure that no breach has occurred. If breach occurs, notify TCEQ, as specified in §4.5.2 Notification of this SOP	Weekly	Site Manager or Designee	Note status and maintain in SOR
Cover Application Record	Record date of cover, how it was accomplished, and the last area covered, according to 330.165.	Daily	Site Manager or Designee	Document daily, intermediate, and final cover application, sign form, and place in SOR
Perimeter Drainage Channel and Pond Maintenance	Inspect channels for litter and debris, establish flowline, as required. Inspect detention ponds for damage.	Inspect weekly Maintain as needed	Site Manager or Designee	Document weekly, place in SOR
Random Load Inspection	Conduct inspection of selected vehicle to ensure that no unauthorized wastes are in the load.	Weekly, as specified in §4.2.2.4 Random Inspections of this SOP	Site Manager or Designee	Place completed Load Inspection Report in SOR
Unauthorized Material Removal	Document removal of unauthorized materials from the landfill.	Per Occurrence	Site Manager or Designee	Complete Unauthorized Material Removal form and place in SOR
Final Cover Inspection	Inspect final cover for erosion and damage to drainage structures.	As indicated in the SWPPP or weekly at a minimum	Site Manager or Designee	Complete documentation and place in SOR
On-site Litter Collection	Inspect site for litter. Collect litter on a daily basis and return to the	Daily	Site Manager or Designee	Complete documentation and place in SOR

Description of Activity	Task	Frequency	Inspector	Inspection Documentation
	working face for proper disposal.			
Mud and Debris Cleaned from Public Roads	Inspect public roads for evidence of mud and debris tracked from the site.	Daily during periods of inclement weather	Site Manager or Designee	Complete documentation and place in SOR
Fire Extinguishers/ Firefighting Equipment	Inspect all fire extinguishers and/or firefighting equipment, promptly repair or replace defective equipment.	Annually	Site Manager or Designee	Properly mark tags on fire extinguishers, document results of equipment inspections, place in SOR
Markers and Benchmarks	Inspect markers and benchmarks for damage. Replace markers that are removed or destroyed within 15 days of removal or destruction.	Monthly	Site Manager or Designee	Complete documentation and place in SOR
Roadway Regrading	Inspect on-site access roadways to ensure a clean and safe condition.	As needed or Quarterly	Site Manager or Designee	Complete documentation and place in SOR
Site Signs	Inspect all site signs for damage, general location, and accuracy of posted information.	Weekly	Site Manager or Designee	Complete documentation and place in SOR
Ponded Water	Inspect site for potential ponding and ponded water. Fill and grade low areas as soon as practical.	Weekly	Site Manager or Designee	Complete documentation and place in SOR

Notes:
SWPPP = Storm Water Pollution Prevention Plan

4.1 Personnel Training

30 TAC §§330.127(4), 335.586(a), & 335.586 (c)

Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the applicable requirements of 30 TAC §335.586. The City must ensure that this program includes all the elements described in the description of the type and amount of both introductory and continuing training that will be given to each personnel position.

This program must be directed by a person trained in waste management procedures, and must include instruction that teaches facility personnel waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by

familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

- procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
- communications or alarm systems;
- response to fires or explosions;
- response to groundwater contamination incidents; and
- shutdown of operations.

More detailed written descriptions of the type and amount of introductory and continued training provided to each employee as well as documentation of training will be maintained in the SOR. Facility personnel must take part in an annual review of the initial training required. The site manager, equipment operators, gate attendants, and laborers are trained in the contents of this SOP and other topics, as described in the following table:

Table IV-5: Personnel Training

Position	Job Description	Site Orientation	Site Operations	Endangered Species	Prohibited Waste Identification	Safety (job specific)	Fire Prevention	Load Inspection	Prohibited Wastes	Spill Prevention Control	Emergency Response	Litter Control	Random Inspection	Stormwater Pollution Prevention	Leachate System Maintenance
Site Manager	Responsible for all activities, ensure adequate staffing, inspections	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Gate Attendant	Take receipts, screen and some load inspection, direct vehicles to unloading area	X			X	X	X	X	X		X		X		
Equipment Operator	Compact waste, visual inspection of loads, unauthorized waste identification, apply daily cover	X		X	X	X	X	X	X	X	X		X		As Assigned
Laborer	As assigned	X		X		X	X				X	X			

4.2 Prohibited Waste Detection and Prevention

30 TAC §330.127(5

The facility has and will continue to implement procedures for the detection and prevention of the disposal of prohibited wastes, including regulated hazardous waste as defined in 40 Code of Federal Regulations (CFR) Part 261, and of polychlorinated biphenyls (PCB) wastes as defined in accordance with 40 CFR Part 761 unless authorized by the United States Environmental Protection Agency. Prohibited wastes that shall not be accepted are identified in Part II, Waste Acceptance Plan.

4.2.1 Training for Inspecting Loads

30 TAC §330.127(5)(C)

Facility personnel will be trained to inspect vehicles and identify regulated hazardous waste, PCB waste, and any prohibited waste described above. At a minimum, the gate attendant and equipment operators at the working face will be trained in screening and inspection procedures for prohibited waste and trained to recognize potential sources of prohibited waste, such as microelectronics manufacturers, electronic companies, metal plating industry, automotive and vehicle repair service companies, and dry cleaning establishments. The personnel will receive on-the-job training from the site manager or designated alternate. Records of employee training on prohibited waste control procedures will be maintained in the facility SOR.

4.2.2 Procedures to Control the Receipt of Prohibited Wastes

30 TAC §330.127(5)(A)

Procedures to control the receipt of prohibited wastes are designed to minimize the potential that the facility will receive hazardous or otherwise unacceptable waste for disposal. The following sections discuss the methods and procedures that will be used to control prohibited wastes at the facility.

4.2.2.1 Access Control

A means to control the disposal of prohibited waste at the landfill is by the control of access into the facility by unauthorized vehicles. This issue is addressed in §4.5, Access Control of this SOP.

4.2.2.2 Special/Industrial Waste Screening

Pre-screening customers bringing special waste and industrial waste to the facility is an additional means of controlling the receipt of prohibited waste. A detailed description of the special waste screening process is provided in the Appendix IVH, Special Waste Acceptance Plan (SWAP). This plan has been and will continue to be an essential element to preventing the acceptance or disposal of prohibited wastes.

4.2.2.3 Gatehouse Waste Screening

During hours of operation, the gatehouse will be staffed with at least one gate attendant. The attendant, trained for inspecting loads, will screen incoming loads and customers to help ensure that no prohibited wastes are being brought to the landfill. In addition, the facility will provide a sign in a conspicuous location that will list wastes that are prohibited for acceptance at the l.

If the attendant suspects prohibited waste is present in an incoming load, then that load will be directed to an area out of the flow of traffic, and trained personnel will further assess the load. Appendix IVA, Waste Discrepancy Report Form will be used to document the inspection and includes the date, time, name of the inspector(s), type of inspection/screening (i.e., suspected prohibited waste), transporter/generator information, and waste information. The inspection report shall be placed in the SOR within 7 working days of the inspection.

4.2.2.4 Random Inspections

The gate attendant, or other designated landfill personnel, will randomly select a minimum of two vehicles per week (including compactor vehicles) for inspection, notify the equipment operator, and direct the selected load to the working face. Once the selected load arrives at the working face, the equipment operator will direct the vehicle to a separate but adjacent location on the working face out of the flow of normal disposal traffic. The driver will be instructed to discharge the load onto the ground. The equipment operator will then visually inspect the contents of the load and document the presence of any prohibited waste.

Appendix IVB, Random Load Inspection Form will be used to document results of the random load inspection and includes information such as the date and time of inspection, name and signature of inspector(s), type of inspection/screening (i.e., random screening, suspected unauthorized waste, etc.), transporter/generator information (including hauling company name and license plate number), source of waste, contents of load as reported by driver, contents of load as observed by inspector, and approval or disapproval of the load. The inspection report will be placed in the SOR within 7 days of the inspection.

Loads that are excluded from random inspections are:

- Waste from transfer stations, providing that the transfer station is permitted or registered by the TCEQ and conducts random screening (waste received from transfer stations is already subject to visual inspections and random screening prior to arrival at the facility).
- Liquid waste.
- Asbestos waste.

4.2.2.5 Waste Disposal Observation

Equipment operators, trained for inspecting loads, will observe waste being disposed of at the active working face. If an equipment operator suspects the presence of any prohibited waste, the trained personnel will further assess the load. Appendix IVA, Waste Discrepancy Report Form will be used to document the inspection. The inspection report shall be placed in the SOR within 7 working days of the inspection. If the waste is determined to be prohibited, then the prohibited waste remediation plan will be implemented as §4.2.4.1 Prohibited Waste Remediation Plan of this SOP.

4.2.3 Records of All Inspections 30 TAC §330.127(5)(B)

Records of all inspections will be placed in the SOR within 7 days of the inspection.

4.2.4 Notification of Receipt of Hazardous Waste or PCB

30 TAC §330.127(5)(D)

The TCEQ, and any local pollution agency with jurisdiction that has requested to be notified, will be notified of any incident involving the receipt or disposal of regulated hazardous waste (which is defined to exclude waste generated by conditionally exempt small quantity generators, now referred to as very small quantity generators under applicable federal rules) or PCB waste (which is defined as those PCBs and PCB items subject to federal disposal requirements) at the facility.

4.2.4.1 Prohibited Waste Remediation Plan

30 TAC §330.127(5)(E)

Remediation procedures may range from loading prohibited waste back onto the generator's vehicle to loading waste in an on-site container, tarping, testing, and removing the waste to an approved off-site facility. Containers will be marked appropriately with words for the type of prohibited waste it contains, such as "Hazardous Waste" or "PCBs." Remediation procedures for the incident will be documented and included in the facility operating record within 7 days. Remediation procedures will also include any requirements imposed by the TCEQ following the notification of receipt or disposal of prohibited waste.

4.3 Other Site Activities

The site manager, or designated alternate, has responsibility for on-the-job training of other site activities briefly discussed below and ensuring that they are conducted as required by the facility permit, TCEQ regulations, or any other local, state, or federal regulation. However some site activities may arise that are not disucess in this plan.

4.3.1 Liquids Restrictions

The landfill shall not accept bulk or non-containerized liquid waste for direct disposal unless it is household waste other than septic waste. The restriction of bulk or non-containerized liquids, with the exception of household waste other than septic waste, is intended to control a source of leachate. Liquid waste refers to any waste that is determined to contain free liquids by using USEPA Test Method 9095B-paint filter liquids test. Containers holding liquid waste shall not be placed in the landfill unless they are small containers of household waste. The facility shall not accept bulk liquids, such as tank trucks of liquid waste, for disposal.

The facility may accept liquid sludges, grease trap waste, and liquid waste from other municipal sources for processing prior to disposal in accordance with §4.24, Disposal of Special Waste of this SOP.

4.3.2 Pond and Ditch Maintenance

Periodically, as directed by the site manager or designated alternate, site drainage ditches and stormwater ponds may require maintenance and/or cleaning to ensure that they function as intended. The required maintenance may be conducted by site personnel or by a contractor. The maintenance may consist of cleaning up litter and/or small brush/limbs to excavating and removing silt deposits. The amount of maintenance will be determined by the site manager or designated alternate.

4.3.3 Leachate System Maintenance

It will be the responsibility of the site manager or designated alternate to ensure that the leachate collection system remains in good working order. As leachate systems are installed for new cell constructions, landfill personnel will be trained on the operation and maintenance procedures associated with the equipment. The leachate system at each cell location will be monitored for regulatory compliance. Any system found to not be operating properly will be brought to the immediate attention of the site manager or designated alternate. The site manager or designated alternate will ensure that appropriate measures are taken to repair the system as soon as possible.

4.3.4 Final Cover Maintenance

Final cover in waste areas will be placed as described in Part III7, Closure Plan. Once final cover has been placed, it will be the responsibility of the site manager or designated alternate to ensure that vegetation is established and maintained, and that erosion is minimized. If erosion of the final cover does occur that jeopardizes the integrity of the final cover, additional soil capable of sustaining vegetation will be placed and graded according to the final contours as detailed in Part III 7, Closure Plan Figure III-7-1, Final Contour Map. After erosion is repaired, seeding and irrigation will be provided over repaired areas to provide revegetation.

4.4 Fire Protection Plan

30 TAC §330.129

This plan includes fire protection standards and site personnel training requirements for all on-site activities.

4.4.1 Source of Earthen Material for Uncovered Waste

The City shall maintain a source of earthen material in such a manner that it is available at all times to extinguish any fires. The source must be sized to cover any waste received for disposal not covered with six inches of earthen material. Sufficient on-site equipment must be provided to place a six-inch layer of earthen material to cover any waste not already covered with six inches of earthen material within one hour of detecting a fire.

4.4.1.1 Adequacy of Earthen Material

During site operations, the site manager shall perform daily monitoring of the working face size. A sufficient volume of earthen material will be maintained on the site within 1,000 feet of the working face at all times to cover a potential fire area equivalent to the size of the working face with 6 inches of earthen material within 1 hour. This source of earthen material may be on-site soil stockpiles, working face diversion and/or containment berms, areas of future excavation, or some combination thereof. Examples of required earthen material volumes are included in the following table.

Table IV-6: Examples of Earthen Material Required for Various Working Face Dimensions

Length of Working Face (feet)	**Width of Working Face** (feet)	**Volume Needed to Cover Working Face** (cubic yards)
100	50	111
200	50	222
100	100	222
200	100	444
300	100	667
400	200	1,778

4.4.1.2 Sufficient On-Site Equipment

A bulldozer, earthmoving equipment, and a water truck will immediately mobilize to place earthen material to smother any fire that may occur. A calculation showing the adequacy of the site equipment to place the 6 inches of soil in 1 hour is included in Appendix IVC, Fire Protection Equipment Capacity. If the working face size varies or the number of working faces is greater than 1, the landfill manager will evaluate the adequacy of site equipment to place the 6 inches of soil in 1 hour in a manner consistent with the calculations.

4.4.2 Fire Protection Standards and Training Procedures

The TCEQ may approve alternative methods of fire protection. To reduce the possibility of fire and improve the operation of the site and pursuant to §330.133, a minimum of 6 inches of "daily" cover soil, or approved equivalent, shall be placed and compacted over exposed waste at the end of each working day or at least once every 24 hours, in accordance with §4.22.1 Daily Cover of this SOP. Fire protection standards to be used at the facility and how personnel are trained are discussed in the following sections.

4.4.2.1 Fire Protection Standards

Designated landfill personnel regularly take the following steps to minimize the potential for fires:

- No burning of solid waste shall be permitted at this site.
- Burning waste is prevented from being dumped in the active area of the landfill. The gate attendant and equipment operators are trained to observe for hot loads entering the landfill by observing for signs of burning waste, such as smoke, steam, or heat being released from incoming waste loads.
- Fuel spills, if they occur, will be contained and cleaned up immediately.
- Dead trees, brush, or vegetation adjacent to the landfill are removed, and grass and weeds are mowed so that forest, grass, or brush fires cannot spread to the landfill.
- Smoking is not allowed on the active areas of the landfill.
- A source of earthen material adequately sized to cover the working face is maintained in such a manner that it is available at all times to the working face or active disposal area for fire protection.
- If a fire does occur, it shall be promptly extinguished using the procedures described in this SOP.
- The potential for fires shall be minimized by applying cover soils or approved ADC.

4.4.2.2 Fire Protection Training

To minimize hazards regarding fire, employees shall be instructed in controlling small fires. Training of employees will be coordinated by the site manager and will be provided to each new employee as part of the employee training program. Fire control measure training for all landfill personnel will be conducted on an annual basis. All fire extinguishers and/or firefighting equipment on-site will be inspected annually, and any equipment found to be defective will be promptly repaired or replaced. At a minimum, each landfill employee shall be trained for the following:

- Emergency notification requirements.
- Preventive measures to minimize or prevent the possibility of fire.
- Proper use of fire extinguishers or other equipment.
- Procedures to extinguish fire with soil (equipment operators only).

4.4.3 Activities Requiring Fire Protection

Municipal solid waste activities that that store or process combustible materials at the facility include uncovered solid waste; fuel supplies; trees, brush, or unmaintained grasses; equipment/vehicles; buildings; recycling collection area; stored used tires; stored used oil; or other sources. The operator must initiate the following procedures in accordance with this fire protection plan upon detection of a fire:

- Small Fires – If detected soon enough, small fires may be fought with a hand-held fire extinguisher. The fire area may be watered down or smothered with 6 inches of soil, as appropriate, to ensure the fire is out.
- Equipment/Vehicle Fires – If a fire occurs on a vehicle or piece of equipment, the equipment operator should bring the vehicle or equipment to a safe stop. If safety of personnel will allow, the vehicle must be parked away from fuel supplies, uncovered solid wastes, and other vehicles. The engine should be shut off and the brake engaged to prevent movement of the vehicle or piece of equipment. A fire extinguisher will then be used to extinguish the fire.
- Hot Loads – Burning waste will not be unloaded in the active area of the landfill. After the gate attendant, equipment operator, or other site personnel have identified signs of a possible load of burning waste, or a hot load, the truck will be directed to a portion of the disposal area away from the working face, fuel areas, and other combustion sources where the load can be unloaded without danger of spreading fire. The water truck will water down the waste. The bulldozer will then spread the waste to apply additional water. The bulldozer may smother the fire with soil. The waste will be inspected for signs of fire or hot spots. When the fire has been extinguished and the waste has cooled, the waste will be landfilled.
- Working Face – In the event that a fire is detected at the working face, the burning area should be isolated and pushed away from the working face quickly, or fire breaks should be cut around the fire before it can spread. Efforts to cover the burning area with earthen material must be initiated immediately to smother the fire. Sufficient earthen material will be available to cover the entire working face, if necessary. All vehicles and equipment not involved in smothering the fire will be immediately moved away from the fire. Incoming waste will be temporarily rerouted to another portion of the disposal area and a working face may be established there or work may be halted all together until the fire is extinguished. A bulldozer, earthmoving equipment, and a water truck will immediately mobilize to place earthen material to smother any fire that may occur.

If additional fire protection/fighting measures are deemed warranted by the site manager or designated alternate, emergency assistance may be requested from the City of Edinburg by dialing 911. City emergency response personnel will assess the nature of the emergency and dispatch the appropriate emergency crews. Law enforcement assistance may respond from the City of Edinburg Police Department, or the Hidalgo County Sheriff's Department, depending on availability. Fire, ambulance, and hazardous materials emergencies may be handled by either the City of Edinburg or Hidalgo County, depending on availability.

4.4.4 Notification Requirements

If a fire occurs that is not extinguished within ten minutes of detection, TCEQ Region 15 office in Harlingen, Texas must be contacted immediately, but no later than four hours by telephone, and in writing within 14 days with a description of the fire and the resulting response.

TCEQ Region 15
1804 W Jefferson Ave
Harlingen TX 78550-5247
Tel: (956) 425-6010
Fax: (956) 412-5059

4.5 Access Control

30 TAC §330.131

Currently, fencing has been installed along the southern boundary of Type IV Landfill TCEQ Permit MSW-2302 and facility entrance, along the west side of the facility entrance, along the southern facility boundary from the site entrance to the west facility boundary, and along the west facility boundary as shown on Figure II-16, Facility Entrance Plan. The northern and eastern portions of the facility boundary are adjacent to City owned property where the land use is primarily agricultural and the southern portion is adjacent to Type IV Landfill, TCEQ Permit MSW-2302, and hence providing adequate control to public access. However, fencing will be incrementally installed along the northern facility boundary and east of the facility on City owned property to provide an additional barrier to control public access.

Public access to the facility is controlled by a gate at the facility entrance on Jasman Road. Another maintenance gate is located on the west side of the facility on Encinitos Road. The gate at the facility entrance is locked by site personnel at the end of the day's operations while the gate on Encinitos Road remains locked unless access is needed by site personnel.

The entrance gate is designed to provide complete access restriction when the site is not open, yet allow plenty of room for vehicles to maneuver through the entrance when the facility is open. All landfill users shall be required to stop at the gatehouse, satisfy applicable waste acceptance criteria, and conduct appropriate business transactions prior to proceeding to the disposal area(s). Since the facility shares the same entrance as the Edinburg Type IV Landfill TCEQ Permit MSW-2302, vehicles containing construction and demolition waste will receive a yellow placard and be directed to the active Type IV Landfill and all other acceptable loads will receive a blue placard and will be directed to the Type I Landfill. Unauthorized vehicles and loads identified as containing prohibited waste shall not be allowed to proceed past the gatehouse.

4.5.1 Inspection and Maintenance Schedule

The fence shall be inspected on a weekly basis, with repairs made as necessary. The gates will be inspected periodically for damage or problems. Appendix IVD, Perimeter Fence and Gate Inspection and Repair Record will be used to document results of the fence and gate inspection. The inspection report will be placed in the SOR within 7 days of the inspection. The fence, gate, and associated signs shall be repaired, maintained, or replaced on an as needed basis to ensure continued site security.

4.5.2 Notification

If access control is breached, the TCEQ's regional office, and any local pollution agency with jurisdiction that has requested notification, will be notified within 24 hours of detection of the breach, including an estimate of when the breach will be permanently repaired. The breach will be temporarily repaired within 24 hours of detection and will be permanently repaired by the time specified to the TCEQ's regional office when it is reported. The TCEQ's regional office will be notified when the permanent repair is complete. If a permanent repair can be made within 8 hours of detection, no notice is required. A copy of these notices will be place in the SOR.

4.6 Unloading of Waste

4.6.1 Unloading Areas

30 TAC §330.133(a)

The various types of unloading areas and their maximum sizes at the facility include the following:

Table IV-7: Unloading Areas and Maximum Size

Unloading Area	Description	Maximum Size
Active Working Face	Municipal solid waste will be unloaded at the active working face(s). More than one working face maybe established to provide for separation of residential and commercial trucks, etc., as described in 4.6.1.1 below.	2 - 80,000 sqft
RACM Disposal Areas	RACM is to be placed in a disposal area separate from (but possibly immediately adjacent to) the active working face.	20,000 sqft
Liquid Stabilization Processing Area	Liquid waste will be unloaded at the liquid stabilization processing area located within Subtitle D cells.	40,000 sqft
Brush Area	Brush will be unload in designated area for mulching, currently over Pre-Subtitle D Units 1 – 4.	80,000 sqft
Citizen's Collection Station	Private citizen and other small loads may be delivered to the citizen's collection station.	40,000 sqft
Reusable Material Storage Area	Designated reusable materials storage area will remain free of putrescibles and household wastes with the exception of incidental amounts	40,000 sqft

Unloading Area	Description	Maximum Size
Large Item Salvage Area	Large item salvage will be unloaded in designated area	40,000 sqft
Tire Area	Incidental tires will be stored in the tire area prior to processing. Periodically, tires will be processed by grinding or other means to reduce size to less than quartered or split, or sent off-site for processing/disposal.	40,000 sqft

4.6.1.1 Active Working Face

The unloading of municipal solid waste (MSW) at the active working face shall be confined to as small an area as practical. Landfill personnel will limit the size of each active working face to a maximum of 80,000 sqft (e.g., 400 feet by 200 feet). The size of each working face will be directly impacted by the amount of wastes being received and may vary accordingly.

In general, there will only be one active MSW working face to reduce odors and windblown waste and to control vector populations. There may be more than one active MSW working face open at any given time, however. Examples of when more than one MSW working face may be open at one time includes the separation of residential and commercial customers, wet weather operation, when wastes are being deposited in a new cell that must receive only select wastes to cover the bottom of the new cell, during a transition from a wet weather area to another MSW working face, during disposal of RACM, or when there may be a “hot load” delivered to the MSW working face and another working face is established until the fire is controlled.

4.6.1.2 RACM

The maximum size of the unloading area for RACM will be 20,000 sqft (e.g., 100 feet by 200 feet). RACM is to be placed in a disposal area separate from (but possibly immediately adjacent to) the active working face. A separate cell is not required. The procedures for managing RACM are provided in Appendix IVE, Regulated Asbestos Containing Material Handling Plan.

4.6.1.3 Liquid Stabilization Processing

Liquid waste will be unloaded at the liquid stabilization processing area located within Subtitle D cells. The maximum size of the unloading area for liquid waste will be 40,000 sqft (e.g., 200 feet by 200 feet).

4.6.1.4 Brush Area

Brush will be unloaded in designated area currently located over Pre-Subtitle D Units 1 – 4. The maximum size of the unloading area for brush will be 40,000 sqft. (e.g., 200 feet by 200 feet).

4.6.1.5 Citizens Collection Station

The citizens collection station will be used for small loads. The gate attendant will direct vehicles to this area as appropriate. Roll-off boxes will be provided to unload waste. The boxes will be emptied at the working face as needed. The maximum size will be 40,000 sqft. (e.g., 200 feet by 200 feet).

The type and quantity of containers provided will correspond to anticipated waste receipt volumes. Containers will be delivered to an active disposal area daily or tarped overnight. The City will supervise the area designated for citizen's collection routinely in order to maintain it in a sanitary condition. Rules for waste disposal and prohibited waste will be prominently displayed on signs at the site entrance. Citizen's collection may accept sharps from single-family or multi-family dwellings, hotels, motels, or other establishments that provide lodging and related services for the public. The sharps will not be considered medical waste, as defined in 30 TAC §330.3.

4.6.1.6 Reusable Materials Storage

The designated reusable materials storage area will remain free of putrescibles and household wastes with the exception of incidental amounts. The maximum size will be 40,000 sqft. (e.g., 200 feet by 200 feet).

4.6.1.7 Large Item Salvage

Large item salvage will be unloaded in a designated area with a maximum size of 40,000 sqft. (e.g., 200 feet by 200 feet).

4.6.1.8 Tire Area

Whole tires or tire pieces may be stored or processed on-site in an unused portion of the property with a maximum size of 40,000 sqft. (e.g., 200 feet by 200 feet) in accordance with §328.54(c). Storage shall be above ground in controlled storage piles or in enclosed and lockable containers, pursuant to §328.61. The site will not store tires or tire pieces in excess of 500 used or scrap tires (or weight equivalent tire pieces or combination thereof) on the ground or 2,000 used or scrap tires (or weight equivalent tire pieces or combination thereof) in enclosed and lockable containers. The area used for tire storage and processing will be dedicated to tires only.

Tire piles consisting of scrap tires or tire pieces will be no greater than 15 feet in height and the pile will have a maximum footprint of 8,000 square feet. Indoor storage piles or bins shall not exceed 12,000 cubic feet with a 10-foot aisle space between piles or bins. Scrap tires or tire pieces may be stored in trailers provided the trailer is totally enclosed and lockable for volumes greater than 500 tires.

Tire storage will be located within the permit boundary and in an area that will allow all-weather access for emergency vehicles. Fire lanes will be provided with minimum separation of 40 feet between outdoor piles

of scrap tires or tire pieces. Outdoor piles consisting of scrap tires or tire pieces and entire buildings used to store scrap tires or tire pieces shall not be within 40 feet of the property line or within an easement.

The tire storage area will not be located within a designated 100-year floodplain area, and suitable drainage structures or features will be provided to divert the flow of rainfall run-off or other uncontaminated surface water within the scrap tire storage site to a location off-site.

Tires will be split, quartered, shredded, and otherwise processed to ensure current approved limits for MSW landfills are not exceeded. (i.e., 500 tires on the ground or 2,000 tires in enclosed and lockable container[s]). Scrap tires shall be split, quartered, or shredded within 180 days from the date of delivery to the scrap tire storage site. Off-the-road tires that are used on heavy machinery, including earthmovers, loader/dozers, graders, agricultural machinery, and mining equipment are exempt from this requirement. Truck tires shall not be classified as off-the-road tires and thus are not exempt from this requirement. Appropriate vector controls shall be used at a frequency based upon type and size of piles, weather conditions, and other applicable local ordinances. The tire storage area will remain free of putrescibles and household wastes. The tire storage and processing activity shall not be conducted in a manner that will adversely affect operations of the MSW disposal site, or otherwise endanger human health or the environment.

Quartered, shredded, or otherwise processed tires may be beneficially reused or disposed of within the landfill. In the event that tires are not processed on-site they will be transported to an appropriately authorized facility.

4.6.2 Trained Staff to Monitor Incoming Loads

30 TAC §330.133(a)

A trained employee shall be present at the gatehouse at all times during regular waste acceptance hours to monitor all incoming loads of waste, and shall direct traffic to the appropriate unloading area. Trained personnel will also be on duty during regular waste acceptance hours at the working face to direct and observe unloading of solid waste. The City is not required to accept any solid waste that the City determines will cause or may cause problems in maintaining full and continuous compliance.

4.6.3 Unloading Waste in Unauthorized Areas

30 TAC §330.133(b)

The unloading of waste in unauthorized areas is prohibited. Any waste deposited in an unauthorized area must be removed immediately and disposed of properly. Trained staff shall observe each load that is disposed at the landfill.

4.6.3.1 Pre-Operation Notice

30 TAC §330.123

The City shall provide written notice in the form of a geomembrane liner evaluation report (GLER) as described in 30 TAC §330.341 of the final construction and lining of a new disposal cell to the TCEQ for review 14 days prior to the placement of waste. The TCEQ has 14 days to provide a verbal or written response. If by the end of the 14th day following the TCEQ's receipt of the report no comments are received, the City may begin placing waste.

4.6.4 Unauthorized Loads

30 TAC §330.133(b)

The site manager or designated alternate has the authority and responsibility to reject unauthorized loads, have unauthorized material removed by the transporter, and/or assess appropriate surcharges and have the unauthorized material removed by on-site personnel or otherwise properly managed by the facility. The employees will be trained to recognize prohibited waste and their transportation and disposal requirements. A record of unauthorized material removal will be maintained in the SOR.

4.6.5 Prohibited Wastes

30 TAC §330.133(c)

The following wastes are prohibited from disposal in the facility and shall not be intentionally or knowingly offered by a generator or transporter and/or accepted for disposal in accordance to 30 TAC §330.15(e):

Table IV-8: Prohibited Wastes

Prohibited Wastes	Citation
A lead acid storage battery	30 TAC §330.15(e)(1)
Do-it-yourself used motor vehicle oil	30 TAC §330.15(e)(2)
Used oil filters from internal combustion engines	30 TAC §330.15(e)(3)
Whole used or scrap tires unless processed prior to disposal in a manner acceptable to the TCEQ	30 TAC §330.15(e)(4)
Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbon (CFC) must be handled in accordance with 40 Code of Federal Regulations §82.156(f), as amended.	30 TAC §330.15(e)(5)
Bulk or non-containerized liquid waste unless the waste is household waste other than septic waste	30 TAC §330.15(e)(6)(A)
Containers holding liquid waste unless the container is a small container similar in size to that normally found in household waste, the container is designated to hold liquids for use other than storage, or the waste is household waste.	30 TAC §330.15(e)(6)(B)
Regulated Hazardous Waste other than from CESQGs. Municipal hazardous waste from a CESQG may be accepted, provided the generator	30 TAC §330.15(e)(7)

Prohibited Wastes	Citation
provides a certification that it generates no more than 220 pounds of hazardous waste per calendar month.	
Polychlorinated biphenyls (PCB) wastes as defined under 40 CFR Part 761.	30 TAC §330.15(e)(8)
Radioactive materials as defined in 30 TAC §336	30 TAC §330.15(e)(9)

4.6.6 Unloading of Prohibited Wastes 30 TAC §330.133(c)

The unloading of prohibited wastes at the municipal solid waste facility must not be allowed. Necessary steps shall be taken by the City to ensure compliance with this provision. Any prohibited waste must be returned immediately to the transporter or generator of the waste or otherwise properly managed by the City.

The driver shall be advised and will be responsible for the proper disposal of this rejected waste. In the event the unauthorized waste is not discovered until after the vehicle that delivered it is gone, the waste will be segregated and controlled as necessary. An effort will first be made to identify the entity that deposited the prohibited waste and have them return to the site and properly dispose of the waste. In the event that identification is not possible, the Site Manager or designated alternate will notify the TCEQ and seek guidance on how to dispose of the waste as soon as practical.

4.6.7 Disposal Vehicles

Only those persons operating vehicles that comply with the following requirements will be authorized by the Site Manager or designated alternate to dispose of waste at this site:

1. Vehicles and equipment used to collect and transport waste will be in good working order to prevent loss of waste material and to minimize health and safety hazards to landfill personnel and the public.
2. Collection vehicles not equipped with an enclosed transport body will be required to have tarpaulins to preclude accidental spillage.

4.6.8 Site Signage to Disposal Areas

Signs with directional arrows and/or portable traffic barricades will help to restrict traffic to designated disposal locations. Signs will be placed along the access route to the current disposal area or other designated disposal areas that may be established. In addition, rules for waste disposal and prohibited waste will be prominently displayed on signs at the site entrance.

4.7 Hours of Operation

30 TAC §330.135(a)

Consistent with Part II, Existing Conditions Summary, the land use within a one-mile-radius of the facility is primarily open land used for pastureland and agricultural and industrial purposes. Residential land use is

less than 15% of the surrounding land with the closest residence located a quarter-mile west of the facility boundary as demonstrated on Figure II-4, Land Use Map. Therefore, landfill operations and construction activities will have minimal impact on adjacent landowners.

To effectively and efficiently support the facility's ongoing and future operations as a regional disposal facility, the site may be operated 24 hours per day and seven days a week. These operating hours include the times when the facility may be open to the public to accept solid wastes and recyclable materials (6:00 a.m. to 8:00 p.m., Monday through Friday, and 8:00 a.m. to 2:00 p.m. on Saturday); when solid waste, recyclable materials, construction or operational materials, and equipment or supplies may be transported on- or off-site by the City and its contractors (5:00 a.m. to 9:00 p.m., Monday through Friday, and 7:00 a.m. to 3:00 p.m. on Saturday); when heavy equipment may operate (4:00 a.m. to 10:00 p.m., Monday through Friday, and 6:00 a.m. to 4:00 p.m. on Saturday); and when the facility may conduct any other activities or operations (24 hours per day, seven days a week).

4.7.1 Alternative Hours

30 TAC §330.135(d)

Disaster situations, emergencies, or other unforeseen situations for which the facility believes a need exists to extend waste acceptance outside permitted landfill operating hours will be addressed through the TCEQ regional office. Landfill operations outside permitted landfill operating hours will receive TCEQ approval and will be documented in the SOR as Temporary Operating Hours.

4.8 Site Sign

30 TAC §330.137

The facility will conspicuously display at all entrances through which wastes are received, a sign measuring at least four feet by four feet with letters at least three inches in height stating the Type I and Type IV nature of the site, the hours and days of operation, an emergency 24-hour contact phone number(s) that reaches a key landfill staff person with the authority to obligate the facility at all times that the facility is closed, the local emergency fire department phone number, and the facility permit number. The facility sign must be readable from the facility entrance.

A sign indicating prohibition of receipt of hazardous waste, closed drums, and smoking will be posted near the facility entrance or gatehouse. A sign stating that all loads will be properly covered or otherwise secured will be prominently displayed at the facility entrance.

Within the landfill site, additional signs will be placed along the landfill haul road and access road directing customers to where disposal areas are and which roads are to be used.

4.9 Control of Windblown Solid Waste and Litter

The working face will be maintained and operated in a manner to control windblown solid waste and windblown material and litter will be collected and properly managed as provided below to control unhealthy, unsafe, or unsightly conditions.

4.9.1 Working Face

30 TAC §330.139(1)

The working face shall be covered daily to avoid prolonged exposure of waste to wind. In order to prevent disease vectors, control windblown debris and odors, reduce the possibility of fire, prevent scavenging, and improve the operation of the site, a minimum of 6 inches of "daily" cover soil, or approved equivalent, shall be placed and compacted over all exposed waste at the end of each working day or at least once every 24 hours. Weather conditions may result in material occasionally being blown away from the working face during placement operations.

Litter fences or other comparable controls (e.g., portable panels) will be utilized in the immediate vicinity of the working face to help aid in controlling windblown material. The Site Manager or designated alternate shall be responsible for determining the need, type, and placement of litter fences. Litter fences shall either be portable, free-standing fences that can be readily moved, as necessary, with equipment, or they may be temporary fences that consist of poles driven into the waste/soil cover with fencing between them. Typically, the litter fences shall be placed downwind and extend the full width of the working face and shall extend above the working face. Windblown waste and litter at the working face will be collected and properly managed to control unhealthy, unsafe, or unsightly conditions. The collected waste will be returned to the active disposal area(s).

4.9.2 Scattered Litter

30 TAC §330.139(2)

Litter scattered throughout the site, along fences and access roads, and at the gate will be picked up once a day on the days the facility is in operation. Litter will be collected and properly managed to control unhealthy, unsafe, or unsightly conditions and the collected waste will be returned to the active disposal area(s).

4.10 Easements and Buffer Zones

4.10.1 Easement Protection

30 TAC §330.141(a) & §330.543(a)

No solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way (ROW) that crosses the site. There are currently no ROWs within the permit boundary. Additionally, no solid waste disposal will occur within 25 feet of the center line of any utility line or pipeline easement unless otherwise authorized by the TCEQ.

4.10.2 Easement Marking

30 TAC §330.141(a) & §330.543(a)

All pipeline and utility easements will be clearly marked with green posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet.

4.10.3 Buffer Zones

30 TAC §330.141(b) & §330.543(b)

A minimum separating distance will be maintained between solid waste processing and disposal activities within and adjacent to the facility boundary on property owned or controlled by the City as determined by the requirements of 30 TAC §330.543(b). Such buffer zones are detailed in Part II, Facility Layout Plan. The buffer zones will provide for safe passage for fire-fighting and other emergency vehicles.

4.11 Landfill Markers and Benchmarks

30 TAC §330.143

4.11.1 Inspection and Maintenance

30 TAC §330.143(a)

All required landfill markers and benchmarks will be maintained so that they are visible during operating hours. Markers that are removed, destroyed, or determined not to meet regulatory requirements shall be replaced or repaired within 15 days thereafter. All markers will be repainted as necessary to retain visibility. It is the responsibility of the SM to ensure that landfill markers and benchmarks are inspected for regulatory compliance on a monthly basis. Records of all inspections will be maintained in the SOR.

4.11.2 Landfill Marker Installation and Color-Coding

30 TAC §330.143(b)(1)

Landfill markers will be installed to clearly mark significant features. In the event a marker location falls in a roadway, waterway, or other area incapable of sustaining an above ground marker, an alternate marker may be placed with the offset from its true location noted on the marker. The TCEQ may modify specific marker requirements to accommodate unique site-specific conditions. All markers will be durable posts, steel or wooden, extending at least six feet above ground level and will not be obscured by vegetation. Sufficient intermediate markers will be installed to show the required boundary and because the size of the site, all markers will be incrementally installed such that the markers are in place prior to cell construction or operations. Markers will be installed at the following locations and color coded as follows:

Table IV-9: Marker Color-Coding

Marker	Color
Facility Boundary	Black
Buffer Zone	Yellow
Easements and Rights-of-Way	Green
Landfill Grid System	White
Geosynthetic Liner Area / GLER	Red
100-yr Flood Protection	Blue

4.11.3 Boundary Markers

30 TAC §330.143(b)(2)

Site boundary markers (color-coded black) will be placed at each corner of the facility and along each boundary line at intervals no greater than 300 feet. Fencing with color-coded posts may be used in place of these markers, as appropriate.

4.11.4 Buffer Zone Markers

30 TAC §330.143(b)(3)

Buffer zone markers (color-coded yellow) will be placed along each buffer zone boundary at all corners and between corners at intervals of no greater than 300 feet. Placement of the landfill grid markers may be made along a buffer zone boundary.

4.11.5 Easement and Right-of-Way Markers

30 TAC §330.143(b)(4)

Easement and right-of-way markers (color-coded green) will be placed along the centerline of an easement and along the boundary of a right-of-way at intervals of 300 feet and at each corner within the facility and at the intersection of the facility boundary.

4.11.6 Landfill Grid System Markers

30 TAC §330.143(b)(5)

A landfill grid system (color-coded white) will be installed at the facility. The grid system will encompass at least the area expected to be filled within the next three-year period. Although grid markers must be maintained during the active life of the facility, post-closure maintenance of the grid system is recommended, but not required. An alphanumeric grid system will be used, consisting of lettered markers along two opposite sides, and numbered markers along the other two sides. Markers will be spaced no greater than 100 feet apart measured along perpendicular lines. Where markers cannot be seen from opposite boundaries, additional markers will be installed, where feasible.

4.11.7 GLER Area Markers

30 TAC §330.143(b)(6)

GLER area markers (color-coded red) will be placed so that all areas for which a GLER has been submitted and approved by the TCEQ are readily determinable. Such markers are to provide site workers immediate knowledge of the extent of approved disposal areas. These markers will be located so that they are not destroyed during operations until operations extend into the next GLER. The location of these markers will be tied into the landfill grid system and will be reported on each GLER submitted. GLER markers will not be placed inside the approved disposal areas.

4.11.8 Flood Protection Markers

30 TAC §330.143(b)(7)

Flood protection markers (color-coded blue) will be installed for any area within the 100-yr floodplain that is subject to flooding prior to the construction of a flood protection levee. The area subject to flooding will be clearly marked by means of permanent posts spaced not more than 300 feet apart or closer, if necessary, to retain visual continuity.

4.11.9 Permanent Benchmark

30 TAC §330.143(b)(8)

A permanent benchmark has been established at the site in an area that is readily accessible and will not be used for disposal. The benchmark monument is a bronze survey marker set in concrete with the benchmark elevation and survey date stamped on it. The monument elevation was surveyed from a known United States Coast and Geodetic Survey benchmark. The reference benchmark monument location is provided in Part I, Figure I-1, Facility Location Map.

4.12 Materials Along Route to Site

30 TAC §330.145

The City will encourage persons hauling waste to the site to enclose their vehicles or utilize a tarpaulin, net, or other means to effectively secure the load to prevent the escape of any part of the load by blowing or spilling. These efforts will include, as necessary, signs posted at the landfill entrance requiring the loads to be enclosed or covered, verbal or written admonitions to drivers or customers, the possibility of reporting offenders to the City of Edinburg Police Department, adding litter control surcharges, or other actions to encourage compliance.

At least once on a daily basis and during daylight hours when the facility is in operation, public access roads serving the facility will be inspected and cleaned of spilled materials and windblown waste for a distance of 2 miles in either direction from any entrances used to deliver waste to the site. As necessary, litter found along Jasman Road and FM 2812 will be picked up by landfill personnel or other persons acting in coordination with the landfill operator. The landfill's pickup truck and personnel will be utilized to gather the litter, secure it on the vehicle, and transport it back to the landfill for proper disposal. Litter control outside the site will not be conducted during night hours. It shall be the responsibility of the SM or designated alternate to ensure that litter control outside the facility is conducted in a safe and timely manner using appropriate personnel and equipment. The SM or designated alternate shall make proper arrangements to gather items that are too large to be picked up by conventional means. The SM or designated alternate will record daily cleanup efforts on a log that will be maintained in the SOR.

The SM will be responsible for consulting with officials of TxDOT, who has maintenance authority over FM 2812, concerning cleanup when necessary. The City's litter abatement efforts along FM 2812 will be subject to any limitations or requirements imposed by TxDOT.

4.13 Disposal of Large Items

30 TAC §330.147

Items that can be classified as large, heavy, or bulky can include, but are not limited to, white goods (household appliances), air conditioner units, metal tanks, large metal pieces, and automobiles. Large, heavy, or bulky items that cannot be incorporated in the regular spreading, compaction, and covering operations at the landfill will be recycled. Items identified as being too large for proper disposal shall be refused, broken into smaller pieces, or crushed by compactor equipment to prevent bridging and localized subsidence.

Large items to be salvaged will be placed in a designated area away from the general flow of traffic, so as not to interfere with prompt sanitary disposal of solid waste, but readily assessable to all users. Large items will be removed from the site frequently to prevent them from becoming a nuisance and to preclude the discharge of any pollutants.

White goods may be recycled. No items containing CFCs will be knowingly accepted. Refrigerators, freezers, air conditioners, and any other items containing CFCs must be handled in accordance with 40 CFR §82.156(f), as amended, and with §4.2.2, Procedure to Control the Receipt of Prohibited Wastes of this SOP, which requires verification that the CFC has been evacuated from the unit.

4.14 Odor Management Plan

30 TAC §330.149 .

MSW landfill operations have the potential to yield odorous emissions. Odor management at a landfill is a combination of identifying the sources of odor and methods used to minimize or eliminate those odors. This odor management plan addresses the identification of potential sources of odors, and includes methods to minimize odors or sources of odors and procedures to be followed if these methods are ineffective in preventing a release of odors to the surrounding community.

4.14.1 Sources of Odor

Sources of odor that emanate from a landfill can vary considerably and may include the wastes being delivered to the landfill, the open working face, or the leachate collection or landfill gas management systems. Some of the wastes received at a landfill are a source of odor upon receipt, such as sludge and dead animals. Other wastes have the potential for becoming a source of odor by their decomposition characteristics, generating odors or gases as they are rapidly decomposed by microorganisms. Leachate, the liquid that passes through or emerges from solid waste, may also be a source of odor if not properly managed. Ponded water can also become a source of odor as well.

4.14.2 Odor Minimization

The primary objectives for odor control at a landfill are to minimize odor generation and odor emissions. Methods used to achieve these objectives include waste and leachate handling procedures, the timely placement of cover materials, the elimination of ponded water, and gas control. These methods, described briefly below, are also included in Parts III and IV.

Waste Handling Procedures – Putrescible wastes will to be deposited at the working face, spread into layers that can be readily compacted, and subsequently compacted and covered with soil or with an approved alternate daily cover (ADC) material such as tarps or other applied materials. Sludges, septage and grease trap wastes that pass the paint filter liquids test will be incorporated into the working face with other absorptive wastes before cover is applied. Dead animals will be covered immediately with 3 feet of waste or 2 feet of soil.

Cover – The placement of daily cover is sufficient to reduce the immediate emission of odors when applied in sufficient thickness (minimum of 6 inches soil) and with the proper compaction or other approved cover. Daily cover also serves as the first deterrent to odor generation by preventing air and water from further impacting the wastes. If odors result during the use of ADC material, the ADC will be reevaluated to determine if it will continue to be used. The subsequent placement of intermediate and final cover will provide an additional barrier that will reduce the amount of odor emissions as decomposition of wastes occurs over time. Cover procedures are further discussed in §4.22 Landfill Cover of this SOP.

Leachate Handling Procedures – Leachate will be removed from the collection system at a rate to maintain less than 30 cm of head on the liner. Leachate may be removed by pumping directly from the leachate collection sump to a storage tank, evaporation pond, recirculation system, or a transfer truck. The evaporation pond may be a source for odors and will be monitored. The evaporation pond may be equipped with aerators to further reduce the emission of odors by forcing oxygen into the leachate.

Ponded Water – Water ponded over waste disposal areas may become a source of odors and should be eliminated prior to the occurrence of odors. Ponded water that occurs in the active portion of the site or on a closed area will be eliminated as quickly as possible and the area in which the ponding occurred shall be filled in and regraded within 7 days of the occurrence as further discussed in §4.23 Ponded Water of this SOP.

Gas Extraction System – Odor reduction may be achieved by installing a gas extraction system. The gas extraction system will minimize the migration of gases either horizontally or vertically. Gases collected in an extraction system may be distributed to such processing devices as a flare or processing plant as further discussed in §4.19 Landfill Gas of this SOP.

4.14.3 Odor Response Procedures

Upon identification of an odor emission from the landfill that may adversely impact off-site receptors, landfill personnel will attempt to isolate the source of the odor. If an identifiable source of the odor is detected, the SM or designated alternate will be notified, who will ascertain and initiate the necessary remedial actions. Remedial actions may include applying additional cover over the suspect area, using odor controlling sprays applied directly to the working face or installing misters, controlling any ponded water on the site, adjusting the gas extraction system, sealing the riser pipe covers or otherwise adjusting the leachate collection or management system, or other methods proven to be beneficial for remediating landfill odors. If odors persist, the SM may contract with an engineer or other expert to address specific remediation issues.

4.15 Disease Vector Control

30 TAC §330.151

Conditions favorable to the production or harboring of disease vectors (rodents, flies, and mosquitoes) will be minimized through proper compaction of the waste and the use of daily and intermediate cover, as appropriate. Vectors are attracted by exposed wastes and water that serve as food and breeding grounds. The size of the working face of each disposal area will be minimized and daily cover will be applied to control disease vectors. Landfill cover procedures are described in §4.22 Landfill Cover of this SOP. To further control disease vectors, ponded water shall be controlled, as detailed in §4.23 Ponded Water of this SOP. Birds should also be controlled by using the daily cover, minimizing the working face size, and controlling ponded water. Site personnel should be observant for insects and rodents and report problems to the landfill manager or designated alternate. Professional exterminators will be contacted, if necessary, to eliminate rodents or other pests that may appear at the site. If chemicals are needed for disease vector control, a professional will apply the appropriate chemical at the industry recommended rate, and use the appropriate health and safety practices to minimize any potential adverse effects.

4.16 Site Access Roads

4.16.1 All-weather Roads

30 TAC §330.153(a)

The public roadway that provides access to the facility's entrance is currently paved. All-weather roads will be provided from the gatehouse and scales at the facility's entrance to the unloading areas that are designated for wet-weather operation. Such interior access roads are characteristically surfaced with caliche, but other all-weather road building materials such as compacted gravel, crushed stone, asphalt, or concrete may be used by the facility.

4.16.2 Tracking of Mud Minimization

30 TAC §330.153(a)

The tracking of mud and associated debris onto public roadways from the facility will be minimized. Traffic leaving the facility will travel southbound on Jasman Road for a quarter-mile to FM 2812. Mud at the facility entrance road and interior access roads will be removed by spraying water from the site water truck, scraping with a site bulldozer or maintainer, using a rotary broom street sweeper, or otherwise deploying site personnel with appropriate on-site materials, tools and equipment. Jasman Road, an asphaltic-concrete-paved road, will be inspected for any tracked mud and associated debris daily. As necessary, mud will be removed from Jasman Road in a similar manner to control the further tracking of mud onto FM 2812. The SM will have authority to implement additional measures (e.g., wheel shakers, wheel washes, etc.) if the preceding measures are not reasonably effective.

4.16.3 Dust Control

30 TAC §330.153(b)

Dust from on-site and other access roads will be controlled on an as-needed basis to avoid becoming a nuisance to surrounding areas. A water source and the necessary equipment will be provided by the City for dust control. The on-site water truck will be equipped and can be utilized for dust control. Sources of water for this process include the on-site municipal water supply, on-site ditches and detention ponds, borrow areas, and/or other outside sources. The SM or his authorized delegate will deploy site personnel with appropriate on-site materials, tools and equipment.

4.16.4 Roadway Maintenance

30 TAC §330.153(c)

All on-site and other access roadways will be maintained in a clean and safe condition. Interior access roadways will be re-graded on a periodic basis by grading and placing additional road materials to minimize depressions, ruts, and potholes, and provide uninterrupted access to the unloading area(s). Additional re-grading or maintenance will be implemented by the SM or his authorized delegate as needed by deploying site personnel with appropriate on-site materials, tools and equipment.

4.16.5 Litter and Debris

30 TAC §330.153(c)

All on-site and other access roads including ditches shall be cleaned of litter and debris. Litter and any other debris must be picked up at least daily and taken to the working face in accordance to §4.9.2 Scattered Litter. Litter and any other debris on Jasman Road, the public access road to the facility, will be removed daily in accordance to §4.12 Materials along Route to Site.

4.17 Salvaging and Scavenging

30 TAC §330.155

Salvaging is the controlled removal of waste materials for utilization, recycling, or sale. Salvaging or recycling of materials, such as metals, cardboard, brush, and white goods, will be allowed with specific authorization from the SM or designated alternate if the activity is conducted by and/or supervised by landfill personnel. However, salvaging will not be allowed to interfere with the prompt sanitary disposal of solid waste or create a public health nuisance. Such items shall be removed on an as-needed basis to prevent the creation of nuisance conditions, to preclude the discharge of any pollutants from the area, and to prevent an excessive accumulation of the material at the facility. Other special wastes received at the facility will not be salvaged. Pesticide, fungicide, rodenticide, and herbicide containers will not be salvaged unless being salvaged through a state-supported recycling program.

Scavenging is the uncontrolled and unauthorized removal of materials at any point in the solid waste management system. Scavenging is prohibited and shall be strictly enforced through site access controls and monitoring by facility personnel, including both human and animal scavenging activities.

4.18 Endangered Species Protection

30 TAC §330.157

Included in Part IIE, Endangered or Threatened Species is an assessment, recommendations provided by Texas Parks and Wildlife Department (TPWD), and agreement with US Fish and Wildlife Service (USFWS). The facility and the operation of the facility will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species. The facility will be operated in conformance with TPWD's identified best management practices (BMPs) to minimize potential negative impacts to federally-listed and state-listed species. The referenced BMPs are incorporated by reference into this SOP, contain operational criteria for protecting such species, and will be included in the personnel training discussed in §4.1 Personnel Training of this SOP.

4.19 Landfill Gas

30 TAC §330.159

All landfill gases will be monitored in accordance with Part III6, Landfill Gas Management Plan (LFGMP) and 30 TAC §330.371 (Subchapter I) to help ensure that the concentration of methane gas generated by the facility does not exceed 1.25% by volume in facility structures (excluding gas control/recovery system components) and does not exceed 5% by volume in monitoring points, probes, subsurface soils, or other

matrices at the facility boundary. The LFGMP, required reports, and other submittals must be included in the SOR of the facility and submitted to the TCEQ.

4.20 Oil, Gas, and Water Wells

30 TAC §330.161

As described in Part II, Existing Conditions Summary there is one producing gas well, two plugged gas wells, and no existing or abandoned water wells situated within the facility.

4.20.1 Discovery of Water Wells, Oil Wells, Natural Gas Wells, or Other Wells

30 TAC §330.161(a)-(b)

The City will provide written notification within 30 days to the TCEQ of the location of any and all existing or abandoned water wells, on-site crude oil or natural gas wells, or other mineral recovery wells under the jurisdiction of the Railroad Commission of Texas that are discovered within the facility during the course of facility development.

4.20.1.1 Water Wells

30 TAC §330.161(a)

The City will, within 30 days of such a discovery, also provide the TCEQ with written certification that such water wells have been capped, plugged, and closed in accordance with all applicable rules and regulations of the TCEQ or other state agency. The facility does not require supply from a water well for landfill operations.

4.20.1.2 On-site Crude Oil or Natural Gas Wells, or Other Mineral Recovery Wells

30 TAC §330.161(b)

The City will, within 30 days after the plugging of any such crude oil, natural gas or other mineral recovery well, provide the TCEQ with written certification that such wells have been properly capped, plugged, and closed in accordance with all applicable rules and regulations of the Railroad Commission of Texas. Producing crude oil or natural gas wells that do not affect or hamper landfill operations may be operated within the facility boundary, if identified in the permit for the facility or in a written notification to the TCEQ. Currently there is one producing natural gas well, owned by Faulconer, located within the facility boundary as shown on Figure II-8, Water Well and Oil & Gas Well Location Map that will not affect or hamper landfill operations.

4.20.2 Well Plugging Report

30 TAC §330.161(c)

Any water or other type of wells under the jurisdiction of the TCEQ will be plugged in accordance with all applicable state requirements or additional requirements imposed by the TCEQ. A copy of the well plugging report required to be submitted to the appropriate state agency will also be submitted to the TCEQ within 30 days after the well has been plugged.

4.20.3 Liner Installation Modifications

30 TAC §330.161(d)

The City will submit for TCEQ approval a permit modification application identifying any proposed changes to the liner installation plan as a result of any well abandonment.

4.21 Waste Compaction

30 TAC §330.163

Solid waste will be spread and compacted by repeated passages of compaction equipment such that each layer of solid waste is thoroughly compacted. The first 5 feet of waste placed over the liner system shall be free of brush and large bulky items that would damage the underlying parts of the liner system or that cannot be compacted to the required density. On subsequent waste lifts, a wheeled trash compactor having a minimum weight of 40,000 pounds, or similar equipment, shall be properly utilized to reach a compaction density of at least 1,200 pounds per cubic yard.

4.22 Landfill Cover

30 TAC §330.165

4.22.1 Daily Cover

30 TAC §330.165(a)

To control disease vectors, fires, odors, windblown litter or waste, and scavenging, the facility will apply six inches of well-compacted earthen material (not previously mixed with garbage, rubbish, or other solid waste), or an approved alternative daily cover (ADC), to the working face or active disposal area at least once every 24 hours. Runoff from areas that have intact daily cover is not considered as having come into contact with the working face or leachate.

To ensure that the daily cover will be adequate, the following procedures will be followed:

- The daily cover will be sloped to drain.

- The daily cover will be compacted with the bulldozer tracks to minimize infiltration of stormwater, graded to drain, and will not have any waste visibly protruding through it.
- The SM or designated alternate will visually inspect the daily cover and document its completion and area of placement.
- The TCEQ may require a chemical analysis of any landfill cover material.

4.22.2 Intermediate Cover

30 TAC §330.165(c)

All areas that have received waste but will be inactive for longer than 180 days will receive either intermediate or final cover. Intermediate cover will not be less than 12 inches of suitable earthen material, with the upper six inches capable of sustaining native plant growth. Intermediate cover will be seeded or sodded following its application in order to control erosion. Mulch may be used in conjunction with the suitable earthen materials as a method of reducing erosion and as an alternative to seeding and as a means of providing soil enrichment. The intermediate cover will be graded for proper drainage to help prevent ponding of water and to maintain plant growth or other erosion control features. Runoff from areas that have intact intermediate cover is not considered as having come into contact with the working face or leachate.

4.22.3 Alternative Daily Cover

30 TAC §330.165(d)

Appendix IVF, Alternative Daily Cover Operating Plan (ADCOP) includes the Alternative Daily Cover (ADC) materials previously approved for use on a permanent basis and which will be utilized at this facility: hydro-mulch and tarpaulins, and alternate materials such as mulch covers, flexible membranes, petroleum contaminated soils, synthetic foam materials, or other engineered fabrics. The use of ADC is limited to a 24-hour period after which either waste or daily cover as defined in §4.22.1 Daily Cover of this SOP must be placed.

The use of an additional ADC may be allowed by a temporary authorization under 30 TAC §305.62(k)(1)(A) on a 180-day trial basis. Additionally, one extension of up to 180 days may be granted by the TCEQ. If the TCEQ grants temporary authorization for the use of ADC, status reports on the ADC will be submitted to TCEQ on a 2-month basis that describes the effectiveness of the alternative material, any problems that may have occurred, and corrective actions required and implemented as a result of such problems. Permanent authorization for the use of an additional ADC may be obtained from the TCEQ through a “Notice Modification” in accordance with 30 TAC §§305.70(k)(1). Permanent authorization may be applied for during the temporary trial periods, but in no case shall ADC be continued past the trial periods without first receiving permanent authorization from the TCEQ.

4.22.3.1 Required ADCOP Information

30 TAC §330.165(d)(1)(A)-(E) The evaluation of the effectiveness of the different alternate material daily cover (ADC) will generally be based on comparisons with soil cover. The ADCOP includes the following:

- a description and minimum thickness of the alternative material to be used
- its effect on vectors, fires, odors, and windblown litter and waste
- the application and operational methods to be utilized at the site when using this alternative material
- chemical analysis of the material and/or the Material Safety Data Sheet(s) for the alternative material
- any other pertinent characteristic, feature, or other factors related to the use of this alternative material

4.22.3.2 Status Reports

30 TAC §330.165(d)(2) A status report on the ADC will be submitted on a two-month basis to the TCEQ during the temporary authorization period describing the effectiveness of the alternative material, any problems that may have occurred, and corrective actions required as a result of such problems. If no unresolved problems have occurred within the temporary authorization period, status reports may no longer be required.

4.22.3.3 Length of Time

30 TAC §330.165(d)(3)

ADC will not be allowed when the landfill is closed for a period greater than 24 hours, unless the TCEQ approves an alternative length of time.

4.22.3.4 Contaminated Soil

30 TAC §330.165(d)(4)

For any contaminated soil to be used as ADC, the constituents of concern will not exceed the maximum leachable concentrations listed in 30 TAC §335.521(a)(1).

4.22.3.4.1 Polychlorinated Biphenyl Wastes

30 TAC §330.165(d)(4)(A)

Additionally, the contaminated soil must not contain polychlorinated biphenyl wastes that are subject to the disposal requirements of 40 Code of Federal Regulations Part 761.

4.22.3.4.2 Total Petroleum Hydrocarbons

30 TAC §330.165(d)(4)(B)

Additionally, the contaminated soil will not contain total petroleum hydrocarbons (TPH) in concentrations greater than 1,500 milligrams per kilogram (mg/kg). The City may submit a demonstration for TCEQ approval that material exceeding 1,500 mg/kg TPH can be a suitable ADC. The demonstration shall include information regarding the risk to human health and the environment and the information required in §4.22.3.1, Required ADCOP Information. If approved, the TCEQ may impose additional permit requirements regarding the use of this material.

4.22.3.5 Constituent Limitations

30 TAC §330.165(d)(5)

ADC must not exceed constituent limitations imposed on waste authorized to be disposed at the facility.

4.22.3.6 Runoff

30 TAC §330.165(d)(6)

The TCEQ may require the City to test runoff from areas that have ADC for compliance with Texas Pollutant Discharge Elimination System (TPDES) storm water discharge limits or manage the runoff as contaminated water.

4.22.4 Temporary Waiver

30 TAC §330.165(e)

The TCEQ may grant a temporary waiver from the requirements of30 TAC §330.165(a) - (d) if the City demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

4.22.5 Final Cover

30 TAC §330.165(f)

Final cover for the landfill must be in accordance with the Part III7, Closure Plan and 30 TAC §330.457 (Subchapter K). The final cover system is designed to minimize infiltration and erosion, and it will be composed of no less than two feet of soil and consist of a clay-rich soil cover layer overlain by an erosion layer that is capable of sustaining native plant growth. The erosion layer will be seeded or sodded immediately following application of the final cover to minimize erosion. The final cover system, including the erosion control structures (such as drainage swales and chutes), will be maintained during and after construction. During the active life of the site, the landfill manager or designated alternate should inspect

the final cover system on a weekly basis. Erosion of final cover shall be repaired promptly by restoring the cover material, grading, compacting, and seeding it as necessary.

4.22.6 Erosion of Cover

30 TAC §330.165(g)

Intermediate or final cover that has been seeded and has vegetation established will continue to be maintained. When addressing erosion rills, however, caution will be exercised not to damage the integrity of the vegetative cover system, which could result in greater erosion. To address this concern, minor or incidental erosion rills will be monitored to ensure that they do not develop into areas of significant erosion. Erosion of intermediate or final cover of a magnitude that would be considered significant will consist of areas that, in the opinion of the SM, jeopardize the integrity of the intermediate or final cover (such as deep erosion gullies or wash-outs exceeding four inches in depth). These areas will be repaired within 5 days of detection as weather permits. If conditions warrant, and the TCEQ's regional office approves otherwise, based on the extent of the damage, time to repair, or weather conditions, the 5 day requirement may be extended.

The date of detection of significant erosion and date of completion or repairs, including reasons for any delays, will be documented in the cover inspection record. The SM or designated alternate will inspect the intermediate and final cover at the site on a weekly basis and after each rain event in which run-off occurs. Inspections and restorations will occur during the entire operational life and for the post-closure maintenance period.

4.22.7 Cover Inspection Record

30 TAC §330.165(h)

A cover application record will be maintained at the site and readily available for inspection by TCEQ and authorized agents or employees of local governments having jurisdiction. The record shall specify the date that cover was accomplished (no exposed waste), how it was accomplished, and the last area covered. This record applies to daily, alternate daily, intermediate, and final cover. For final cover, this record must specify the area covered, the date cover was applied, and the thickness applied that date. Each entry will be certified by the signature of the on-site supervisor that the work was accomplished as stated in the record. A cover inspection record will be maintained that documents inspections of daily, intermediate, and final cover, the findings, and corrective action taken when necessary.

4.23 Ponded Water

30 TAC §330.167

The ponding of water over waste on the landfill, regardless of its origin, must be prevented. Ponded water that occurs in the active portion of the landfill or on a closed portion of the landfill will be eliminated and the area in which the ponding occurred will be filled in and regraded within seven days of the occurrence.

4.23.1 Ponding Prevention Plan

The potential for ponding of water over waste areas will be minimized by achieving adequate compaction during the placement of the wastes and by constructing and maintaining proper cover and slope on all areas so that stormwater will not pond and will drain properly, either to the site drainage system (for intermediate or final covered areas) or to run-off control structures (for active disposal areas). Installation of upgradient diversion berms to minimize the amount of water entering the disposal area and proper construction of the working face slopes will minimize ponding of water over waste in the disposal areas.

Active waste disposal areas of the landfill, including final covered areas not in post-closure care, intermediate cover areas, and daily cover areas, will be inspected at least weekly for signs of ponded water or depressions that could potentially pond water. Additional inspections may be conducted after rainfall events in excess of 0.5 inches or more rain in a 24-hour period. However, during periods of extended or heavy rainfall, portions of the site may not be readily accessible to vehicles for inspection. During these periods it may be necessary to allow for drying prior to accessing the remote sections of the site for inspection. During the post-closure period of closed portions of the landfill, the final cover will be inspected and maintained in accordance with Part III8, Post-Closure Plan.

Ponded water areas may be corrected by implementing one or more of the following procedures:

- Pumping water out of the depression.
- Regrading and allowing the water to flow off.
- Adding cover soils to fill the depression and forcing the water onto areas of the landfill that allow the water to dissipate or flow off the landfill.

Water that has been in contact with waste is considered contaminated and in general will be contained in the working face area behind a containment berm. This contaminated water will either be allowed to flow into the leachate collection system for removal or pumped directly into the leachate force main. Contaminated water may not be recirculated.

4.24 Disposal of Special Waste

Special waste is any solid waste or combination of solid wastes that because of its quantity, concentration, physical or chemical characteristics, or biological properties requires special handling and disposal to

protect the human health or the environment. If improperly handled, transported, stored, processed, or disposed of or otherwise managed, it may pose a present or potential danger to the human health or the environment. Appendix IVH, Special Waste Acceptance Plan outlines the process that will be used to review, evaluate, and determine acceptance of all TCEQ-defined special wastes for the facility.

The acceptance and/or disposal of a special waste, as defined in 30 TAC §330.3(148) (relating to Definitions), is described in Appendix IVG, Regulated Asbestos Containing Material Handling Plan (RACM), and Appendix IVH, Special Waste Acceptance Plan (SWAP). The RACM / SWAP are incorporated by reference into this SOP and will be included in the personnel training discussed in §4.1 Personnel Training of this SOP.

4.25 Disposal of Industrial Waste

Industrial non-hazardous waste is defined by 30 TAC §330.3(66) as solid waste resulting from or incidental to any process of industry or manufacturing, or mining or agricultural operations, and is classified as follows:

- Class 1 Industrial Solid Waste – any industrial solid waste or mixture of industrial solid wastes that because of its concentration, or physical or chemical characteristics is toxic, corrosive, flammable, a strong sensitizer or irritant, a generator of sudden pressure by decomposition, heat, or other means, or may pose a substantial present or potential danger to human health or the environment when improperly processed, stored, transported, or disposed of or otherwise managed, as further defined in 30 TAC §335.505
- Class 2 Industrial Solid Waste – any individual solid waste or combination of industrial solid wastes that cannot be described as Class 1 or Class 3, as defined in 30 TAC §335.506.
- Class 3 Industrial Solid Waste – any inert and essentially insoluble industrial solid waste, including materials such as rock, brick, glass, dirt, and certain plastics and rubber, etc. that are not readily decomposable as defined in 30 TAC §335.507.

4.25.1 Class 1 Industrial Solid Waste

30 TAC §330.173(c)

This facility will not accept Class 1 industrial solid waste, with the exception of wastes that are Class 1 only because of asbestos content. Waste classified as Class 1 only because of asbestos content may be accepted by the facility for disposal and will be managed in accordance with 30 TAC §330.171(C)(3)(I) and Appendix IVG, RACM Handling Plan. All Class 1 industrial asbestos wastes will be manifested and the City will submit monthly reports to the TCEQ in compliance with 30 TAC §330.173(g) – (h).

4.25.2 Class 2 Industrial Solid Waste

30 TAC §330.173(i)

Class 2 industrial solid waste, except special wastes as defined in 30 TAC §330.3, may be accepted provided the acceptance of this waste does not interfere with facility operation.

4.25.3 Class 3 Industrial Solid Waste

30 TAC §330.173(j)

Class 3 industrial solid waste may be disposed provided the acceptance of this waste does not interfere with facility operation.

4.26 Liquid Waste Stabilization Area

To process/stabilize approved liquid wastes that are received at the facility, and wastes that do not pass the paint filter liquids test, the facility will utilize a metal basin placed within a disposal cell with an approved TCEQ liner system. The basin will be secured with landfill material and soil. The soil will be graded around the liquid waste stabilization basin (basin) to ensure that stormwater run-off is directed away from the basin. The basin will be placed to ensure a minimum of 1 foot of the basin extends above the surrounding soil. Using an excavator or similar mixing equipment, the liquid wastes will be mixed promptly upon receipt with a stabilizing material (see Appendix IVH, Special Waste Handling Plan) or soil within the basin and will be removed from the basin for disposal by the same equipment. The mixing equipment will scrape any residual materials from the basin sides to prevent any cumulative build-up of material that could contribute to odors or vectors. The bottom of the basin will be at least 10 feet above the top of the protective cover soil composite of the lining system and founded in the waste. Various sizes of metal basins may be used throughout the life of the site. Once stabilized, the waste will be removed from the basin promptly and landfilled at the facility. If necessary, the batch of solidified/stabilized material will be tested for free liquids in accordance with the Method 9095B (Paint Filter Liquids Test), as described in “Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods” (EPA Publication Number SW-846), as amended. Upon verification of the solidified/stabilized material passing the paint filter liquids test, or other approved test, the mixture will be removed from the basin and deposited in the active face for landfilling.

4.27 Screening of Deposited Waste

30 TAC §330.175

As discussed in Part II, Existing Conditions Summary, some visual screening currently exists along the southern portion of the facility boundaries. Additional visual screening of deposited waste materials is not necessary because the nearest high traffic roadway is located approximately 1,900 feet to the west and surrounding land use is primarily agricultural. The City will provide supplemental visual screening of deposited waste materials in the future if the TCEQ determines additional screening has become necessary.

4.28 Facility Generated Wastes

30 TAC §330.205(b)-(c)

Waste generated by the facility's operations, including any solid waste storage and processing units, will be disposed at the facility unless waste generated is unauthorized for acceptance by the facility. Any such waste will be disposed at an authorized solid waste management facility. Wastewaters generated by a facility shall be managed in accordance with §4.29 Contaminated Water Management of this SOP.

4.29 Contaminated Water Management

30 TAC §330.207

All liquids resulting from the operation of the facility will be disposed of in a manner that will not cause surface water or groundwater pollution, and the City will not discharge contaminated water without specific written authorization. As discussed in Part III2, Surface Water Drainage Report, run-on and runoff controls for active disposal areas will be utilized to minimize the potential for stormwater contamination. The working face of the active disposal area will be encompassed by a run-on berm (top berm) and a runoff berm (toe berm) for the purpose of segregating potentially contaminated and non-contact stormwater. The contaminated water storage area, located within a constructed waste disposal unit constructed in accordance with 30 TAC §330.331(b), will have a containment berm designed to ensure an adequate capacity for a 25-year, 24-hour rainfall event with one foot of freeboard. Contaminated water and leachate will be pumped from the storage area into a force main connected to a public sewer system in accordance with Part III3, Waste Management Unit Design. The facility will ensure that wastewater discharged to a treatment facility permitted under Chapter 26 of the Texas Water Code will not interfere with or pass-through the treatment facility processes or operations, including its sludge processes, use or disposal, or otherwise be inconsistent with prohibited discharge standards including 40 CFR Part 403 (Pretreatment Regulations).

4.30 Citizen's Collection

30 TAC §330.213

Waste accepted from citizens and other small loads may be delivered to an area designated for citizen's collection where waste shall be unloaded in to roll-off containers whereas the quantity of containers provided will correspond to anticipated waste receipt volumes. Containers will be delivered to active disposal area daily or tarped overnight. The City will supervise the area designated for citizen's collection routinely in order to maintain it in a sanitary condition. Rules for waste disposal and prohibited waste will be prominently displayed on signs at the site entrance. Citizen's collection may accept sharps from single-family or multi-family dwellings, hotels, motels, or other establishments that provide lodging and related services for the public. The sharps will not be considered medical waste, as defined in 30 TAC §330.3.

APPENDIX IVA
WASTE DISCREPANCY REPORT FORM

CITY OF EDINBURG LANDFILL

WASTE DISCREPANCY REPORT FORM

(This form is to be completed for all special waste shipments with a waste discrepancy. The form is to be kept on-site as part of the Site Operating Record)

A. General Information

Wastestream Number: _____

Date: _____

Generator: _____

Wastestream Name: _____

Transporter: _____

Manifest Number: _____

B. Discrepancy (Quantity/Type) _____

Describe discrepancy:

_____

_____

_____

C. Resolution

_____

_____

_____

_____

(Attach copy of Special Waste Documentation pertaining to this shipment)

_____
Landfill Supervisor

APPENDIX IVB
RANDOM LOAD INSPECTION FORM

RANDOM LOAD INSPECTION FORM

Name of Inspector:	
Date & Time:	
Name of Hauling Company:	
Driver's Name:	
Vehicle's License Plate or Identification Number:	

SOURCE IDENTIFICATION

Low Risk Sources	Medium Risk Sources	High Risk Sources
☐ Residential	☐ Dry Cleaners	☐ Large Manufacturing
☐ Office Buildings	☐ Auto Body Repair	☐ Doctor's Office
☐ Schools	☐ Small Manufacturing	☐ Hospitals
☐ Farms	☐ Nursing Homes	☐ Paint Manufactures
☐ Apartments	☐ Other	☐ Shops
☐ Restaurants		☐ Waste Brokers
☐ Department Stores		☐ POTWs
☐ Other		☐ Other

LOAD CONTENTS

	YES	NO		YES	NO
House Hold Waste	☐	☐	Oil	☐	☐
Wood	☐	☐	Medical	☐	☐
Metal	☐	☐	Ashes	☐	☐
Paper, Cardboard	☐	☐	Soil	☐	☐
Plastic, Rubber, Glass	☐	☐	Odors, Unusual	☐	☐
Yard Waste, Brush, Stumps	☐	☐	Colors, Unusual	☐	☐
Containers	☐	☐	Heat, Excessive	☐	☐
Bulk Liquids	☐	☐	Smoke	☐	☐
Powders, Dusts	☐	☐	Other	☐	☐
Powders, Dusts	☐	☐		☐	☐
Soil	☐	☐	Does Waste Match	☐	☐
Transformers/Capacitors	☐	☐	Hauler's Description?	☐	☐
Labeled Hazardous Waste	☐	☐		☐	☐
Batteries	☐	☐		☐	☐

Signature of Inspector		Date:	
Signature of Reviewer		Date:	

APPENDIX IVC
FIRE PROTECTION EQUIPMENT CAPACITY CALCULATION

FIRE PROTECTION EQUIPMENT CAPACITY

Made By: AGM
Checked by: MX
Reviewed by: CEI

1.0 OBJECTIVE

Evaluate the adequacy of the on-site equipment to place a 6-inch layer of earthen material within 1 hour of detecting a fire on the working face area that is not already covered. Evaluate the capacity of the equipment to haul soil from the borrow material available in the adjacent cell, approximately 500 feet away, and for a bulldozer to spread the soil over the open area. The equipment to be evaluated includes a CAT 330 excavator, a CAT 725 articulated truck, and a CAT D8 bulldozer. The equipment being evaluated is typical and may be replaced with equivalent equipment of a different brand or size.

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2.0 ASSUMPTIONS

I) A working face size for a typical operation is approximately 10,000 ft^2 (100 feet by 100 feet).

II) Volume of working face with 6-inch layer is approximately 222 cubic yards (including an addtional 20%). This material is stockpiled adjacent to the working face and used for daily cover.

III) Distance to earthen material borrow area is 1000 feet.

IV) Time to cover working face is 1 hour (60 minutes).

V) Bulldozer will be used at the working face for spreading.

2.1 Equipment Specs

2.1.1 Excavator

Estimated per Reference 1, using the CAT 330 F L excavator specifications and time cycle charts with a bucket fill factor of 110% for sandy clay material.

Average Heaped Bucket Capacity	1.7	cy	(p. 7-34)
Average Bucket Payload	1.8	cy	(p. 7-238)
Load Bucket	0.09	min	(p. 7-279)
Swing Loaded	0.07	min	
Dump Bucket	0.04	min	
Swing Empty	0.07	min	
Cycle Time per Load	0.27	min	

2.1.2 Articulated Truck

Estimated per Reference 1, using the CAT 725C articulated truck specifications.

Dump Capacity	14.5	cy	(p. 1-2)

Loading Time = (Dump Truck Capacity / Excavator Bucket Volume) * Excavator Cycle Time

Loading Time	2.3	min

Hauling and return time = (Distance to borrow area)/(truck speed)

Hauling Time	0.3	min	(Assuming an average speed of 20 mph)
Dumping Time	0.5	min	(Assumed)
Return Time	0.2	min	(Assuming an average speed of 25 mph)

3.0 CALCULATIONS

3.1 Excavator and Articulated Truck

Cycle Time = Load + Haul + Dump + Return

Cycle Time =	3.3	min

In 60 minutes:

Number of Loads	18	
Volume of Earthen Material	261	cy

Excavator and One (1) Dump Truck

Total Volume in 60 minutes =	261	cy

3.2 CAT D8 Bulldozer

Maximum production estimated per Reference 1, using the estimated dozing production curve for a D8 dozer. In an emergency fire situation, the bulldozer will push nearby soil already hauled and dumped next to working face, plus it will push storm water run-on/run-off control berms to create a fire break and then to cover exposed waste.

Average dozing distance assumed as 100 feet.

Dozer production = maximum production * correction factors:

Max production per D8 Dozer =	900	cy/hr	(p. 19-51)
Loose stockpile, correction factor =	1.20		(p. 19-55)
Excellent Operator, correction factor =	1.00		
Production =	1080	cy/hr	

Total Soil handled by the bulldozer = 1080 cy/hr

4.0 CONCLUSION

On-site equipment will be available to place a 6-inch layer of earthen material on the working face waste area within one hour of detecting a fire. If the stockpile does not contain enough soil at the time of a fire, the other site equipment (excavator and dump truck) are capable of hauling an additional 261 cy to the working face within one hour. This amount, in addition to that already stockpiled for daily cover, will ensure an adequate amount of soil for fire protection.

5.0 REFERENCES

1) Caterpillar Performance Handbook, Edition 46, January 2016.

Hydraulic Excavators | Specifications

MODEL	330D2 L		330F		330F L	
Region Offerings	South America, Middle East, Africa, CIS, Asia Pacific, China		Japan		Japan, Europe, North America	
Engine Power:						
ISO 9249	151 kW	203 hp	175 kW	239 hp	175 kW	239 hp
SAE J1349	N/A		N/A		N/A	
Operating Weight*	27 835-30 115 kg	61,370-66,390 lb	26 894-30 747 kg	59,291-67,184 lb	28 577-30 939 kg	63,002-68,209 lb
Bucket Capacity Range (heaped)	0.57-2.35 m^3	0.78-3.08 yd^3	1.1-1.5 m^3	1.4-2.0 yd^3	0.45-2.12 m^3	0.6-2.8 yd^3
Engine Model	C7.1		C7.1 ACERT		C7.1 ACERT	
Emission Standards	Tier 2/Stage II/ China Stage II Nonroad Equivalent OR Tier 3/Stage IIIA/ China Stage III Nonroad Equivalent		Japan 2014 (Tier 4 Final)		Tier 4 Final/Stage IV/ Japan 2014 (Tier 4 Final)	
Rated Engine RPM	1800		1800		1800	
No. of Cylinders	6		6		6	
Displacement	7.01 L	428 in^3	7.01 L	428 in^3	7.01 L	428 in^3
Max. Implement Hydraulic Pump Output at Rated RPM	2 × 254 L/min	2 × 67.1 gpm	2 × 246.5 L/min	2 × 65 gpm	2 × 246.5 L/min	2 × 65 gpm
Relief Valve Settings:						
Implement Circuits	35 000 kPa	5076.4 psi	35 000 kPa	5076 psi	35 000 kPa	5076 psi
Travel Circuits	35 000 kPa	5076.4 psi	37 000 kPa	5366 psi	37 000 kPa	5366 psi
Swing Circuits	27 500 kPa	3982.7 psi	27 400 kPa	3974 psi	27 400 kPa	3974 psi
Pilot Circuits	3920 kPa	568.6 psi	4100 kPa	595 psi	4100 kPa	595 psi
Maximum Drawbar Pull	248 kN	55,752.6 lbf	247 kN	55,528 lbf	247 kN	55,528 lbf
Maximum Travel Speed at Rated RPM	5.3 km/h	3.4 mph	5.1 km/h	3.2 mph	5.1 km/h	3.2 mph
Width of Standard Track Shoe	600 mm	24"	700 mm	28"	800 mm	3'2"
Overall Track Length	4860 mm	15'11"	4860 mm	15'11"	4860 mm	15'11"
Ground Contact Area with Std. Shoe	5.2 m^2	8000 in^2	5.31 m^2	8231 in^2	6.88 m^2	10,664 in^2
Track Gauge	2590 mm	8'6"	2390 mm	7'10"	2590 mm	8'6"
Fuel Tank Refill Capacity	520 L	137.4 U.S. gal	520 L	137.4 U.S. gal	520 L	137.4 U.S. gal
Hydraulic System (includes tank)	310 L	81.9 U.S. gal	310 L	81.9 U.S. gal	310 L	81.9 U.S. gal

*Operating weight includes coolant, lubricants, full fuel tank, standard shoes, bucket and operator 75 kg (165 lb).
NOTE: Certain models may not be available in all Sales areas.
Specifications also vary by Sales area.
Contact your Cat dealer for details.

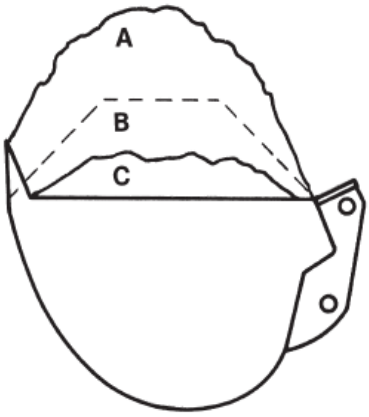
Hydraulic Excavators | Working Weights
- Bucket Fill Factors
- Bucket & Payload

BUCKET PAYLOAD

An excavator's bucket payload (actual amount of material in the bucket on each digging cycle) is dependent on bucket size, shape, curl force, and certain soil characteristics, i.e., the fill factor for that soil. Fill factors for several types of material are listed below.

Average Bucket Payload =
(Heaped Bucket Capacity) × (Bucket Fill Factor)

Material	Fill Factor Range (Percent of heaped bucket capacity)
Moist Loam or Sandy Clay	A — 100-110%
Sand and Gravel	B — 95-110%
Hard, Tough Clay	C — 80-90%
Rock — Well Blasted	60-75%
Rock — Poorly Blasted	40-50%



Working Weights — Bucket & Payload

The following tables give maximum "bucket plus payload" weights to assist in selecting the correct bucket for a specific application. These weights are based on actual job conditions. In better than average conditions the excavator may be able to achieve rated lift capacities listed in this section.

NOTE: Bucket sizes are suitable for a maximum material density of 1800 kg/m³ (3035 lb/yd³). Payloads shown are calculated at 1500 kg/m³ (2530 lb/yd³).

Cycle Time Estimating Chart

Model		308E2 CR SB	311D LRR	312D, 312D L	315D L	319D L, 319D LN	M313D	M315D, M316D	M318D	M322D
Bucket Size	L	220	450	520	520	800	610	750	900	1050
	yd³	0.30	0.59	0.68	0.68	1.05	0.80	0.98	1.18	1.37
Soil Type		←		Packed Earth		→	←	Sand/Gravel		→
Digging Depth	m	1.8	1.5	1.8	3.0	3.0	3.0	3.0	3.0	3.0
	ft	6'0"	5'0"	6'0"	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
Load Bucket	min	0.08	0.07	0.07	0.07	0.09	0.05	0.06	0.06	0.08
Swing Loaded	min	0.03	0.06	0.06	0.08	0.09	0.05	0.05	0.06	0.06
Dump Bucket	min	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
Swing Empty	min	0.08	0.05	0.05	0.06	0.07	0.04	0.04	0.05	0.05
Total Cycle Time	min	0.22	0.21	0.21	0.24	0.28	0.17	0.18	0.20	0.23

7

Cycle Time Estimating Chart

Model		320D2	320D RR, 321D CR, 323D2	324D	328D LCR	329D	336D	349D2, 349E, 349F	365C L	385C
Bucket Size	L	800	800	1000	N/A	1100	1400	2400	1900	3760
	yd³	1.05	1.05	1.31		1.44	1.83	3.0	2.5	5.0
Soil Type		←				Hard Clay				→
Digging Depth	m	2.3	2.3	3.2	N/A	3.2	3.4	4.0	4.2	5.6
	ft	8	8	10		10	11	13	14	18
Load Bucket	min	0.09	0.09	0.09	N/A	0.09	0.09	0.13	0.10	0.19
Swing Loaded	min	0.06	0.06	0.06	N/A	0.06	0.07	0.07	0.09	0.06
Dump Bucket	min	0.03	0.03	0.04	N/A	0.04	0.04	0.02	0.04	0.03
Swing Empty	min	0.05	0.05	0.06	N/A	0.06	0.07	0.06	0.07	0.07
Total Cycle Time	min	0.23	0.23	0.25	N/A	0.25	0.27	0.28	0.30	0.35

N/A = Not Applicable

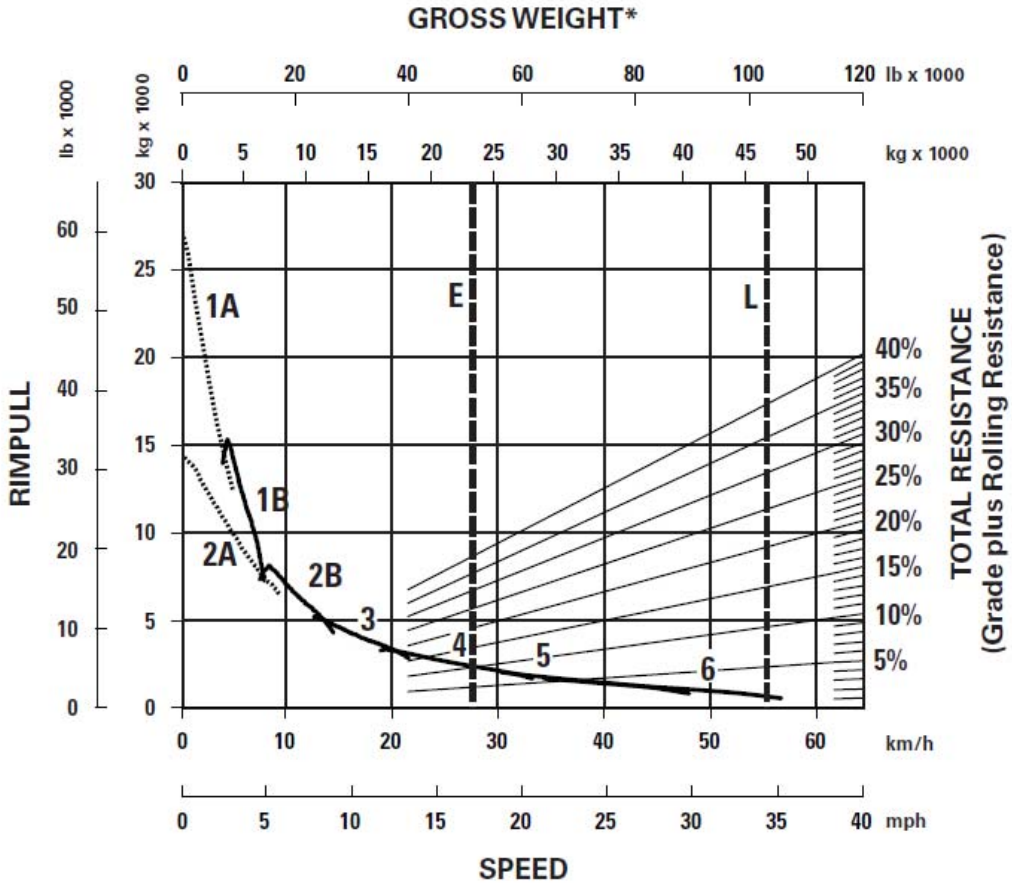
C Series Articulated Trucks | Specifications
● Tier 4 Final/Stage IV/Japan 2014 (Tier 4 Final)

MODEL	725C		730C		730C EJ	
Gross Power — SAE J1995	239 kW	**320 hp**	280 kW	**375 hp**	280 kW	**375 hp**
Net Power — SAE J1349	234 kW	**314 hp**	274 kW	**367 hp**	274 kW	**367 hp**
Net Power — ISO 14396	236 kW	**316 hp**	276 kW	**370 hp**	276 kW	**370 hp**
Net Power — EEC 80/1269	236 kW	**316 hp**	276 kW	**370 hp**	276 kW	**370 hp**
Operating Weight (Empty)*	23 220 kg	**51,191 lb**	24 100 kg	**53,131 lb**	26 800 kg	**59,084 lb**
Top Speed (Loaded)	56 km/h	**35 mph**	55 km/h	**34 mph**	55 km/h	**34 mph**
GMW — Gross Machine Weight	46 820 kg	**103,220 lb**	52 100 kg	**114,860 lb**	54 920 kg	**121,078 lb**
Distribution Empty:						
Front	**62.1%**		**62.3%**		**59%**	
Center	**19.6%**		**19.5%**		**21%**	
Rear	**18.3%**		**18.2%**		**20%**	
Distribution Loaded:						
Front	**36.1%**		**35.1%**		**30%**	
Center	**32.3%**		**32.8%**		**35.3%**	
Rear	**31.6%**		**32.1%**		**34.7%**	
Max. Capacity**	23.6 t	**26 T**	28 t	**31 T**	28 t	**31 T**
Struck (SAE)	11 m^3	**14.4 yd^3**	13.3 m^3	**17.4 yd^3**	13.5 m^3	**17.7 yd^3**
Heaped (2:1) (SAE)	15 m^3	**19.6 yd^3**	17.5 m^3	**23 yd^3**	16.9 m^3	**22.1 yd^3**
Tailgate Heaped SAE 2:1	15.6 m^3	**20.4 yd^3**	18.8 m^3	**24.6 yd^3**	—	
Tailgate Struck	11.1 m^3	**14.5 yd^3**	13.9 m^3	**18.2 yd^3**	—	
Engine Model	**C9.3 ACERT**		**C13 ACERT**		**C13 ACERT**	
No. Cylinders	**6**		**6**		**6**	
Bore	115 mm	**4.53"**	130 mm	**5.1"**	130 mm	**5.1"**
Stroke	149 mm	**5.87"**	157 mm	**6.18"**	157 mm	**6.18"**
Displacement	9.3 L	**567 in^3**	12.5 L	**763 in^3**	12.5 L	**763 in^3**
Tires, Front, Center, Rear	**23.5R25 Radials**		**23.5R25 Radials**		**750/65 Radials**	
Circular Clearance Diameter	16.2 m	**53'0"**	16.2 m	**53'0"**	15.2 m	**49'9"**
Fuel Tank Refill Capacity	410 L	**108.3 U.S. gal**	410 L	**108.3 U.S. gal**	410 L	**108.3 U.S. gal**
DEF Tank Capacity	20 L	**5.3 U.S. gal**	20 L	**5.3 U.S. gal**	20 L	**5.3 U.S. gal**
General Dimensions (Empty):						
Height to Cab Top	3.47 m	**11'4"**	3.48 m	**11'4"**	3.45 m	**11'3"**
Wheel Base (Front-Center of Bogie)	4.83 m	**15'8"**	4.83 m	**15'8"**	4.83 m	**15'8"**
Overall Length	10.45 m	**34'3"**	10.45 m	**34'3"**	10.38 m	**34'0"**
Loading Height (Empty)	2.73 m	**8'9"**	2.91 m	**9'6"**	3.03 m	**9'9"**
Height at Full Dump	6.31 m	**20'7"**	6.46 m	**21'2"**	—	
Body Length	5.69 m	**18'7"**	5.78 m	**19'0"**	5.35 m	**17'6"**
Width (Operating — Over Mirrors)	3.70 m	**12'2"**	3.70 m	**12'2"**	3.70 m	**12'2"**
Front Tire Tread	2.28 m	**7'5"**	2.28 m	**7'5"**	2.28 m	**7'5"**

*Includes coolant, lubricant and full fuel tank.
**Rating dependent on optional equipment. Maximum gross weight (empty weight plus payload) should not be exceeded.

725C Rimpull-Speed-Gradeability
- 23.5R25 Tires
- Tier 4 Final/Stage IV/Japan 2014 (Tier 4 Final)

Articulated Trucks 1



KEY

1A — 1st Gear (Converter Drive)
1B — 1st Gear (Direct Drive)
2A — 2nd Gear (Converter Drive
2B — 2nd Gear (Direct Drive)
3 — 3rd Gear
4 — 4th Gear
5 — 5th Gear
6 — 6th Gear

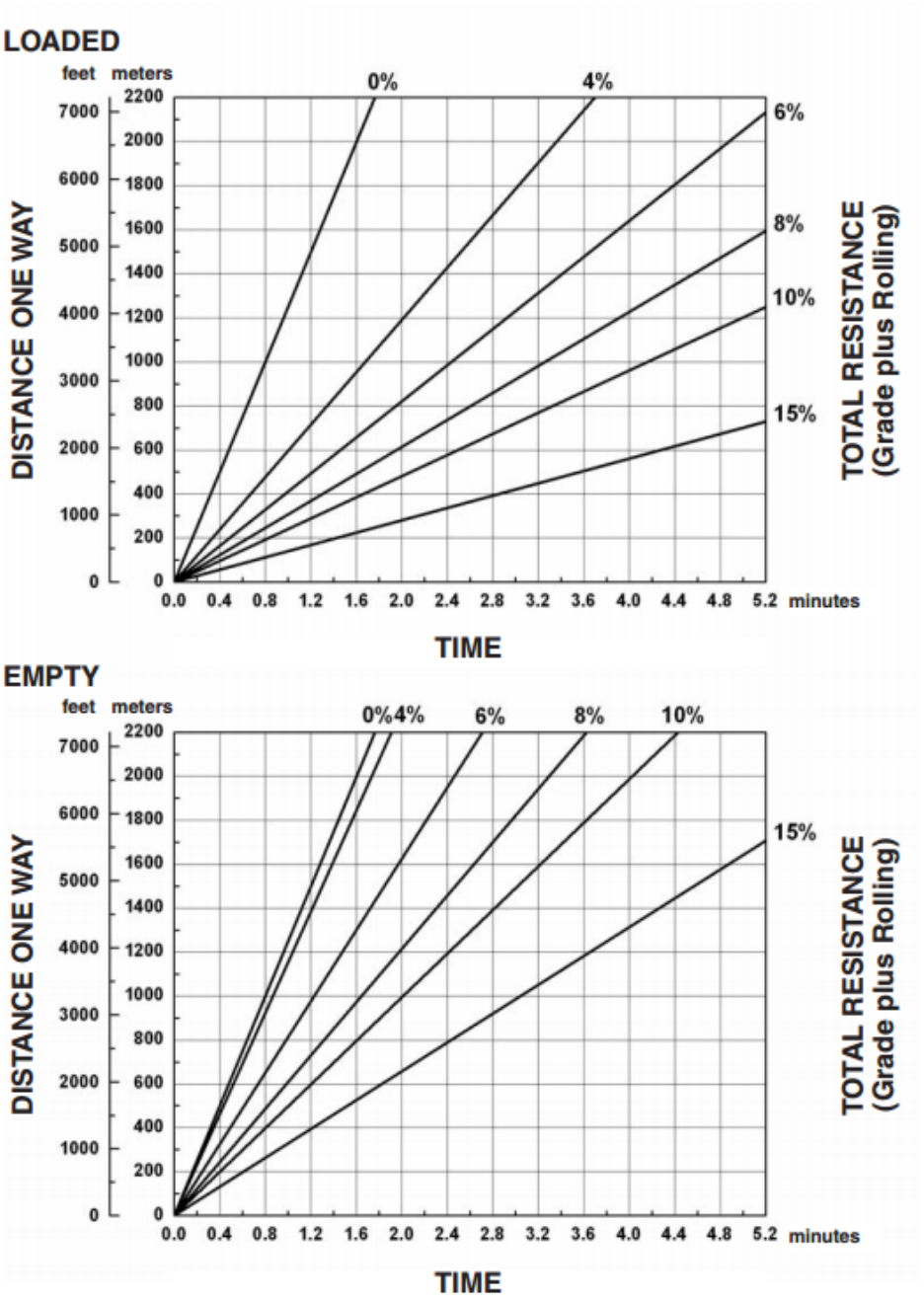
KEY

E — Empty 23 220 kg (51,191 lb)
L — Loaded 46 820 kg (103,220 lb)

*At sea level.

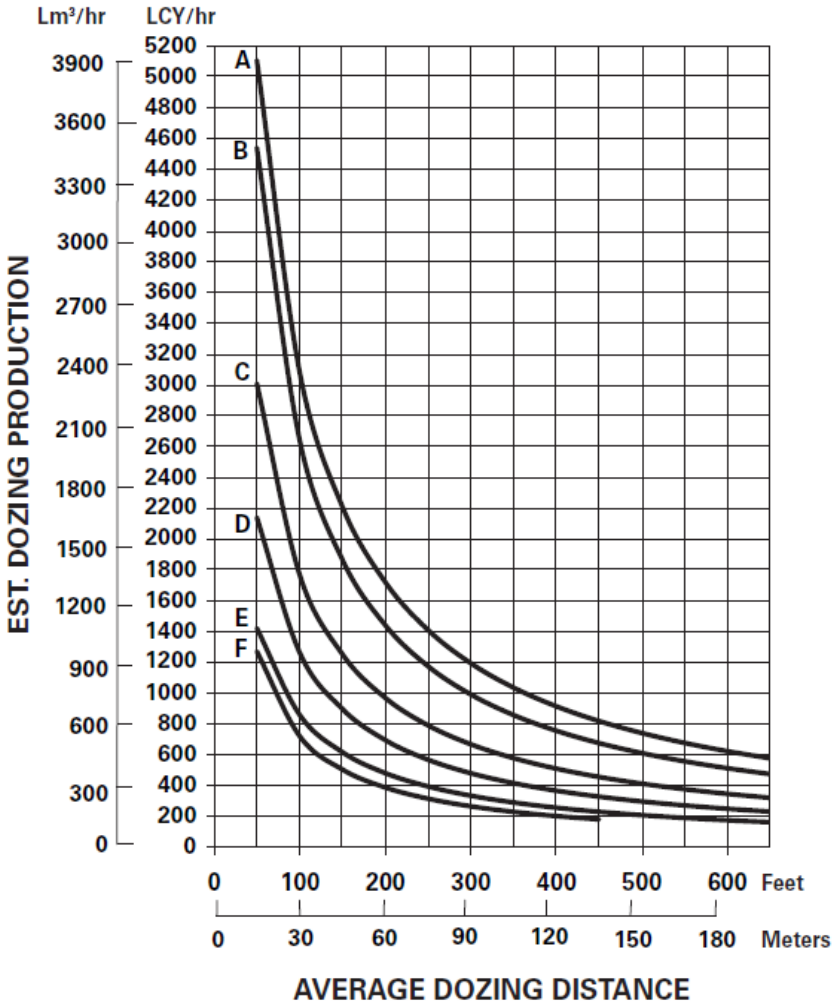
Edition 46 1-9

Construction & Mining Trucks | 770 Travel Time
● 18.00R33 Tires



9-18 Edition 40

ESTIMATED DOZING PRODUCTION ● Universal Blades ● D7E through D11T CD



KEY

A — D11T CD
B — D11T
C — D10T2
D — D9T
E — D8T
F — D7E

NOTE: This chart is based on numerous field studies made under varying job conditions. Refer to correction factors following these charts.

Edition 46 19-51

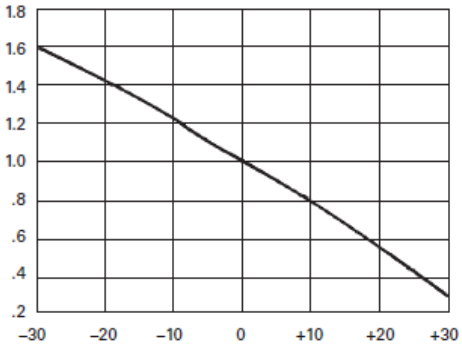
JOB CONDITION CORRECTION FACTORS

	TRACK-TYPE TRACTOR
OPERATOR —	
Excellent	1.00
Average	0.75
Poor	0.60
MATERIAL —	
Loose stockpile	1.20
Hard to cut; frozen —	
with tilt cylinder	0.80
without tilt cylinder	0.70
Hard to drift; "dead" (dry, non-cohesive material) or very sticky material	0.80
Rock, ripped or blasted	0.60-0.80
SLOT DOZING	1.20
SIDE BY SIDE DOZING	1.15-1.25
VISIBILITY —	
Dust, rain, snow, fog or darkness	0.80
JOB EFFICIENCY —	
50 min/hr	0.83
40 min/hr	0.67
BULLDOZER*	
Adjust based on SAE capacity relative to the base blade used in the Estimated Dozing Production graphs.	
GRADES — See following graph.	

***NOTE:** Angling blades and cushion blades are not considered production dozing tools. Depending on job conditions, the A-blade and C-blade will average 50-75% of straight blade production.

% Grade vs. Dozing Factor

(–) Downhill
(+) Uphill



ESTIMATING DOZER PRODUCTION OFF-THE-JOB

Example problem:

Determine average hourly production of a D8T/8SU (with tilt cylinder) moving hard-packed clay an average distance of 45 m (150 feet) down a 15% grade, using a slot dozing technique.

Estimated material weight is 1600 kg/Lm³ (2650 lb/LCY). Operator is average. Job efficiency is estimated at 50 min/hr.

Uncorrected Maximum Production — 458 Lm³/h (600 LCY/hr) (example only)

Applicable Correction Factors:

Hard-packed clay is "hard to cut" material . . .–0.80
Grade correction (from graph) . . . . . .–1.30
Slot dozing . . . . . .–1.20
Average operator . . . . . .–0.75
Job efficiency (50 min/hr) . . . . . .–0.83
Weight correction. . . . . (2300/2650)–0.87

Production = Maximum Production × Correction Factors
= (600 LCY/hr) (0.80) (1.30) (1.20) (0.75) (0.83) (0.87)
= 405.5 LCY/hr

To obtain production in metric units, the same procedure is used substituting maximum uncorrected production in Lm³.

= 458 Lm³/h × Factors
= 309.6 Lm³/h

APPENDIX IVD

PERIMETER FENCE AND GATE INSPECTION AND REPAIR RECORD

PERIMETER FENCE AND GATE INSPECTION AND REPAIR RECORD

Date: _____

Name of Inspector: _____

Perimeter Fence/Gate Inspection

Good Condition (Y/N): _____
Needs Repair (Y/N): _____
Standard Maintenance:
Discussion of repair required: _____
_____
_____
_____

Breach Observed: Yes:_____ No:_____
Time of Breach Discovery: _____
Location of Breach: _____
Date/Time of Temporary Repair: _____
Discussion of Repair: _____
_____
_____

Date/Time of Permanent Repair: _____
Discussion of Repair: _____
_____
_____

Was the TCEQ notified of this breach (see note below): _____

Note: If an access control breach is detected, a temporary or permanent repair must be made within 24 hours of detection. The TCEQ regional office must be notified of the access control breach within 24 hours of detection if a permanent repair cannot be completed within 8 hours of detection. The breach must be temporarily repaired within 24 hours of detection and permanently repaired by the time specified in the official breach report to the TCEQ regional office. The TCEQ regional office must be notified when a permanent access control breach repair is completed, unless the repair can be made within 8 hours of detection.

APPENDIX IVE
SITE MARKER INSPECTION AND REPAIR RECORD

EXAMPLE SITE MARKER INSPECTION AND REPAIR RECORD

Date:_____

Name of Inspector: _____

Black Site Boundary Markers
Maximum 300-ft intervals and at all corners: (Y/N):_____
Replacement/repair needed? (Y/N):_____

Yellow Buffer Zone Markers
Maximum 300-ft intervals and at all corners: (Y/N):_____
Replacement/repair needed? (Y/N):_____

Green Easement Markers
Maximum 300-ft down centerline and at permit boundary: (Y/N):_____
Replacement/repair needed? (Y/N):_____

White Grid System Markers
100-ft intervals (Y/N):_____
Replacement/repair needed? (Y/N):_____

Red SLER/GLER Markers
*Maximum 300-ft intervals and at all corners: (Y/N):_____
Replacement/repair needed? (Y/N):_____

Blue Floodplain Markers
Maximum 300-ft intervals and at all corners: (Y/N):_____
Replacement/repair needed? (Y/N):_____

Discussions and Locations of Maintenance and/or Repairs Made: _____

_____

_____

_____

_____

_____

_____

*SLER Markers required only in area currently being filled

APPENDIX IVF
ALTERNATIVE DAILY COVER OPERATING PLAN

CITY OF EDINBURG SOLID WASTE MANAGEMENT

PERMIT AMENDMENT APPLICATION

Part IV, Appendix F

PART IV, APPENDIX F

ALTERNATE DAILY COVER OPERATING PLAN

Edinburg Regional Disposal Facility

Edinburg, Hidalgo County, Texas

TCEQ Permit MSW-956C

GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

INTENDED FOR PERMITTING PURPOSES ONLY

Submitted To: City of Edinburg
Department of Solid Waste Management
8601 North Jasman Road
Edinburg, Texas 78542 USA

Submitted By: Golder Associates Inc.
500 Century Plaza Drive, Suite 190
Houston, TX 77073 USA

July 2017

Project No. 1401491

Golder Associates

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1.2 Effect on Vectors, Fires, Odors, and Windblown Litter 1
1.3 Application and Operational Methods 2
1.4 Chemical Composition 2
1.5 Other Pertinent Characteristics, Features, or Factors 2

List of Appendices

Appendix IVF-1 Hydro-Mulch Material Safety Data Sheet
Appendix IVF-2 Synthetic Material Tarp
Material Safety Data Sheet

GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

INTENDED FOR PERMITTING
PURPOSES ONLY

EXECUTIVE SUMMARY

This document presents the Alternate Daily Cover Operating Plan (ADCOP). This document is prepared in accordance with the requirements set forth in 30 TAC §330.165(d) and has several references to the EPA document entitled "The Use of Alternate Materials for Daily Cover at Municipal Solid Waste Landfills" by Frederick G. Pohland and Johannes T. Graven, July 1993.

1.0 ALTERNATIVE DAILY COVERS

Alternative Daily Cover (ADC) materials which may be used at this site are:

- **Hydro-mulch,** Topcoat and/or Waste Cover
- **Synthetic material tarps**, both reusable and sacrificial
- **Petroleum contaminated soils**.

1.1 Description and Thickness

A description and thickness of the ADC materials is provided below.

- **Hydro-mulch.** Fiber mulch mix to be applied to a thickness of ¼ inch or greater.
- **Synthetic material tarps.** There are many types of tarps on the market for this purpose. Fabrene, a high density woven polypropylene coated fabric, or an equivalent-type tarp may be utilized.
- **Petroleum contaminated soils.** Soils contaminated by petroleum products, crude oils, or chemicals (also referred to as petroleum contaminated soils) must meet the criteria outlined in §4.22.3.4, Alternative Daily Cover of the Site Operating Plan (SOP). When used as ADC, these soils will be applied in a 6-inch minimum thickness.

1.2 Effect on Vectors, Fires, Odors, and Windblown Litter

ADC materials will have an effectiveness on vectors, fires, odors, and windblown litter as provided by daily cover described in §4.22.1, Daily Cover of the SOP.

- **Hydro-mulch.** Fiber mulch mix provide for adequate waste coverage so that problems with windblown waste, vectors or odors are not observed. The material reduced the threat of fire acting as a fire retardant.
- **Synthetic material tarps.** Tarps provide for adequate waste coverage so that problems with windblown waste, vectors or odors are not observed. The material is not flammable and, although it may not have the same fire retarding properties of soil, should provide adequate protection since the tarps provide uniform waste coverage.
- **Petroleum contaminated soils.** These soils will provide the same effective control as clean soil ensuring protection from vectors, fires, odors, and windblown litter and waste. The low allowable petroleum product concentrations limit flammability and odors while the soil properties aid in vector and windblown waste control.

In the event of a waste fire, the actions described in §4.4, Fire Protection Plan of the SOP, will be implemented. ADC materials will not be used in the area of a waste fire until the fire has been completely controlled. If ADC material is present when a waste fire begins, the ADC material will either be removed or smothered with soil.

1.3 Application and Operational Methods

A description of application and operational methods of the ADC materials is provided below.

- **Hydro-mulch.** Application by directing the flow of hydro-mulch into the air allowing it to rain down onto the active working face to ensure that no shadows are created as a result of surface irregularities. Complete coverage is required.
- **Synthetic material tarps.** Using standard landfill equipment and site personnel, the tarp is typically placed over the waste and secured along the sides and ends with soil, rock or other heavy items at the end of each working day. An Automatic Tarping Machine (ATM) may be used. The tarps are removed in the mornings using landfill equipment and site personnel. If sacrificial tarps are utilized, they shall be subsequently covered with new waste on the next working day. If the active face has an irregular shape or is larger than can be covered with available tarps, soil cover must be applied to the active face perimeter to "square it" down to appropriate dimensions prior to applying the tarp. To minimize tears, the tarp will not be forcibly dragged across the active face. Tarps should overlap each other on the active face perimeter. Up slope tarps should lap over down slope tarps in a shingle fashion.
- **Petroleum contaminated soils.** This material will be applied to the active face using standard landfill equipment. This alternate daily cover material will be spread in an identical manner as standard soil daily cover. Care will be taken not to commingle the contaminated soils with uncontaminated soils outside of use as daily cover.

1.4 Chemical Composition

A description of the chemical analysis of the ADC materials and/or Material Safety Data Sheets is provided below.

- **Hydro-mulch.** A material safety data sheet (MSDS) for Topcoat and Waste Cover is provided in Appendix IVF-1.
- **Synthetic material tarps.** A material safety data sheet (MSDS) for Fabrene (a typical synthetic tarp) is provided in Appendix IVF-2.
- **Petroleum contaminated soils**. All soils used as alternate daily cover material will meet the TCEQ soils policy or policies applicable to the site at the time of application or have been specifically authorized for use as an alternative cover material by TCEQ. The acceptance and/or disposal of a special waste as defined in 30 TAC §330.3 (relating to Definitions), is described in Appendix IVH – Special Waste Acceptance Plan.

1.5 Other Pertinent Characteristics, Features, or Factors

Other pertinent characteristics, features, or factors related to the use of ADC is provided below.

- **Hydro-mulch.** None.
- **Synthetic material tarps.** None.
- **Petroleum contaminated soils.** None.

APPENDIX IVF-1

HYDRO-MULCH MATERIAL SAFETY DATA SHEET

Chemical Composition of Alternate Material

(Material Safety Data Sheets)

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MATERIAL SAFETY DATA SHEET

SOUTHWEST ENVIRONMENT SERVICES, INC.
P.o. Box 134 Tyler, TX 75710
1-800-837-7862

SECTION I: PRODUCT IDENTIFICATION

Product/Material:	Alternative Landfill Cover	Product Code Number:	
Trade Name:	Waste-Cover	Filler:	Proprietary
ACGIH TLV:	5 mg/m^3 (respirable)	ACGIH TLV:	Not Applicable
OSHA 15 MPPCF		OSHA:	Not Applicable
HMIS Rating:			
Health	0	Flammability	1
Reactivity	0	Personal Protection	"E"

SECTION II: HAZARDOUS INGREDIENTS

Paper based slurries are not known to be hazardous and should be controlled as described under Section VIII herein.

SECTION III: PHYSICAL CHARACTERISTICS

Boiling Point (F)	Not Applicable
Vapor Pressure (mm Hg)	Not Applicable
Solubility in Water	Insoluble, Dispersible
Specific Gravity (H_2O =1)	Not Applicable
Reactivity in Water	Not Applicable
Melting Point	Not Applicable
Appearance & Odor	Finely divided material, green in color. No discernible odor.

SECTION IV: FIRE & EXPLOSION DATA

Flash Point		Not Applicable
Flammable Limits	LEL	Not Applicable
	UEL	Not Applicable
Extinguishing Media		Water
Special Fire Fighting Procedures		None
Unusual Fire and Explosion Hazards		None

SECTION V: PHYSICAL HAZARDS (REACTIVITY)

Stability:	Stable
Conditions & Materials to Avoid:	Avoid storage in high moisture or humid condition, possible curing may occur.

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AUG 02

Hazardous Decomposition Products:	Thermal decomposition may produce carbon monoxide and carbon dioxide.
Hazardous Polymerization:	Will not occur.

SECTION VI: HEALTH HAZARDS

Effects of Overexposure:	Persons with respiratory problems should avoid breathing dust.
Inhalation:	Can cause irritation to mucous membrane and upper respiratory system. Remove to fresh air.
Ingestion:	May cause vomiting or diarrhea.
Eyes:	In case of eye contact, flush with copious amounts of water.
Skin:	In case of broken skin, wear gloves. Wash dust from skin with soap and water.

SECTION VII: SPECIAL PRECAUTIONS & SPILL/LEAK PROCEDURES

Precautions in Handling and Storing:	A sealed container will protect integrity of product.
In case of spill:	Sweep up excess material.
Waste Disposal:	Dispose of in landfill or normal refuse in accordance with Federal, State, and Local regulations.

SECTION VIII: SPECIAL PROTECTION/CONTROL MEASURES

Respiratory Protection:	None
Eye Protection:	Use goggles or safety glasses.
Hand Protection:	If skin is broken or sensitive, wear gloves.
Other Protective Clothing:	None
Ventilation:	Normal and adequate ventilation.
Work/Hygienic Practices:	Standard Hygienic Practices

Information presented herein has been compiled from sources considered dependable and is accurate and reliable to the best of our knowledge & belief, but it is not guaranteed to be so. Nothing herein is to be construed as recommending any practice on any product in violation of any patent or in violation of any law or regulation. It is users responsibility to determine the suitability of any material for a specific purpose & adopt necessary safety precautions. We make no warranty as to results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

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Material Safety Data Sheet

TOPCOAT
2001

Section I: Product Identification

Product.....Cellulosic Based Fibers
Trade Name.....TOPCOAT
CAS#.....9004-34-6
ACGIH TVL.....5 mg/m3 (respirable)
OSHA.....15 mppcf
HMIS Rating
Health 0 Flammability 1
Reactivity 0 Personal Protection "E"
Filler:.....Proprietary

Section II: Hazardous Ingredients

Cellulosic based Fibers are considered a Nuisance Dust and should be controlled as described in Section VIII herein. Not listed as carcinogen or potential; no National Toxicology Program, IARC or OSHA involvement currently recorded.

Section III: Physical Characteristics

Boiling Point (F).....Not Applicable
Vapor Pressure (mm Hg).....Not Applicable
Vapor Density.....Not Applicable
Solubility in Water.....Insoluble, Dispersible
Specific Gravity (H20-1).....Not Applicable
Reactivity in Water.....Not Applicable
Melting Point.....Not Applicable
Appearance & Odor Finely divided material, tan in color. No discernible odor.

Section IV: Fire & Explosion Data

Flash Point.....Not Applicable
Flammability Limits LEL.....Not Applicable
UEL.....Not Applicable
Extinguishing Media.....Water
Special Fire Fighting Procedures.....None
Unusual Fire and Explosion Hazards.....None

Section V: Reactivity

Stability.....Stable
Conditions to Avoid: Material is organic, therefore combustible. Avoid extreme heat and flame
Hazardous Decomposition: may produce carbon monoxide and carbon dioxide
Hazardous Polymerization.....Will not occur

Section VI: Health Hazards

Material is primarily a Nuisance Dust
Overexposure: ..may cause irritation to eyes and respiratory system. Persons with respiratory problems should avoid breathing dust.
Inhalation:...can cause irritation to mucous membrane and upper respiratory system. Remove to fresh air.
Ingestion:.....may cause vomiting or diarrhea
Eyes:... In case of eye contact, flush with copious amount of water.
Skin:... In case of broken skin, wear gloves. Wash dust from skin with soap and water.

Section VII: Special Precautions Spill/Leak Procedure

Do Not store near heat or flame source
A sealed container will protect product
Spill.....Sweep up excess material
Waste Disposal... Dispose in landfill or normal refuse in accordance with Federal, State and local regulations.

Section VIII: Special Protection Control Measures

Respiratory Protection: Use NIOSH approved respiratory masks.
Eye Protection:.....use goggles or eye glasses
Hand Protection:.....if sensitive, wear gloves
Other Protective Clothing:.....None
Ventilation:.....normal and ventilation
Work/Hygiene Practices:.....Standard Hygiene

Information presented herein has been compiled from sources considered dependable and is accurate and reliable to the best of our knowledge and belief, but it is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patents or in violation of any laws or regulations. It is the user's responsibility to determine the suitability of any material for a specific purpose and adopt necessary safety precautions. We make no warranty as to results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

Central Fiber Corporation
4814 Fiber Lane
Wellsville, KS 66092
(913) 883-4600

1525 Waynesburg Dr., SE
Canton, OH 44707
(330) 452-2630

6/13
Aug 02

Other Pertinent Characteristics and Features

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AUG-02

OC 1050: Odor Control Agent

Landfills often find it necessary to address odor problems originating from their sites. These odors can occur with little warning, depending on the nature of the solid waste being brought in, the stage of decomposition of disturbed waste, and climatologically factors such as wind, rain, and temperature. They can disappear as quickly as they appear. Landfill proximity to populated areas will often determine what measures are taken to avoid complaints from the general public and their regulatory agents.

When a landfill is utilizing an Alternative Daily Cover such as ADC mulch, they have an excellent opportunity to dispense an odor controlling material each time they apply daily cover, so as to effectively cover the entire active work site with an odor controlling crust. This method provides the best control for the site with a regular odor problem. Alternatively, the product can be used on an as- needed basis when conditions dictate. Either method is less than a penny per square foot.

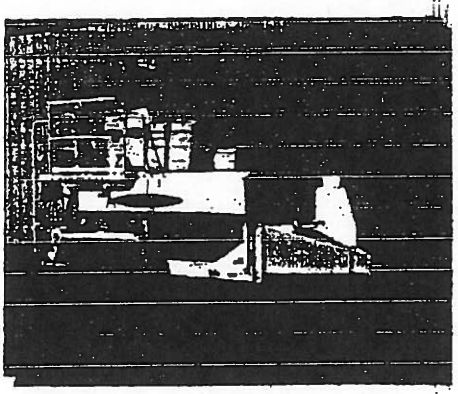
OC 1050 is not a masking agent, but a true odor eliminator which chemically reacts with the odor-causing compounds normally associated with a solid waste landfill. OC 1050 can be added to the hydraulic seeder, along with the ADC mulch material to be applied. The suggested rate is only one quart per 6,000 square feet of active work site. OC 1050 is available in 5 gallon or 55 gallon containers, and can be used at either the suggested rate or higher, depending on the intensity and frequency of the odor problem.

For additional information, please speak with one of our representatives!

8/13 AUG-02

MIXING AND APPLYING

The application of an ADC mulch mixture as an Alternative Daily Cover should be done to the entire working face of the landfill and the end of each day. The operator will mix the appropriate amount of fiber material as shown in Table II into the designated amount of water. The ratio of water to the amount of solid material is very important for proper performance. A diluted mix will not provide an acceptable performance, nor will it meet national regulatory guidelines. The final mixture should have a thick, oatmeal-like appearance. A fifty-pound sample of either the one- or two-bag mix should be used with a maximum of 70 gallons of water. This 50-pound sample will cover approximately 450 square feet of compacted waste. Rinsing the tank and pump with clean water is recommended after each day's use.



Typical landfill hydraulic seeder

TABLE II

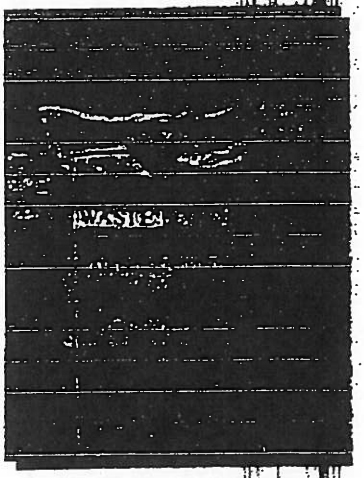
500 GAL.	420 GAL.	300 LBS.	2700 SQ. FT.
700 GAL.	560 GAL.	400 LBS.	3600 SQ. FT.
900 GAL.	770 GAL.	550 LBS.	4950 SQ. FT.
1100 GAL.	910 GAL.	650 LBS.	5850 SQ. FT.
1200 GAL.	1050 GAL.	750 LBS.	6750 SQ. FT.

9113

DESCRIPTION OF MATERIALS USED FOR DAILY COVER

- **Single Bag System – WASTE COVER**

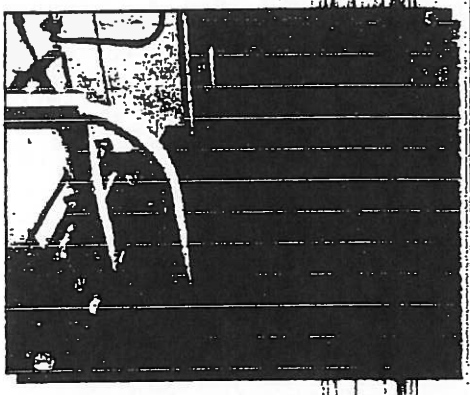
All the ingredients required for use as an Alternative Daily Cover are weighed and metered into a 50-pound bag. The two major ingredients are cellulose fiber and binder. The cellulose fiber is manufactured from recycled paper and wood, and provides the base for the cover. The binder is used to create a cementious crust in combination with the cellulose fiber. Other additives are an enzyme complex to accelerate the decomposition of solid waste there by producing new air space faster, and a colorant to give the cover a more aesthetic appearance. Other proprietary ingredients are used to increase the effectiveness of this product when used as an Alternative Daily Cover in place of the required 6" of dirt.



50 lb. bag of WASTE-COVER

WASTE COVER

- Meets ASTM D6523-00 "Standard Guide for Alternative Daily Cover for Sanitary Landfills"
- Meets ASTM D4982-95 "Flammability Potential Screening Analysis of Waste"
- Easy to mix
- Sprays easily
- One bag system
- Biodegradable and Non-Toxic
- Can be applied with a standard hydraulic seeder
- Meets all E.P.A. 40CFR258
- Capable of withstanding moderate rainfall
- Can be applied in any temperature condition
- Contains microbes for faster breakdown of all organic waste
- Contains an odor control additive for landfill odors



Loading Enviroseeder

10113

TECHNICAL DATA ON TOPCOAT®

Material Characteristics

Consistency:	Slurry
Color:	Brown

Physical Properties

Recycled paper content (minimum)	65%
Moisture content	10-13%
Organic material (minimum)	60%
Inorganic material (maximum)	40%
PH @ 25C (10g/200ml)	8.6 +/-0.4
Toxicity	Non-toxic

Packaging and Shipping Data

Bag size:	17" x 9" x 26"
Bag weight:	50 pounds
Pallet:	40 bags on a pallet (one ton)
	Height: 75"
	Width: 44"
	Depth: 53"
Full truck load:	22 pallets/880 bags
Half truck load:	11 pallets/ 440 bags

11/13

333 Pfingsten Road
Northbrook, Illinois 60062-2096
United States of America
(847) 272-8800
FAX No. (847) 272-8129
http://www.ul.com

Underwriters Laboratories Inc.®

January 19, 1999

Central Fiber Corp.
Mr. Dung Trieu
4814 Fiber Lane
Wellsville, KS 66092

Our Reference: File R13490, Project 98NK42317

Subject: Report On Preliminary "ASTM D4982" Tests

Dear Mr. Trieu:

This is a Report summarizing the results of tests conducted under a preliminary investigation identifiec as Assignment No. 98NK42317.

GENERAL:

Preliminary investigations are initiated to obtain information with respect to a product prior to submittal to Underwriters Laboratories Inc. for Investigation, Classification and Follow-Up Service. This Report does not constitute evidence of such a submittal to Underwriters Laboratories Inc.

METHOD:

The tests were conducted in accordance with ASTM D4982 "Standard Test Methods for Flammability Screening Analysis of Waste."

Method "A" consisting of a test sample exposed to heat and flame was used to determine if the test specimens exhibited a negative or positive flammability potential.

SAMPLES:

The samples utilized in this investigation were neither prepared nor selected by a Laboratories' representative such that no verification of composition can be provided.

The sample consisted of a spray fiber material identified as "Top Coat".

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RESULTS:

The results as tabulated below are considered applicable only to the specific samples tested.

TEST NO.	PRODUCT	FLAMMABILITY POTENTIAL	
		HEAT EXPOSURE	FLAME EXPOSURE
1	Top Coat	Negative	Negative

The Classification Marking of Underwriters Laboratories Inc. on the product is the only method provided by Underwriters Laboratories Inc. to identify products which have been produced under its Classification and Follow-Up Service. No use of a Classification Marking has been authorized as a result of this investigation.

Since the anticipated work has been completed, we have instructed our Accounting Department to terminate the investigation and invoice you for the charges incurred to date.

Should you have any questions, please contact the undersigned.

Sincerely,

ROBERT S. KIFFER (X42014)
Engineering Associate
Engineering Services, 3011E

Reviewed by:

R. K. LAYM [illegible] (X42687)
Engineering Group Leader
Engineering Services, 3011E

RSK:atp

13/13
AUG-02

APPENDIX IVF-2

SYNTHETIC MATERIAL TARP

MATERIAL SAFETY DATA SHEET

Tarpomatic inc.
512 45th Street S.W. • Canton, Ohio 44706
800/500-5069 • 330/484-7100 • 330/484-4630 fax

40' AUTOMATIC TARPING MACHINE

The Automatic Tarping Machine (ATM) is a patented self-contained unit that enables various types of equipment to hydraulically unroll and roll back up different fabric panels. Each ATM is custom fit to be lifted and transported by the blade of a dozer and offers quick and easy hook up. The ATM uses a hydraulic drive motor and engaging system to wind and unwind the spool with variable speed control. Spools can be disconnected and reconnected to utilize one ATM with multiple spools. Remote lead is placed in the cab of the dozer to give the operator complete control of the ATM engine, height of the spool, and forward/ reverse rolling. Utilizing the capabilities of the dozer, the operator also has control of the ATM height and tilt. This allows for even tracking when winding and unwinding tarps on uneven terrain. The 40 foot ATM was designed to accommodate 40 foot wide panels of various lengths and can be adapted to various types of equipment.

ADVANTAGES

- Saves valuable airspace to extend the life of the landfill and increase revenue
- Fast and easy automatic operation reduces costly man hours
- Automatic covering and uncovering eliminates employee contact with waste
- Non-dragging application dramatically extends tarp life
- Weighted tarps with cable pockets and/or chains for ballast

SPECIFICATIONS

- Dimensions: 48' W x 67" H
- Weight: 6000 lb.
- 20 horsepower electric start Kubota diesel engine
- Heavy duty, variable speed, electrically controlled hydraulic drive system
- Hydraulic spool carrying arms
- Includes one spool assembly (additional spool assemblies available)
- Accommodates 40 foot wide panels
- Supports 2,500 lb. maximum tarp weight
- Bolt-on mounting brackets can be easily changed to hook-up to various types of equipment

SERVICE

- Tarpomatic technical service personnel provide each new customer with:
  - Installation of mounting brackets for specific equipment
  - Training of operators on proper ATM use, safety, and maintenance

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Tarpomatic Inc.
512 45th Street S.W. • Canton, Ohio 44706
800/500-5069 • 330/484-7100 • 330/484-4630 fax

AUTOMATIC TARPING MACHINE OPERATING PROCEDURE

Dozer Hook-up and Start-up

• Check all fluids.

• Line dozer blade up with ATM bracket and proceed forward until the blade of dozer is in front of the backside of ATM lifting bracket. Do not lift.

• The control box for the ATM is wired directly to the tarp machine.

• Put control box into the cab of the dozer or compactor.

• Lift up the dozer blade to lift up ATM.

• Turn ignition switch to the left, hold for 6 seconds and then start. The engine has a 6 second quick glow plug. Do not hold longer (see Engine Manual for details).

Cab Controls

• The hydraulic drive system is electrically activated by toggle swiches on the control box.

• Tube roation, forward and reverse, is on the same toggle switch as marked.

• Raising and lowering of the spool carrying arms is on the same toggle switch as marked.

Spool Hook-up Procedure

• The drive motor shaft is engaged and disengaged from the tarp spool via a toggle switch located by the drive motor.

• To hook up to the tarp spool, line up ATM with spool and proceed forward with carrier arms down. Raise the carrier arms when the spool is centered. Pull down and lock into place the top hold downs on both ends. Next, hold drive shaft in line with spool while activating toggle switch to put shaft into tarp spool.

• To unhook from tarp spool, reverse the above procedure.

Covering/ Uncovering Procedure

• Covering: Drive ATM to the top of the working face. Deploy tarp by activating hydraulic drive motor and simultaneously backing up dozer until working face is covered.

• Uncovering: Hook up to ATM and drive forward while simultaeously activating hydraulic drive motor to roll tarp up. If tarp is not rolling up straight, tilt the dozer blade to straighten out tarp tracking. Avoid getting a lot of slack in the tarp so that the tarp is wrapped on the tube uniformly.

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FABRENE®

INDUSTRIAL SYNTHETIC FABRICS

TYPE L257

Made from high density polyethylene tapes, coated on both sides with low density polyethylene.
Contains a flame retardant additive.

PROPERTY	UNIT		VALUES	TEST METHOD
Construction	Tapes/in	Warp	23.9	ASTM D3775
		Weft	16	
Unit Weight	oz/yd2		9.4	ASTM D3775
Tensile Grab Strength	lbf	Warp	495	ASTM D1682-64
		Weft	342	
Tear Strength * (tongue)	lbf	Warp	107	ASTM D2261-71
Tear Strength * (tongue)	lbf	Weft	124	ASTM D2261-71
Coating Thickness	mil	Light Yellow	2	ASTM D1777 MOD
	mil	Light Yellow	2	
Mullen Burst Strength	psi		580	ASTM D751-73
Widths	in	up to	144	

* Includes force to shift tapes - Tear may be crosswise to direction of force.

Fabrene® L257 contains some ultraviolet inhibitors but is not recommended for extended outdoor exposure.
For further information, contact your FABRENE Inc. representative.

Suggested Applications: General purpose tarps. Daily Landfill Covers.

Date: 99/06/07

NOTE: These values are typical data and are not intended as limiting specifications.

SALES OFFICES

Fabrene Inc.
2000 Argentia Road
Plaza 4, Suite 430
Mississauga, ON, Canada
L5N 1W1
Tel: (905) 567-2850
Fax: (905) 858-3670

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Fax: (514) 622-2106

Minneapolis, MN, USA
Tel: (888) 920-1492
Fax: (612) 926-1677

Vancouver, BC, Canada
Tel: (604) 924-0355
Fax: (604) 924-1207

Southport, NC, USA
Tel: (888) 219-3227
Fax: (910) 457-0021

Sioux Falls, SD, USA
Tel: (605) 371-0582
Fax: (605) 371-2174

Salem, MA, USA
Tel: (978) 745-6013
Fax: (978) 745-3766

ORDER DESK

North Bay, ON, Canada
Tel: (888) FABRENE
(888) 322-7363
ext 222 or 226
Fax:
(978) 745-3766

ISO 9001

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ORTECH

SURFACE BURNING CHARACTERISTICS 1 of 3
For: Fabrene Inc. Report No. 93-J52-87-3-514

INTRODUCTION

Determine the Flame Spread and Smoke Developed Classifications based upon a single test conducted in conformance with ASTM E 84, as per your P.O. #019823 dated November 30, 1993.

SAMPLE IDENTIFICATION

The sample of fabric submitted for testing was identified as:
FABRENE PRODUCT G168
(ORTECH sample identification number 93-J52-S0514)

TEST PROCEDURE

The method, designated as ASTM E 84-91a, "Standard Method of Test for Surface Burning Characteristics of Building Materials", is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results are expressed in terms of flame spread index (FSI) and smoke developed (SD).

Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, the test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions.

SAMPLE PREPARATION

The sample was conditioned to constant weight at a temperature of 73°F and a relative humidity of 50% prior to testing. During testing, the sample was supported with 2" hexagonal wire netting and ¼" diameter steel rods spaced at 2 ft. intervals.

SUMMARY OF TEST PROCEDURE

The tunnel is preheated to 150°F, as measured by the floor-embedded thermocouple located 23.25 ft. downstream of the burner ports, and allowed to cool to 105°F, as measured by the floor-embedded thermocouple located 13 ft. from the burners. At this time the tunnel lid is raised and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling 24 ft. long, 12 inches above the floor. The lid is then lowered into place.

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ORTECH

SURFACE BURNING CHARACTERISTICS 2 of 3
For: Fabrene Inc. Report No. 93-J52-87-3-514

SUMMARY OF TEST PROCEDURE (continued)

Upon ignition of the gas burners, the flame spread distance is observed and recorded every 15 seconds. Flame spread distance versus time is plotted ignoring any flame front recessions. If the area under the curve (A) is less than or equal to 97.5 min·ft, FSI = 0.515·A; if greater, FSI = 4900/(195-A). Smoke developed is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, arbitrarily established as 0 and 100, respectively.

TEST RESULTS

SAMPLE	FSI	SD
FABRENE PRODUCT G168	5	14

RED OAK = 100

Observations of Burning C.

- The sample began to melt, drip a... the test chamber immediately upon exposure to the test flame.
- Some of the molten fragments of material ignited while hanging down, causing a brief flame propagation to a distance of 1.0 foot during the first 45 seconds of the test. Several molten pieces continued to flame after falling to the floor of the test chamber.
- A slight increase in smoke developed was recorded during the test. The majority of smoke was generated from the molten material continuing to flame on the floor (see accompanying charts).

Authorities having jurisdiction usually refer to these categories:

	Flame-Spread Index	Smoke Development
Class 1 or A	0 - 25	450 Maximum
Class 2 or B	25 - 75	450 Maximum
Class 3 or C	75 - 200	450 Maximum

R. J. Lederle
Fire & Flammability,
Materials Validation.

H.J. Campbell, Ph.D.
Manager,
Fire & Flammability. 8/9 10/02

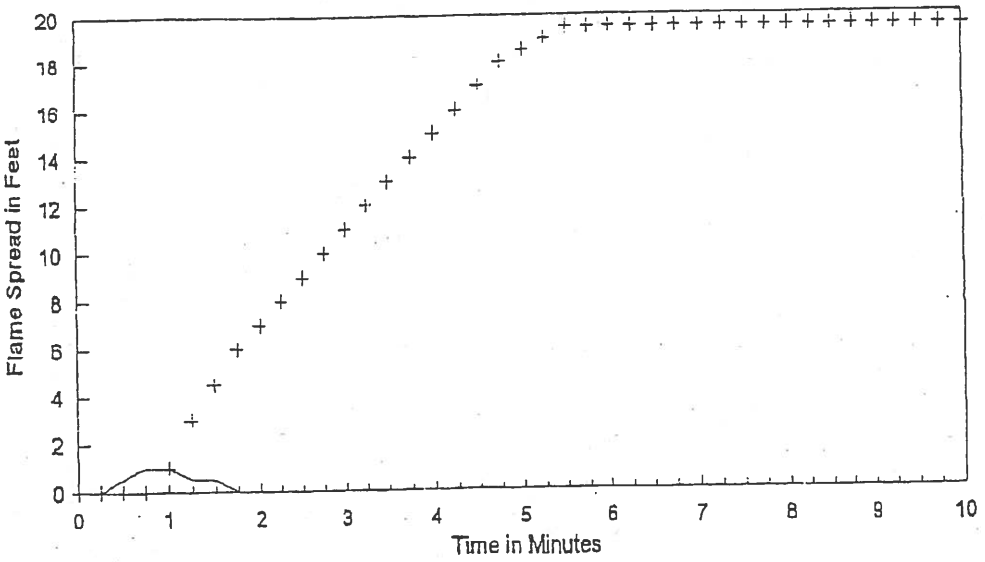
9/10 Aug-02

ORTECH

SURFACE BURNING CHARACTERISTICS
For: Fabrene Inc.

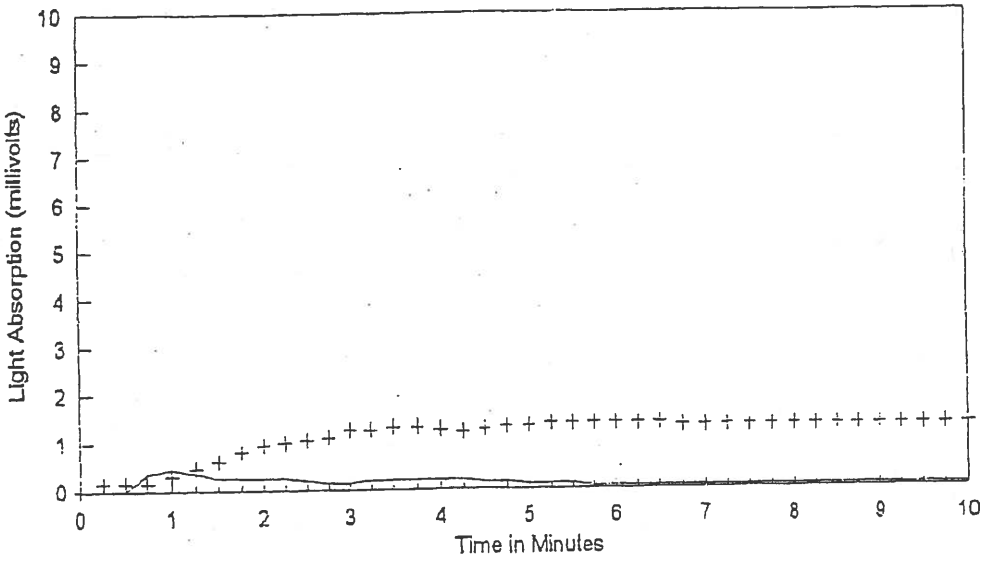
Report No. 93-J52-87-3-514

FLAME SPREAD INDEX
FABRENE PRODUCT G168



_____ SAMPLE +++ RED OAK (FSI = 100)

SMOKE DEVELOPED
FABRENE PRODUCT G168



_____ SAMPLE +++ RED OAK (SD = 100)

FSI	SD
5	14

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APPENDIX IVG

REGULATED ASBESTOS CONTAINING MATERIAL HANDLING PLAN

CITY OF EDINBURG SOLID WASTE MANAGEMENT

PERMIT AMENDMENT APPLICATION

Part IV, Appendix G

REGULATED ASBESTOS CONTAINING MATERIAL HANDLING PLAN

Edinburg Regional Disposal Facility

Edinburg, Hidalgo County, Texas

TCEQ Permit MSW-956C

GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

INTENDED FOR PERMITTING PURPOSES ONLY

Submitted To: City of Edinburg
Department of Solid Waste Management
8601 North Jasman Road
Edinburg, Texas 78542 USA

Submitted By: Golder Associates Inc.
500 Century Plaza Drive, Suite 190
Houston, TX 77073 USA

July 2017

Project No. 1401491

Golder Associates

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GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

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1.0 INTRODUCTION

Breathing asbestos fibers into the lungs has the potential to cause disabling lung diseases and cancer. The primary health objective in handling asbestos waste is the prevention of the release of asbestos fibers during demolition, renovation, transportation, and disposal operations. Proper management practices can prevent exposure to asbestos fibers, eliminating the potential for serious health consequences.

This plan has been prepared to ensure proper handling practices of regulated asbestos-containing material (RACM) during disposal operations at the Edinburg Regional Disposal Facility, in accordance with applicable federal, state, and local requirements, including Code of Federal Regulations Title 40, Part 61; Title 29, Parts 1910.1001 and 1926.58; Title 49, Parts 171 - 173; and Texas Administrative Code, Title 30, Chapter 330, §330.171(c)(3).

2.0 NOTIFICATION

The landfill manager should be notified by the transporter at least 24 hours in advance of the delivery. Less than 24 hour notice is acceptable provided the landfill manager determines that the load can be properly handled and covered.

3.0 LANDFILL DISPOSAL

When a load of RACM arrives at the gate house, the gate attendant shall notify the landfill manager, or his designated representative, who will oversee the disposal operations. The gate attendant shall check the accompanying manifest (required for RACM) to ensure that all necessary information is properly recorded. If the manifest is properly completed, the gate attendant will direct the driver to the proper disposal location, and record the receipt in an Asbestos or Special Waste Receipt Log.

3.1 Initial Inspection

When the load of RACM arrives at the disposal area, prior to unloading, the RACM shall be visually inspected by landfill personnel to determine if the waste has been properly wetted and bagged. A load of RACM determined to be improperly wetted or bagged will be rejected for disposal at this time, and TCEQ will be notified within one working day, in accordance with 40 CFR 61.154(e)(1)(iv).

Due to the movement of the active disposal area at the Edinburg, a specific or separate cell or disposal area cannot effectively be defined. However, the entire permitted fillable area of the landfill will be considered as potential RACM disposal area. An on-site map identifying the RACM area will be maintained at the Landfill and will be revised as needed to include additional constructed areas as disposal areas for RACM. RACM disposal locations will either be surveyed or located by the site grid location.

RACM is to be placed in a disposal area separate from (but possibly immediately adjacent to) the active working face. A separate cell is not required. A minor depression (i.e., three to five feet deep) shall be made with a dozer or compactor prior to unloading. As an alternative, a dozer or compactor may make a cut into the refuse working face, which is deep enough to contain the volume of RACM anticipated (this does not necessarily mean going below grade).

The bags or containers holding the RACM must be placed below natural grade level or, where placement below natural grade is not possible or practical, provisions must be made to ensure that the waste will not be subject to future exposure through erosion or weathering of the intermediate and/or final cover. RACM that is placed above natural grade must be located in the landfill unit such that it is, at closure of the landfill unit, not less than 20 feet from any final side slope of the unit and must be at least ten feet below the final surface of the unit.

3.2 Methods of Unloading

Transporters shall use the method as described below to unload RACM at the landfill.

- RACM must only be accepted at the facility in tightly closed and unruptured containers or bags or must be wrapped with at least six-mil polyethylene.
- Bags or containers holding RACM must be carefully unloaded and placed in their disposal location rather than thrown to the ground. Unloading will be conducted by employees of the generator or transporter.
- Direct discharge of roll-off containers is permitted when performed in accordance with the following procedures:
  - A liner is used with a minimum 6-mil thickness to facilitate sliding of bags from the roll off container without damage by tearing of the bags. A sheet of 6-mil plastic (or equivalent) is placed in the open roll-offs and used to wrap the wetted asbestos in a “burrito wrap” method to prevent airborne particulates. The truck and roll-off box are positioned to unload at the hole excavated in advance for disposal of the waste.
  - With the opened roll-off box tailgate above the edge of the excavation, the bed of the truck and the roll-off box are gradually elevated until the entire envelope slowly slides out of the roll-off box and into the excavation.

3.3 Covering the Asbestos Waste

Asbestos waste will not be compacted directly. Immediately after unloading, the asbestos waste should be covered with a minimum of 3 feet of asbestos-free solid waste or 1 foot of soil. Care should be exercised in the application of the cover to ensure that the bags or containers will not be ruptured.

3.4 Grid System Control

A 3-D grid system will be utilized to identify where the waste will be disposed. The site grid system (i.e., 100 foot markers) and site elevation benchmark and will be used in identifying the disposal locations in a

log book. The date of disposal, the approximate elevation and grid coordinates, and the volume of waste will be recorded.

4.0 RECORD KEEPING

Record keeping for RACM disposal is in the form of manifests and disposal location log. The disposal location log indicating RACM disposal locations is maintained by the landfill manager or designated alternate. A Monthly Waste Receipt Summary form will be completed using STEERS for all loads of industrial RACM which were disposed of during the preceding calendar month.

4.1 Manifests

All shipments of RACM must be accompanied by a Texas Uniform Hazardous Waste Manifest which includes:

a) Name, address, and telephone number of the generator.
b) Name, address, and telephone number of any transporter.
c) Description and quantity of RACM (including Class III Designation).
d) Date of receipt and signature of disposal facility representative.

A copy of each manifest must be retained on-site for at least 3 years.

4.2 Log or Site Map

A RACM disposal log for the landfill must be maintained. The following information should be recorded for each load of RACM accepted:

a) The horizontal location of disposal (using the existing site grid system).
b) The elevation of disposal.
c) The volume of waste.
d) The date of disposal.

4.3 Monthly Waste Receipt Summary

Monthly Reporting of RACM from industrial sources will be submitted through the State of Texas Environmental Electronic Reporting System (STEERS).

4.4 Deed Recordation

Upon closure of the landfill, a specific notification that the landfill accepted RACM will be placed in the deed of records of the property which will include a site diagram or other information identifying the disposal locations of RACM. In addition, a notice of deed recordation and copies of the site diagram or other information identifying the RACM disposal locations will be submitted to the TCEQ executive director.

5.0 PERSONAL PROTECTIVE EQUIPMENT

Respirators and protective clothing prevents exposure of asbestos contamination. Requirements for respirators and protective clothing for spill cleanup are listed below. (Note: If on-site personnel do not meet these requirements, a qualified asbestos cleanup contractor will be contacted. The area will be sealed off until qualified personnel arrive).

5.1 Respirators

a) Must be NIOSH approved.
b) Must be fit-tested to each individual.
c) Must be clean and properly maintained.

5.2 Personal Protective Equipment

a) Disposable Tyvek or similar coveralls.
b) Gloves (when necessary).
c) Foot coverings (when necessary).

The respirator and disposable coveralls should be worn by all personnel in immediate proximity to the RACM cleanup should a spill occur during the disposal operation, workers involved in the cleanup should wear their respirator, disposable coveralls, gloves, and foot coverings.

6.0 EMPLOYEE TRAINING

All employees involved in the receipt and disposal of RACM are given training annually on the proper procedures of managing RACM. This training includes:

a) Asbestos and its health effects.
b) Regulations on transportation, disposal and worker protection.
c) Paperwork, manifesting and notification requirements.
d) Personal protection and protective equipment (including respirator fit tests).
e) Transportation requirements.
f) RACM receipt procedures.
g) RACM disposal procedures.
h) Location logging and record keeping.
i) Spill response actions.

All employee training will be completely documented and maintained on-site.

Contractors and others working around the RACM disposal areas are informed of the RACM disposal practices at the site. Should any excavation work be necessary in areas of previous RACM disposal, a written notification to the TCEQ or EPA Administrator will be made 45 days prior to excavating or otherwise disturbing any RACM. The disposal location will be identified and all personnel working in that vicinity will wear the appropriate protective clothing. Any excavated or exposed RACM will be handled in the same manner as if the waste had just been brought in for disposal.

7.0 CONTINGENCY PLAN

This contingency plan has been developed in the event that a spill of RACM occurs during unloading operations. Personnel involved in the response are to be kept to a minimum to reduce the risk to employees. The Landfill Manager, or his designated representative, shall be in charge of the Landfill's spill response for RACM. The following procedures will be followed in the event of a spill of RACM at or near the landfill:

7.1 Personal Protection

a) Get upwind of the RACM

b) Employees involved in cleanup should make use of the following PPE, including:

   i. Respirator
   ii. Disposable coveralls
   iii. Shoe covers
   iv. Gloves
   v. Safety glasses or goggles

c) Keep others away until cleanup is complete.

7.2 Notification

a) Notify the landfill office/landfill manager.

b) If the spill of RACM involves a reportable quantity (one pound or more), the National Response Center (NRC) must be notified by the landfill manager, or his designated representative.

7.3 Emergency Cleanup Actions

a) Summon water truck, wet down waste with a misting spray of water.

b) Scoop the waste and put it into a properly labeled bag or a closed container and dispose of it with the other RACM.

c) Wash any contaminated equipment or machinery.

d) Dispose of gloves, coveralls, and shoe covers in a tightly sealed 6 mil plastic bag.

e) Wash all other personal protective equipment with soap and water.

f) Check respirator, refit with new filter cartridges, and place into a resealable, air-tight container for future use.

7.4 Spill Response Equipment

1. An OSHA approved respirator with the proper pre-filters.
2. A disposable, Tyvek or similar coverall suit.
3. Disposable gloves.
4. Rubber boots.
5. 6 mil plastic bags with asbestos warning.
6. Water spray tank.
7. Roll of duct tape.
8. Broom and shovel.

APPENDIX IVH
SPECIAL WASTE HANDLING PLAN

CITY OF EDINBURG SOLID WASTE MANAGEMENT

PERMIT AMENDMENT APPLICATION

Part IV, Appendix H

SPECIAL WASTE ACCEPTANCE PLAN

Edinburg Regional Disposal Facility

Edinburg, Hidalgo County, Texas

TCEQ Permit MSW-956C

Submitted To: City of Edinburg
Department of Solid Waste Management
8601 North Jasman Road
Edinburg, Texas 78542 USA

Submitted By: Golder Associates Inc.
500 Century Plaza Drive, Suite 190
Houston, TX 77073 USA

GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

INTENDED FOR PERMITTING PURPOSES ONLY

July 2017

Project No. 1401491

Golder Associates

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GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

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Appendix IVH-3 TCEQ's RG-022, Guidelines for the Classification and Coding of industrial and Hazardous Wastes

1.0 INTRODUCTION & PURPOSE

1.1 Objectives of Special Waste Acceptance Plan (SWAP)

This Special Waste Acceptance Plan (SWAP) outlines the process that will be used to review, evaluate, and determine acceptance of all TCEQ-defined special wastes for the facility. This SWAP was developed in accordance with 30 TAC §§330.127(5)(A) and 330.171. This preventive program specifically provides for waste pre-acceptance procedures to assure that a particular waste is nonhazardous and can accepted and disposed pursuant to facility permit conditions, applicable regulations, and operating capabilities to ensure safe and environmentally sound management of the waste. The City has the authority to request any additional documentation, laboratory analysis, and waste sampling exceeding the requirements and guidelines of this SWAP to adequately characterize both waste-specific and site-specific wastes prior to pre-acceptance review. Upon review to determine if the waste is eligible for disposal at the landfill, the City may approve the acceptance of waste; however the City is not obligated nor required to accept any waste.

It is important to note that this SWAP provides the "how to" of the process that will be used to review, evaluate, and determine acceptance of special wastes. This SWAP does not establish the "what" regarding which particular waste streams will or will not be accepted, as those are established elsewhere in the permit. The facility-specific waste streams that are allowed to be accepted are identified in the Part II, Waste Acceptance Plan. In addition to municipal solid waste (MSW), other solid wastes authorized to be accepted include Class 2 and Class 3 non-hazardous industrial solid waste, special waste, and other waste as approved by the TCEQ. The prohibited wastes that shall not be accepted are identified in Part II, Waste Acceptance Plan.

With respect to several major categories of waste streams, the following is noted here for emphasis:

- Regulated hazardous waste will not be accepted (however, household hazardous wastes and hazardous wastes from conditionally exempt small quantity generators are permissible); and
- Class 1 nonhazardous industrial waste (Class 1 waste) as defined in 30 TAC 330.3 (21) will not be accepted (however, solid waste classified as Class 1 waste only because of asbestos content is permissible).

The remainder of this SWAP describes the procedures that will be in place and used to evaluate, approve and accept special waste for disposal at the facility.

1.2 Special Waste Definitions

30 TAC §330.3(148)

Special waste is any solid waste or combination of solid wastes that because of its quantity, concentration, physical or chemical characteristics, or biological properties requires special handling and disposal to

protect the human health or the environment. If improperly handled, transported, stored, processed, or disposed of or otherwise managed, special waste may pose a present or potential danger to the human health or the environment. Special wastes are as defined by 30 TAC §330.3(148) and include the following:

Table IVH-1: Special Waste Definitions

Special Waste	Citation
Hazardous waste from conditionally exempt small-quantity generators that may be exempt from full controls under 30 TAC §335, Subchapter N	30 TAC §330.3(148)(A)
Class 1 industrial nonhazardous waste	30 TAC §330.3(148)(B)
Untreated medical waste	30 TAC §330.3(148)(C)
Municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water-supply treatment plant sludges	30 TAC §330.3(148)(D)
Septic tank pumpings	30 TAC §330.3(148)(E)
Grease and grit trap wastes	30 TAC §330.3(148)(F)
Wastes from commercial or industrial wastewater treatment plants; air pollution control facilities; and tanks, drums, or containers used for shipping or storing any material that has been listed as a hazardous constituent in 40 CFR Part 261, Appendix VIII but has not been listed as a commercial chemical product in 40 CFR §261.33(e) or (f)	30 TAC §330.3(148)(G)
Slaughterhouse wastes	30 TAC §330.3(148)(H)
Dead animals	30 TAC §330.3(148)(I)
Drugs, contaminated foods, or contaminated beverages, other than those contained in normal household waste	30 TAC §330.3(148)(J)
Pesticide (insecticide, herbicide, fungicide, or rodenticide) containers	30 TAC §330.3(148)(K)
Discarded materials containing asbestos	30 TAC §330.3(148)(L)
Incinerator ash	30 TAC §330.3(148)(M)
Soil contaminated by petroleum products, crude oils, or chemicals in concentrations of greater than 1,500 milligrams per kilogram total petroleum hydrocarbons; or contaminated by constituents of concern that exceed the concentrations listed in Table 1 of 30 TAC §335.521(a)(1)	30 TAC §330.3(148)(N)
Used oil	30 TAC §330.3(148)(O)
Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas when those wastes are to be processed, treated, or disposed of at a solid waste management facility authorized under this chapter	30 TAC §330.3(148)(P)
Waste generated outside the boundaries of Texas that contains any industrial waste; any waste associated with oil, gas, and geothermal exploration, production, or development activities; or any item listed as a special waste	30 TAC §330.3(148)(Q)
Lead acid storage batteries	30 TAC §330.3(148)(R)
Used-oil filters from internal combustion engines	30 TAC §330.3(148)(S)

1.3 Prohibited Wastes

30 TAC §330.15(e)

The following waste as identified in 30 TAC §330.15(e) are prohibited and will not be accepted at the facility:

Table IVH-2: Prohibited Wastes

Special Waste	Citation
A lead acid storage battery shall not be intentionally or knowingly offered by a generator or transporter for disposal at an MSW landfill or incinerator, and/or shall not be intentionally or knowingly accepted for disposal.	30 TAC §330.15(e)(1)
Do-it-yourself used motor vehicle oil shall not be intentionally or knowingly offered by a generator or transporter for disposal at an MSW landfill or MSW incinerator, either by itself or mixed with other solid waste, and/or shall not be intentionally or knowingly accepted for disposal. It is an exception if the mixing/commingling is incidental to, and the unavoidable result of, the mechanical shredding of motor vehicles, appliances, or other items of scrap, used, or obsolete metals.	30 TAC §330.15(e)(2)
Used oil filters from internal combustion engines will not be intentionally or knowingly accepted for disposal at this facility except as provided in 30 TAC §330.171(d).	30 TAC §330.15(e)(3)
Whole used or scrap tires will not be intentionally or knowingly accepted for disposal unless processed prior to disposal in a manner acceptable to the TCEQ or otherwise approved by the agency (e.g., variance). Scrap tires identified during landfill operations and generated through maintenance will be accumulated on site by placing them in containers or trailers prior to shipment. The total quantity of tires will not exceed 500 scrap tires (or weight equivalent tire pieces) on the ground, or 2,000 scrap tires in containers. Tire containers will be kept on landfill property, but the location of the containers will vary to allow operational flexibility, ease of access, and safe landfill operations. Tires and tire pieces stored outside of buildings at the site will be monitored for vectors at least once every two weeks. Manifests will be used for shipment of scrap tires offsite.	30 TAC §330.15(e)(4)
Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbons (CFC) will not be knowingly accepted for disposal unless all the CFC contained in that item is captured and sent to an approved CFC disposal site or recycling facility. If the CFC is not removed from the item, then the whole item must be sent to an approved CFC disposal site. Such items that enter the facility with ruptured lines or holes in the CFC unit will not be accepted unless the generator or transporter provides written certification that the CFC has been evacuated from the unit and that it was not knowingly allowed to escape into the atmosphere.	30 TAC §330.15(e)(5)
Liquids Restrictions. The following wastes are prohibited from disposal: (a) Bulk or non-containerized liquid waste will not be accepted for disposal unless the waste is household waste other than septic waste. (b) Containers holding liquid waste shall not be accepted for disposal unless: (i) The container is a small container similar in size to that normally found in household waste;	30 TAC §330.15(e)(6)

Special Waste	Citation
(ii) The container is designated to hold liquids for use other than storage; or (iii) The waste is household waste.	
Regulated hazardous waste as defined in 30 TAC §330.3.	30 TAC §330.15(e)(7)
Polychlorinated biphenyls (PCB) wastes, as defined under 40 Code of Federal Regulations Part 761.	30 TAC §330.15(e)(8)
Radioactive materials as defined in 30 TAC §336, except as authorized in 30 TAC §336 or that are subject to an exemption of the Department of State Health Services.	30 TAC §330.15(e)(9)

1.4 Wastes Not Requiring Prior Written Approval

30 TAC §§330.171(c), 330.171(d), 330.173(c), 330.173 (i), & 330.173(j)

Receipt of the following wastes does not require the waste-specific or site-specific review detailed in the §2.0 Special Waste Evaluation Program of this SWAP. Specifically, the wastes identified in Table IVH-3, Wastes Not Requiring Prior Written Approval will be accepted for disposal at the facility without the necessity for any waste-specific or site-specific approvals. They will be managed at the facility in accordance with the techniques set forth in 30 TAC §§330.171(c), 330.171(d), 330.173(c), 330.173 (i), & 330.173(j) and this SWAP, including the waste handling and disposal criteria identified in Appendix IVH-1, Waste-Specific Special Waste Management Procedures.

Appendix IVH-1, Waste Specific Special Waste Management Procedures provides a concise description of the waste-specific management procedures for the categories of special waste specifically identified in 30 TAC §330.3(148) as well as for other categories of solid waste mentioned in 30 TAC §§330.171, 330.173 and 330.15(e). The intent of Appendix IVH-1, Waste Specific Special Waste Management Procedures is to provide a user-friendly format to readily identify common categories of special waste and other solid waste and the requirements that apply for its acceptance process and management. Specifically, the second row of each table entry on Appendix IVH-1 (entitled “Evaluation Method”) indicates whether each given special waste category requires prior written waste-specific or site-specific authorization before disposal, or not. It also indicates whether the Special Waste Evaluation Program described in §2.0 Special Waste Evaluation Program of this SWAP is applicable to each listed special waste or other solid waste category.

Table IVH-3: Special Waste Not Requiring Prior Written Approval

Category of Special Waste	Citation
Medical wastes that have not been treated in accordance with the procedures specified in 30 TAC §326 (only if authorized by the Executive Director when a situation exists that requires disposal of untreated medical	30 TAC §330.171(c)(1)

Category of Special Waste	Citation
wastes in order to protect the human health and the environment from the effects of a natural or man-made disaster).	
Dead animals and/or slaughterhouse waste.	30 TAC §330.171(c)(2)
Regulated asbestos-containing material (RACM) as defined in 40 CFR §61.	30 TAC §330.171(c)(3)
Nonregulated asbestos-containing materials (non-RACM)	30 TAC §330.171(c)(4)
Empty containers that have been used for pesticides, herbicides, fungicides, or rodenticides.	30 TAC §330.171(c)(5)
Municipal hazardous waste from a conditionally exempt small quantity generator (CESQG), provided the amount of waste does not exceed 220 pounds (100 kilograms) per month per generator.	30 TAC §330.171(c)(6)
Sludge, grease trap waste, grit trap waste, or liquid wastes from municipal sources (only if the material has been, or is to be, treated or processed and the treated/processed material passes the Paint Filter Liquids Test and is certified to contain no free liquids; it may be accepted for on-site processing/solidification at the liquid waste stabilization area prior to disposal).	30 TAC §330.171(c)(7)
Used oil filters from internal combustion engines (only if properly crushed/processed and offered for disposal by a household generator).	30 TAC §330.171(d)
Wastes that are Class 1 only because of asbestos content.	30 TAC §330.173(c)
Class 2 industrial solid waste that does not interfere with facility operation.	30 TAC §330.173(i)
Class 3 industrial solid waste that does not interfere with facility operation.	30 TAC §330.173(j)

1.5 Waste-Specific and/or Site-Specific Waste Acceptance 30 TAC §§330.171(b), 330.171(b)(1), & 330.171(b)(6)

The acceptance of a special waste as defined in §1.2, Special Waste Definitions and Table IVH-1, Special Waste Definitions, excluding those special wastes identified in §1.3, Prohibited Wastes and Table IVH-2, Prohibited Wastes, and any special wastes that are not specifically identified in §1.4, Wastes Not Requiring Prior Written Approval will require prior written approval from the TCEQ's Executive Director (or authorized designee). Such approvals for acceptance and/or disposal of special waste will be waste-specific and/or site-specific. The TCEQ may revoke an authorization to accept a particular special waste if the City does not maintain compliance with these rules or conditions imposed in the authorization to accept special waste.

2.0 SPECIAL WASTE EVALUATION PROGRAM

2.1 Overview

The Special Waste Evaluation Program (SWEP) obligations described in this section of the SWAP are not applicable to the acceptance of municipal solid waste or any special waste or other materials authorized for disposal under 30 TAC §330.171(c)-(d) and §330.173(c) and (i)-(j) as discussed in §1.4, Wastes Not Requiring Prior Written Approval and Table IVH-3, Wastes Not Requiring Prior Written Approval.

In accordance with 30 TAC §§330.15, 330.127(5)(A), §§330.171-330.173, and §§335.503-335.505, the City has developed this SWEP program to prevent the receipt of hazardous waste, PCB waste, unauthorized Class 1 waste, and other prohibited wastes at the landfill. This proactive policy, in conjunction with random inspections on incoming loads, minimizes the potential that hazardous or otherwise unacceptable waste will be transported to the site for disposal. Implementation of the program provides protection from the potential dangers that a particular special waste could pose to employees, the public, or the environment through improper management and serves as a screening mechanism that minimizes the potential of these prohibited waste streams entering the landfill.

2.2 Request for Approval to Accept Other Types of Special Waste

30 TAC §§330.171(b)(2) & 330.171b(5)

Other categories or types of special waste that are not identified in Appendix IVH-1, Waste Specific Special Waste Management Procedures must receive prior written waste-specific and/or site-specific approvals from the TCEQ's Executive Director prior to acceptance. The TCEQ may authorize the receipt of such other special waste with a written concurrence from the City; however, the City is not required to accept the waste.

After the TCEQ's written approval has been received for a particular "other" type of special waste, the subsequent acceptance review process for the same type of special waste will follow this SWEP. Handling and disposal of each particular "other" type of special waste authorized for acceptance by the TCEQ will be in accordance with the conditions included in the TCEQ authorization for that type of waste.

Requests for approval to accept special wastes must be submitted by the generator to the TCEQ or to the facility with an approved plan and must include, but are not limited to, the following:

2.2.1 Special Waste Characteristics

30 TAC §330.171(b)(2)(A)

A complete description of the chemical and physical characteristics are required including laboratory analyses and information about a waste and the process which generates that waste as discussed in §3.0, Analytical Information of this SWAP. The description must also include a statement as whether or not the waste is a Class 1 industrial waste as defined in 30 TAC §330.3 and the quantity and rate at which each waste is produced and/or the expected frequency of disposal.

2.2.2 Hazardous Waste Determination and Class 1 Waste Determination

30 TAC §330.171(b)(2)(B)

In addition to a Class 1 determination pursuant to 30 TAC §335.505, a hazardous waste determination pursuant to 30 TAC §335.504 as required by 30 TAC §335.6(c) will be performed for the special wastes offered for disposal at the landfill. Regulated hazardous waste (excluding household hazardous waste and hazardous wastes from conditionally exempt small quantity generators) and Class 1 industrial wastes (except wastes that are Class 1 only because of their asbestos content) are prohibited for acceptance. Records of determination will be maintained in the SOR either electronically and/or in hardcopy format as discussed in §5.0, Documentation and Recordkeeping of this SWAP and will be made available for review at the request of TCEQ.

2.2.3 Handling Procedures

30 TAC §330.171(b)(2)(C)

An operational plan containing the proposed procedures for handling waste and listing required protective equipment for operating personnel and on-site emergency equipment is required to accompany the request. Handling and disposal of the special waste authorized for acceptance by the TCEQ will be in accordance with the conditions included in the TCEQ authorization for that type of waste.

2.2.4 Contingency Plan

30 TAC §330.171(b)(2)(D)

A contingency plan outlining responsibility for containment and cleanup of any accidental spills occurring during the delivery and/or disposal operation is required to accompany the request. The contingency plan will be implemented for the containment and cleanup of any accidental spill of the waste.

2.3 Special Waste Acceptance Process

Prior to acceptance of any waste for disposal, information provided by the generator is screened to determine if the wastes meet the definition of "Special Waste." Should any waste be identified as a special waste the customer is required to state the characteristics and origin of the special waste proposed for disposal, if not already provided. In addition, if the waste is not readily identifiable, the generator will be required to provide other pertinent information regarding the waste that might aid in its identification. The following process is completed before waste is accepted:

- The generator provides documentation of the nature of the waste stream to the landfill by submitting the Generator's Waste Profile (GWP) and the waste classification checklist provided in TCEQ's RG-022, Guidelines for the Classification and Coding of industrial and Hazardous Wastes, and any required laboratory analyses data to support classification. Submittals which may be electronic or hardcopy in form or other similar documentation (an

example Generator Waste Profile Form that may be used is provided in Appendix H-2). The customer may be required to provide laboratory analyses data for the waste stream intended for disposal. If the generator is an industrial facility that is required to have specific waste codes assigned, whether self-assigned, TCEQ-assigned, or EPA-assigned, documentation used to assign the waste classifications must be provided for review. Dependent on the waste stream, sufficient documentation may be available in the GWP. Form documents for submittal are:

- Appendix H-2, GWP
- Appendix H-3, RG-022

- The Director of Solid Waste Management (DSWM) or designee will review the electronic or hardcopy GWP and all information provided by the generator. This process may include an electronic review of certain standardized (express) profiles. The DSWM or designee implements the Special Waste Acceptance Plan including the review and approval for the acceptance of special waste.

Pre-acceptance review will ensure that the analytical information when applicable meets the requirements, TCEQ approval is given when appropriate, the necessary conditions/limitations on managing the waste are assigned, and if the waste is eligible for disposal at the landfill. If the waste is deemed eligible, an approval is granted, an expiration date is assigned, and all information is routed to the designated customer service representative. The customer will be informed of all conditions/limitations that apply to managing the special waste. The customer must comply with all conditions/limitations specified by the City.

3.0 ANALYTICAL INFORMATION

The laboratory analyses that will be required for review is dependent upon the type of waste stream to be disposed. Analytical data used to make a determination regarding a waste will use an EPA or TCEQ approved methodology and laboratory. Proper analytical results or equivalent information (i.e., 40 CFR §262.11 allows generator's knowledge of the waste and process generating the waste) must be obtained to ensure that the facility is not managing hazardous waste or other prohibited wastes. The generator is responsible for ensuring that a sample is representative of the waste stream and is analyzed in accordance with the appropriate methodology and laboratory prior to submitting the data for review.

Information about a waste and the process which generates that waste will be used to evaluate or assist in the evaluation of a special waste. Examples of such information include, but are not limited to, Material Safety Data Sheets (MSDS), manufacturers' literature, analytical results (e.g., an analysis may demonstrate that the potential constituents of concern are not present in the waste and therefore could not leach above the levels of concern), knowledge of how the waste was generated (e.g., a filter was used in painting operations and therefore does not contain any pesticides), and other such information generated in conjunction with a particular waste generation activity or process.

- When using "process knowledge" to address one or more special waste evaluation criteria, the requirements of 30 TAC §335.511 shall be followed.

- In addition to above, all information that is used to evaluate special wastes shall be documented in accordance with 30 TAC §335.513.

Analytical reports and/or sampling documentation must clearly identify the generator and/or customer, description of the material sampled and analyzed, sample collection date and location, and when analyses were conducted.

The reference of methods employed must accompany the analytical data and be EPA/TCEQ approved method(s), as applicable. Laboratory QA/QC information must accompany the data submitted and may include sample handling, containerization and preservation techniques, chain of custody records, data on standards, duplicate analyses, spikes and blanks, and other pertinent statistical information.

Special waste that is delivered to the facility for disposal will receive a visual QA/QC inspection to verify contents and nature of waste. This inspection will take place either at the gatehouse or at the working face while the waste is being unloaded by personnel trained in prohibited waste identification. Should visual inspection detect unusual characteristics, additional QA/QC will be performed or the load will be rejected.

Waste containing free liquids as determined using the Paint Filter Liquids Test (EPA Method 9095: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA Publication No. SW-846) will not be accepted for direct disposal unless it is: (i) bulk or noncontainerized liquid waste that is household waste other than septic waste, or leachate or gas condensate derived from the facility and managed/disposed of in accordance with the Part III, Site Development Plan or (ii) containerized liquid waste that is in a small container similar in size to that normally found in household waste, in a container that is designed to hold liquids for use other than storage, or that is household waste. Other than these exceptions, if a waste contains free liquids or is otherwise not certified as passing the Paint Filter Test, it will not be accepted for direct disposal, but is allowed to be accepted for on-site solidification/processing, provided that the waste is an approved waste stream and that it is processed in accordance with the approved operational procedures included in §8.2.2, On-Site Liquid Waste Processing of this SWAP.

4.0 WASTE APPROVAL UPDATES

The GWP for special wastes will be assigned an expiration date not to exceed three years unless otherwise required or approved by the TCEQ. The City of Edinburg requires the generator/customer to provide notification and additional process and/or chemical analysis data in the event there are changes in the process from which the waste is produced. At a minimum, all special waste streams approved and accepted for disposal will be reevaluated prior to the expiration date or if the generator submits additional information after a process change, to include an electronic review if there is no change in process or additional information. Updated analytical may be requested but may not be required for the renewal if the generator certifies that there has not been a change in process.

5.0 DOCUMENTATION AND RECORDKEEPING

Shipping documentation for profiled wastes that arrive at Edinburg Regional Disposal Facility for management is provided to the facility upon arrival. Waste specific information included in the GWP, including any special handling or other requirements is also made available to the facility, hard copy and/or electronically. If the waste and associated documentation is missing, incomplete, or the characteristics of the waste are questionable, all discrepancies must be resolved prior to acceptance of the waste, as outlined in §6.0, Waste Discrepancies and Rejected Loads of this SWAP. All necessary and required paperwork relating to the acceptance of special waste will be maintained in the site operating record either electronically and/or in hardcopy format, and will be furnished upon request to the TCEQ Executive Director and must be made available for inspection/review by the TCEQ Executive Director. Refer to Appendix IVH-2, Example Generator Waste Profile (GWP) Form for an example of a GWP. As the result of potential future revisions, the format and/or information contained in the GWP may change.

6.0 WASTE DISCREPANCIES AND REJECTED LOADS

Gatehouse personnel screen all industrial generators to ensure that all special waste represented by the GWP has been identified and that all required paperwork, approvals, and documentation are in place. If any associated documentation is missing, incomplete, or the characteristics of the waste are questionable, all discrepancies must be resolved prior to acceptance of the waste. In the event the discrepancies cannot be resolved, the waste load will be rejected. All waste discrepancies must be resolved before a waste can be accepted for disposal.

In the event that the description or physical characteristics of a waste being received at the facility differs from that of an approved waste stream or if previously unidentified waste is suspected, the load will be stopped and the generator/customer will be asked to provide additional process knowledge and/or chemical analysis data in order to determine the proper identity of the waste. That information will be reviewed and approved by the facility, the Director of Solid Waste Management (DSWM), or their designee for acceptance or rejection, depending on the nature of the discrepancy (e.g. administrative versus waste composition issues). Copies of the discrepancy resolution, including updated or missing documentation, will be maintained by the site in accordance with §5.0, Documentation and Recordkeeping of this SWAP.

Should an incident occur where hazardous waste, PCB wastes, radioactive or other prohibited wastes are suspected or discovered, the waste will not be authorized for disposal but will instead be rejected or isolated until the material can be adequately identified to determine the proper disposition/remediation of the material and the appropriate handling procedures. During this identification process, the generator/customer will be contacted to determine the identity of the material. If the material is determined to be hazardous waste or contain regulated levels of PCB or radioactive material, the TCEQ will be notified of the incident and the planned disposition/remediation of the material. The proper disposition/remediation

of the prohibited hazardous, PCB, or radioactive waste will be specific to the waste and will be implemented upon TCEQ concurrence and approval.

7.0 TRAINING OF PERSONNEL AND WASTE SCREENING

In addition to the implementation of this SWAP, which provides for specific and detailed pre-acceptance procedures to prevent the receipt of hazardous waste, PCBs, and other prohibited wastes, appropriate facility personnel will receive training to recognize potential hazardous waste, PCBs, or other prohibited wastes. The City provides in-house training to key site personnel, gatehouse personnel and field personnel. This in-house training is function specific and may include Subtitle D requirements, state specific requirements, regulations and procedures, waste recognition and/or waste screening requirements and procedures for acceptable and unacceptable wastes, definition and identification of special wastes, hazardous waste, PCB wastes or other prohibited waste, and the requirements and procedures of this SWAP. Appropriate landfill operations personnel will be trained in the proper use of PPE and on-site emergency equipment. Proper PPE includes a work uniform, work boots, and safety vest. Additional PPE may include Tyvek (or equivalent) suit or coveralls, hardhat, hearing protection, gloves, and safety glasses as conditions warrant. Documentation and a record of all training provided to key facility personnel will be maintained on site in the site operating record and available for inspection.

This required training allows for the monitoring of waste streams as they enter the facility, as well as during disposal, under the supervision of properly trained site personnel. Upon arrival at the site, appropriate gatehouse personnel screen all industrial customers to ensure that all special waste represented by the GWP has been identified and that all required paperwork, approvals, and documentation are in place. In the event that the description or physical characteristics of a waste being received at the landfill differ from that of an approved waste stream, or if a previously unidentified waste is suspected, the load will be stopped and the generator will be required to provide additional process and/or chemical analysis data in order to determine the proper identity of the waste. Upon arrival at the working face and during the unloading of an industrial customer's waste, appropriate field personnel screen the waste for signs of any waste that may exhibit signs of being hazardous or otherwise prohibited waste.

Household hazardous wastes are exempt from regulation under 40 CFR 261.4(b)(1) and under 30 TAC §335.401-335.419. Notwithstanding this exemption, shipments of residential waste can be screened and visually monitored for hazardous wastes other than those contained in normal household waste upon arrival at the gatehouse and during unloading at the working face or citizen’s collection station by the appropriate gatehouse and field personnel.

During the waste screening process by the appropriate field and gatehouse personnel, items to consider and look for may include the type of transport vehicle, signs of liquids or leaking liquids, strange odors, non-household size containers, smoke, vapors, unusual color or content, unusual compaction, excessive liquids,

powders or abnormal products, unusual or prohibited signage or labeling, and body language of driver (i.e., suspicious or nervous appearance or actions).

Should an incident occur where hazardous waste, PCB waste prohibited from Subtitle D land disposal, or other prohibited wastes are suspected or discovered, the waste will not be authorized for disposal but will instead be isolated until the material can be adequately identified to determine the proper disposition/remediation of the material and the appropriate handling procedures. During this identification process, the facility will make a reasonable attempt to determine the identity of the generator of the material.

If the generator is identified, they will be contacted to determine the identity of the material. If the material is determined to be a non-acceptable waste for the facility, the waste will be returned to the generator for proper disposal. The proper disposition/remediation of the prohibited waste will be specific to the waste.

If the generator cannot be identified, the facility will take reasonable steps to determine the identity of the material. If the material is determined to be a hazardous waste, PCB waste, or other prohibited material, the TCEQ will be notified of the incident and the planned disposition/remediation of the material. The facility will make the necessary arrangements for proper disposition/remediation of the waste.

8.0 OPERATIONAL PROCEDURES

8.1 Arrival Acceptance Procedures

Special waste delivered to the landfill for disposal will be checked against the pre-acceptance information to match the contents and nature of waste. The gate attendant will monitor the loads by observing the vehicle, and/or inspecting the load, and/or questioning the driver concerning the origin of the waste. Additional QA/QC may include pH testing, ignitability testing, and paint filter testing. If conducted, QA/QC results will be recorded and referenced by manifest document number and maintained in the site operating records. Wastes requiring special handling are diverted to the appropriate special management area.

8.2 Special Waste Handling Procedures

8.2.1 General

Special wastes approved for receipt at this facility and accepted in accordance with the procedures described in the SWAP will be managed in accordance with the handling and disposal criteria provisions applicable to that waste as presented in Appendix IVH-1, Waste Specific Special Waste Management Procedures. In general, special wastes will be handled and disposed of at the site in a similar manner as municipal solid waste. The special waste will off-loaded from transport trucks and disposed of at the appropriate unloading area/working face identified in the SOP based on how the waste is classified (e.g., MSW working face, regulated asbestos-containing material (RACM) disposal area, liquids stabilization area). The special waste will then be placed and spread using standard landfill equipment listed in the

SOP. Specific handling/disposal procedures for certain wastes will be in accordance with the TCEQ regulations governing their proper disposal and as described further in Appendix IVH-1, Waste Specific Special Waste Management Procedures of this SWAP. For emphasis, the subsections below identify wastes of a certain type or composition that require specific handling and disposal procedures.

8.2.2 On-Site Liquid Waste Processing

30 TAC §330.171(b)(3)

The facility is authorized to perform on-site liquid waste processing. Liquid wastes will be directed to the on-site liquid stabilization processing area prior to being disposed of in the landfill.

8.2.3 Odorous Wastes and Potentially Dusty/Windblown Wastes

The facility will follow the Odor Management Plan presented in §4.14, Odor Management Plan of the SOP. Wastes with strong odors (such as dead animals, slaughterhouse wastes, sewage sludges, etc.), will be covered immediately upon disposal. These wastes may be placed in a select area of the working face to facilitate covering them immediately. See Appendix IVH-1, Waste Specific Special Waste Management Procedures of this SWAP for specific cover requirements that apply to dead animals and slaughterhouse wastes.

Potentially dusty (or otherwise prone to becoming windblown/airborne) special wastes will be transported and unloaded so as to minimize the potential for airborne particles. This includes positioning windbreaks at the working face, placing the dusty/windblown-prone special waste in contingency trenches or requiring the generator to containerize the waste. If needed, personnel may be required to wear personal protective equipment (PPE).

8.2.4 Asbestos Waste (RACM)

RACM will be managed, handled, and disposed of at the facility in accordance with the provisions and requirements of the Regulated Asbestos Containing Material Handling Plan (Appendix IVG of the SOP).

9.0 CONTINGENCY PROCEDURES

For incidental spills that do not pose a threat to waters of the state, operations staff will contain and clean up the spill using appropriate equipment at the direction of the landfill manager. For solids, site staff will use shovels, brooms, and/or heavy equipment to pick up spilled materials. For liquids, typical cleanup materials would include oil dry, absorbent pads, or other available materials to contain the spilled material. Spill cleanup kits are maintained on site. Pumps might also be used, when appropriate, to transfer liquid material from the spill area into containers.

For larger spills, or where there is potential for the waste to impact waters in the state, the landfill manager will assess the situation and determine the appropriate means to contain and collect the material. If spilled material threatens to impact storm water discharge from the site, the landfill manager will use booms or diversionary dikes, or excavate holes or pits as needed to contain the spilled material. Equipment typically available for spill response includes excavators, backhoes, dozers, pumps, and haul trucks. In the event of a spill that cannot be picked up using handheld tools, this equipment will be used as needed to contain and collect spilled material. For larger spills of liquid wastes that cannot be adequately cleaned up with on-site equipment, an emergency cleanup contractor or vacuum truck company will be contacted to assist with cleaning up the spill. Once the liquids are removed, a visual inspection of the spill area will be made, and soils observed to be potentially impacted will be over-excavated and disposed with the collected material.

APPENDIX IVH-1

WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special wastes specifically listed in 30 TAC §330.3(148):

Hazardous waste from conditionally exempt small-quantity generators (CESQG) that may be exempt from full controls under 30 TAC Chapter 335, Subchapter N (relating to household materials which could be classified as hazardous waste)	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste, and the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	There are no specific acceptance criteria for municipal hazardous waste from CESQG except for the liquid waste criteria [see Note 5] and provided the amount of waste does not exceed 220 lb (100 kg) per month per generator, and provided the facility authorizes acceptance of the waste.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing.

Class 1 non-hazardous industrial waste (Class 1 Waste) not routinely collected with municipal solid waste (MSW)	
Authorized for Acceptance[1]	NO

Untreated medical waste	
Authorized for Acceptance[1]	Only if approved by the TCEQ Executive Director when necessary to protect human health and the environment from the effects of a natural or man-made disaster.
Evaluation Method[2]	Receipt of this waste, if authorized for approval by the TCEQ Executive Director, requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If this waste contains free liquids, see Note 5 for further requirements.
Handling and Disposal Criteria[4]	Handling and disposal of this waste is by special circumstances only and must be authorized in advance by the TCEQ Executive Director. Once approved, management will be in accordance with the conditions included in the TCEQ authorization and in accordance with all applicable federal, state, and local regulations.

Municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water-supply treatment plant sludges	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for these wastes and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Sludges or liquid wastes from municipal sources must be tested in accordance with Test Method 9095B (Paint Filter Liquids Test) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids, see Note 5 for further requirements.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill. These wastes may pose a greater potential for objectionable odor. Odorous wastes of this type will be promptly mixed and removed to the working face for burial (for wastes needing solidification), and these wastes will be covered immediately upon disposal.

Septic tank pumpings	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Septic tank pumpings from municipal sources must be tested in accordance with Test Method 9095B (Paint Filter Liquids Test) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids, see Note 5 for further requirements.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area. These wastes containing no free liquids will be disposed of at the working face of the landfill. These wastes may pose a greater potential for objectionable odor. Odorous wastes of this type will be promptly mixed and removed to the working face for burial (for wastes needing solidification), and these wastes will be covered immediately upon disposal.

Grease and grit trap wastes	
Authorized for Acceptance[1]	YES

Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Grease trap waste, grit trap waste, or liquid wastes from municipal sources must have been treated or processed and the treated/processed material must be tested in accordance with Test Method 9095B (Paint Filter Liquids Test) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids, see Note 5 for further requirements.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area. These wastes containing no free liquids will be disposed of at the working face of the landfill. These wastes may pose a greater potential for objectionable odor. Odorous wastes of this type will be promptly mixed and removed to the working face for burial (for wastes needing solidification), and these wastes will be covered immediately upon disposal.

Wastes from commercial or industrial wastewater treatment plants; air pollution control facilities; and tanks, drums, or containers used for shipping or storing any material that has been listed as a hazardous constituent in 40 Code of Federal Regulations (CFR) Part 261, Appendix VIII but has not been listed as a commercial chemical product in 40 CFR §261.33(e) or (f)	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If this waste contains free liquids, see Note 5 for further requirements. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Slaughterhouse wastes	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.

Acceptance Determination Process[3, 5]	There are no specific acceptance criteria for this waste that meets the requirements for disposal, except for the liquid waste criteria [see Note 5].
Handling and Disposal Criteria[4]	Slaughterhouse waste containing no free liquids will be covered by 3 feet of other solid waste or at least 2 feet of earthen material immediately upon receipt at the working face. Slaughterhouse waste arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing.

Dead animals	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	There are no specific acceptance criteria for this waste that meets the definition requirements for disposal.
Handling and Disposal Criteria[4]	Dead animals, other than single household pets and other single small animals, will be covered by 3 feet of other solid waste or at least 2 feet of earthen material immediately upon receipt at the working face.

Drugs, contaminated foods, or contaminated beverages (other than those contained in normal household waste) **[Note – For contaminated food/beverage special waste that is in the form of a small/non-storage container holding liquid waste, see the table entry for "Nonhazardous containerized liquids in small containers similar in size to that normally found in household waste, or in a container that is designed to hold liquids for use other than storage"]**	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If this waste contains free liquids, see Note 5 for further requirements. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.

Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill. At the discretion of the Site Manager or designee, a minimum of 1 foot of other municipal solid waste or 6 inches of dirt may be placed on the waste immediately upon disposal and/or additional precautionary measures may be taken to prevent scavenging and salvaging of these types of waste. For controlled substances (Schedule I through Schedule V as identified in 12 CFR 1308.11-1308.15) approved for acceptance, the U.S. Drug Enforcement Agency must be contacted for approval and for specific destruction, disposal, or other requirements.

Pesticide (insecticides, herbicides, fungicides, or rodenticide) containers (i.e., empty containers that have been used for pesticides)	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	For containers that have been triple rinsed and rendered unusable, there is no required prior written waste-specific or site-specific authorization before disposal (provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes) nor does this waste require the review detailed in the Special Waste Evaluation Criteria (Section 3). For other containers that have been used for pesticides, receipt of this waste require the review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Empty containers that have been triple rinsed prior to receipt at the site, and rendered unusable prior to or upon receipt at the site, may be accepted for disposal at the landfill. For those containers for which triple-rinsing is not feasible or practical (e.g., paper bags, cardboard containers), acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. Depending on the waste profile, those containers may be accepted for disposal under the provisions of 30 TAC §330.171(c)(6) [see CESQG entry in this table] or 30 TAC §330.173 [see Class 2 or 3 nonhazardous industrial waste entries in this table], as applicable. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Discarded materials containing asbestos: **Regulated asbestos-containing material (RACM) as defined in 40 CFR §61**	
Authorized for Acceptance[1]	YES

Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee.
Handling and Disposal Criteria[4]	RACM will be handled and disposed in accordance with the facility's Regulated Asbestos Containing Material Handling Plan (SOP Appendix G). With respect to handling and disposal, this includes the following criteria : The bags or containers holding the RACM should typically be placed below natural grade level. Where this is not possible or practical, provisions must be made to ensure that the waste will not be subject to future exposure through erosion or weathering of the intermediate and/or final cover. RACM that is placed above natural grade must be located in the landfill unit not less than 20 feet from any final side slope of the unit and must be at least 10 feet below the final surface of the unit. RACM will only be accepted at the facility after it is wetted and contained within a closed un-ruptured bag or other type of tightly closed container. The bags or containers will be carefully unloaded and placed in the final disposal area. Care will be taken to not rupture any bags or containers. A minimum of 12 inches of suitable soil or at least 3-ft of non-soil, non-RACM type waste material will be utilized for covering of RACM.

Discarded materials containing asbestos: **Non-regulated asbestos-containing materials (non-RACM)**	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	There are no specific acceptance criteria for this waste that meets the definition requirements for disposal.
Handling and Disposal Criteria[4]	Non-regulated asbestos-containing materials (non-RACM) will be disposed of at the working face of the landfill and covered in accordance with 30 TAC §330.171(c)(4). Under no circumstances may any material that contains non-RACM be placed on any surface or roadway that is subject to vehicular traffic or disposed by any means which the material could be crumbled into a friable state.

Discarded materials containing asbestos: **Asbestos containing material from industrial sources that is only Class I due only to its regulated asbestos content.**	
Authorized for Acceptance[1]	YES

Evaluation Method[2]	Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee.
Handling and Disposal Criteria[4]	Handle and dispose in the same manner as RACM – see above table entry for RACM.

Incinerator ash	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	Incinerator ash will be disposed of at the working face of the landfill. The ash will be handled such that it does not become a public health nuisance, such as becoming airborne. Note that if a facility permit authorizes storage/processing of incinerator ash (e.g., associated with a liquid waste stabilization process), the incinerator ash may be stored and handled only in a manner that is in accordance with the approved provisions for said material.

Soil contaminated by petroleum products, crude oils, or chemicals in concentrations less than 1,500 milligrams per kilogram total petroleum hydrocarbons; or contaminated by constituents of concern that are below the concentrations listed in Table 1 of 30 TAC §335.521(a)(1)	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This table entry refers to soil material from industrial and nonindustrial sources lightly-contaminated (in concentrations less than those indicated in column 1 of this table entry) by petroleum substances as defined in §335.1 (relating to Definition of Petroleum Substance) or chemicals listed in §335.521(a)(1) (relating to Appendices). Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If this waste contains free liquids, see Note 5 for further requirements.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Used oil **[Note – see also the related item in this table for used oil filters from internal combustion engines]**	
Authorized for Acceptance[1]	NO - Used oil is prohibited from disposal at MSW landfills

Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas (RRC) when those wastes are to be processed, treated, or disposed of at the facility	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Waste not exempted under 40 CFR 261.4(b)(5) will require at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. Waste exempted under 40 CFR §261.4(b)(5) will require a completed waste profile. If it is determined that this waste exhibits the characteristics of Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Waste generated outside the boundaries of Texas that contains any industrial waste; waste associated with oil, gas, and geothermal exploration, production, or development activities; or any item listed in the definition of a special waste in 30 TAC §330.3(148)	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Waste generated outside the state boundaries of Texas that meets the definition of a special waste will be handled in accordance with the provisions and requirements of this plan for the same types of waste generated within Texas. Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. Out-of-state industrial solid waste will be handled in accordance with 30 TAC §330.173 and 30 TAC §335.508(9). Out-of-state Class 2 and 3 industrial wastes shall require written authorization by the TCEQ. A copy of the approval must accompany the waste profile prior to initial approval. If it is determined that this waste is a Class 1 waste or exhibits the characteristics of a Class 1 waste, it shall not be accepted.

Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill. If the waste is of a type that has objectionable odors, the waste will be covered immediately upon disposal.

Lead acid storage batteries	
Authorized for Acceptance[1]	NO - Lead acid storage battery disposal is prohibited at MSW landfills by 30 TAC §330.15(e)

Used-oil filters from internal combustion engines	
Authorized for Acceptance[1]	Used oil filters from internal combustion engines must not be intentionally and knowingly accepted for disposal at MSW landfills except as provided by paragraphs (1) and (2) of 30 TAC §330.171(d)
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Evaluation of whether used oil filters may be accepted for disposal is as follows: ▪ The filter must be crushed to less than 20% of its original volume to remove all free-flowing used oil; or processed by a method other than crushing to remove all free-flowing used oil. A filter is considered to have been processed if the filter has been separated into component parts and the free flowing used oil has been removed from the filter element by some means of compression in order to remove free-flowing used oil or the used filter element of a filter consisting of a replaceable filtration element in a reusable or permanent housing has been removed from the housing and pressed to remove free-flowing used oil or the housing is punctured and the filter is drained for at least 24 hours. ▪ Used oil filters (to include filters that have been crushed and/or processed to remove free-flowing used oil) must not be offered for landfill disposal by any non-household generator.
Handling and Disposal Criteria[4]	Waste of this type that is determined to meet the acceptance criteria outlined herein will be disposed of at the working face of the landfill.

Other special waste categories that are types of special wastes identified in 30 TAC §330.171 and §330.173, or are categories of special wastes based on meeting the "catch-all" definition in 30 TAC 330.3(148) (See SWAP Section 1):

Class 2 and Class 3 non-hazardous industrial solid waste.	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	These wastes do not require prior written waste-specific or site-specific authorization before disposal, provided that the facility is permitted to accept these wastes (and provided that it is handled in accordance with the noted provisions specified in this table for this waste and that that these wastes does not interfere with facility operations). Receipt of these wastes will typically include the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If the waste contains free liquids, see Note 5 for further requirements.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Nonhazardous containerized liquids in small containers similar in size to that normally found in household waste, or in a container that is designed to hold liquids for use other than storage	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	Waste in small containers similar in size to that normally found in household waste, or in a container that is designed to hold liquids for use other than storage, or that is household waste may be disposed of at the working face of the landfill, provided the following takes place: The landfill cell in which this waste is to be disposed of shall have a minimum of 3 feet of waste in it prior to disposal of this waste.

Nonhazardous filter media (e.g., paint filters, glycol filters, molecular sieves and other types of filter media), but not including those contained in normal household waste or used oil filters from internal combustion engines.	
Authorized for Acceptance[1]	YES

Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Nonhazardous abrasive wastes (e.g., blasting grit, steel shot, etc.).	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If the waste contains free liquids, see Note 5 for further requirements. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Nonhazardous demolition debris from non-household sources contaminated with lead based paint	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Wastes from non-household sources containing lead-based paint will require, at a minimum, a completed waste profile sheet and analysis to determine that the concentration of lead meets the requirements of the Hazardous Waste and Class 1 Waste determination (i.e., that it does not classify as either). Additional documentation (MSDS, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If it is determined that this waste classifies as a Class 1 waste, it shall not be accepted.

Handling and Disposal Criteria[4]	These wastes will be disposed of at the working face of the landfill.

Materials containing Polychlorinated biphenyls (PCBs) but that are not defined as PCB waste(s) under 30 TAC §330.3(111), nor that are regulated under 40 CFR §761	
Authorized for Acceptance[1]	YES [Note: PCB wastes as defined in 30 TAC §330.3(111) or that are regulated under 40 CFR §761 are prohibited and will not be accepted]
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. PCB wastes as defined in 30 TAC §330.3(111) or that are regulated under 40 CFR §761 are prohibited and will not be accepted. Nonhazardous light ballasts and nonhazardous small capacitors containing PCB compounds as defined in 40 Code of Federal Regulations (CFR) §761.3 (relating to federal PCB/TSCA regulations) will be accepted for disposal at the facility only if the PCB-containing light ballasts and electrical capacitors are generated during routine maintenance only and are not leaking, provided that the total weight of such wastes does not exceed 3 pounds of ballast per day.
Handling and Disposal Criteria[4]	These wastes will be disposed of at the working face of the landfill.

Treated medical waste that contains whole, non-encapsulated hypodermic needles or syringes (per 30 TAC §330.1219(e))	
Authorized for Acceptance[1]	YES
Evaluation Method[2]	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Note that in general, treated medical waste may be managed as routine municipal solid waste. However, treated medical waste that contains whole, non-encapsulated hypodermic needles or syringes or intact red bags that are sent to a landfill for disposal shall be accompanied by a shipping document that includes a statement that the shipment contains whole, non-encapsulated hypodermic needles or syringes or intact red bags, as applicable, and that the medical waste was treated
Handling and Disposal Criteria[4]	These wastes will be disposed of at the working face of the landfill. Treated sharps will be disposed of in accordance with 30 TAC §330.1219(b)(4) (regarding packaging/container requirements).

Wastes that contain or are contaminated by naturally occurring radioactive material (NORM) or other radioactive substances.	
Authorized for Acceptance[1]	YES [Only if meets exemption requirements and is below the concentration limits given in Acceptance Determination Process]
Evaluation Method[2]	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.
Acceptance Determination Process[3, 5]	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Director of Solid Waste Management (DSWM) or designee. If the waste contains free liquids, see Note 5 for further requirements. NORM containing wastes must be exempt from state licensing per 25 TAC §289.259, including being below the concentration limits set forth in 25 TAC §289.259(d). Other wastes with radioactive substances must be below the radionuclide concentration and annual activity limit requirements of 30 TAC 336.365 Appendix H.
Handling and Disposal Criteria[4]	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste stabilization area for processing. These wastes containing no free liquids will be disposed of at the working face of the landfill.

Notes:

1. The facility may only accept special wastes that the landfill is permitted to accept or that has been given prior written waste-specific and/or site-specific authorization by the TCEQ Executive Director (and provided that the special waste is also evaluated in accordance with this SWAP and meets the criteria specified herein for evaluation, acceptance, and disposal).
2. Describes the level of evaluation/evaluation method that will be used to determine acceptance requirements.
3. Describes the pre-acceptance process that will be used by the Director of Solid Waste Management (DSWM) (WAM) or designee to verify that the waste meets the required criteria prior to acceptance at the facility.
4. Describes the gate acceptance, handling, and disposal requirements for the special waste. Refer to Section 8.2 of the SWAP for additional operational requirements that apply to certain types/compositions of special wastes.
5. Note that sludges, grease trap waste, grit trap waste, liquid wastes, and other waste categories that are suspected of having free liquids [other than nonhazardous containerized liquids in small containers similar in size to that normally found in household waste, or in a container that is designed to hold liquids for use other than storage] must be tested in accordance with EPA Test Method 9095B (Paint Filter Liquids Test, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA Publication No. SW-846) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids or is otherwise not certified as passing the Paint Filter Test, it may be accepted for on-site processing (solidification) at the liquid waste stabilization area prior to disposal (only if the facility is approved to take that type of waste).

APPENDIX IVH-2

EXAMPLE GENERATOR WASTE PROFILE (GWP) FORM

THE CITY OF EDINBURG

Landfill Use Only	
Wastestream #	
Approved:	
Date:	
Expiration:	

GENERATOR WASTE PROFILE

CITY OF EDINBURG
DEPARTMENT OF SOLID WASTE MANAGEMENT
9601 NORTH JASMAN ROAD
EDINBURG, TEXAS 78542

TEL: (956) 381-5635
FAX: (956) 383-2851

I. GENERATOR INFORMATION

EPA Generator ID#:			
Generator Name:			
Generator Site Address:			
City:	County:	State:	Zip:
Generator Mailing Address (if different)			
City:	County:	State:	Zip:
Generator Contact Name:		Email:	
Phone Number:	Ext:	Fax Number:	

II. WASTE STREAM INFORMATION

Wastestream Name:			
Texas Waste Code:	Sequence Number:	Form Code:	Classification Code:
Process Generating Waste: (*Be Specific*)			
Describe appearance (*e.g. brown powder, etc.*)			
Color:	Odor (*describe*)	Density lbs/cubic yard	
Is the waste a solid per the paint filter liquids test, method 9095?			Yes No
Type of Waste	Industrial	Nonindustrial	
	Class 1 Class 2 Class 3		
Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20 (c) guidelines or equivalent rules?			Yes No
I have completed a hazardous Waste, Class 1 & 2 determination for the waste. The determination checklist or other documentation is attached.			Yes No

III. Shipping Data

Method of Shipment	Bulk	Drum	Bagged
Estimated Annual Volume:		Select Volume Type	
Frequency:	One Time	Ongoing	

Attach Laboratory Analytical Report (*and/or Safety Data Sheet*) Including Chain of Custody Required Parameters Provided for this Profile.

IV. CERTIFICATION

I certify and warrant that the above wastestream identification for the materials offered for disposal as appears on this form and contained on any attachments, or supplements, is true and correct. My certification is based on personal examination of the information submitted, or is based upon my inquires of those individuals responsible for obtaining the information. I further certify and warrant that the identification is a result of analysis of a representative sample obtained and analyzed in accordance with testing procedures specified by the Texas Commission of Environmental Quality (TCEQ) or by applying knowledge of the process generating the specific waste being offered for disposal. I am an employee of the generator and an empowered to sign this for.

Generator Signature:_____ Title_____ Date_____

It is the generators responsibility to correctly classify their waste per the regulations. This checklist is intended to assist with evaluating this wastestream for disposal at the Edinburg Landfill only, and is not intended to be a comprehensive waste classification tool. Generators must refer to 31 Texas Administrative Code Chapter 335 Subchapter R for a more detailed explanation of waste determination.

PART I: HAZARDOUS WASTE DETERMINATION

Is the waste a listed hazardous waste, or is it mixed with or derived from one per 40 CFR Subpart D, §261.31 through §261.33?	Yes	No
Is the waste ignitable according to 40 CFR §261.21?	Yes	No
Is the waste corrosive according to 40 CFR §261.22?	Yes	No
Is the waste reactive according to 40 CFR §261.23?	Yes	No
Is the waste toxic according to 40 CFR §261.23?	Yes	No

PART II: NONHAZARDOUS INDUSTRIAL WASTE CLASS 1 & 2

Has the generator chosen to classify its nonhazardous waste as Class 1?	Yes	No
If the waste is a container, greater than 5 gallons in holding capacity, which has held a hazardous waste, Class I waste, and/or a material which would be classified as a hazardous or Class I waste, check the following true statements: *(Please note that containers that have held acutely hazardous wastes must be triple-rinsed before they can be classified as empty).*		
Has the container had all its residues removed?	Yes	No
Has the container been rendered unusable?	Yes	No
Are any of the answers to questions (1) or (2) above "NO"?	Yes	No
Does the waste contain asbestos material identified as Regulated Asbestos Containing Material (RACM) as defined in 40 CFR Part 61.	Yes	No
Is the waste contaminated by a material that originally contained 50 or more parts per million (ppm) total polychlorinated biphenyl's (PCBs)?	Yes	No
Does the waste contain 50 or more ppm PCBs?	Yes	No
Is your waste specifically identified as a petroleum substance or contaminated with a material identified as a petroleum substance waste?	Yes	No
Does the waste contain more than 1500 ppm total petroleum hydrocarbons (TPH)?	Yes	No
Are the answers to both of the numbered questions above "Yes"? (If one or both of the answers are "No," for this question.)	Yes	No
Is the waste from the production of a "new chemical substance," as defined by the federal Toxic Substances Control Act, 15 U.S.C.A. Section 2602(9)?	Yes	No
Is the waste generated outside Texas?	Yes	No
If the waste is a liquid, does it have a flash point of less than 65.6°C (150°F)?	Yes	No
Is the waste a solid or semi-solid that – under conditions normally encountered in storage, transportation, and disposal- • Is liable to cause fires through friction or through retained heat from manufacturing or processing; or • Can be ignited readily, and when ignited burns so vigorously and persistently as to create a serious hazard?	Yes	No

Is the waste a semi-solid or solid that, when mixed with an equivalent weight of ASTM Type II laboratory distilled or deionized water, produces a solution with a pH of 2 or less or 12.5 or more?	Yes	No
Does the waste leach Class 1 toxic constituents at or above the levels listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R when submitted to the toxicity characteristic leaching procedure (TCLP)?	Yes	No
Is information lacking that demonstrates the waste belongs in Class 2 or 3	Yes	No

PART III: NONHAZARDOUS INDUSTRIAL CLASS 3 WASTE

Is the waste an empty container?	Yes	No
Is the waste a medical waste regulated under 30 TAC Chapter 330, Subchapter Y?	Yes	No
When subjected to the 7-day distilled water leaching test, does the waste leach constituents at or above the maximum contaminant levels listed in Table 3, Appendix 1 of 30 TAC Chapter 335, Subchapter R?	Yes	No
When submitted to the toxicity characteristic leaching procedure (TCLP), does the waste leach Class 1 toxic constituents listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R at or above their detection levels?	Yes	No
Does the waste contain detectable levels of petroleum hydrocarbons (Method 1005)?	Yes	No
Does the waste contain detectable levels of PCBs?	Yes	No
Is the waste readily decomposable?	Yes	No
Is the waste inert? (Inertness refers to chemical inactivity of an element, a compound, or a waste.)	Yes	No
Is the waste essentially insoluble? (***Note***: wastes that contain liquids are *NOT* considered insoluble.)	Yes	No

APPENDIX IVH-3

TCEQ'S RG-022, GUIDELINES FOR THE CLASSIFICATION AND CODING OF INDUSTRIAL AND HAZARDOUS WASTES

GUIDELINES

FOR THE

CLASSIFICATION

AND

CODING

OF

INDUSTRIAL

AND

HAZARDOUS WASTES

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

WASTE PERMITS DIVISION

RG-022 Revised 11/14

GUIDELINES FOR THE CLASSIFICATION AND CODING OF INDUSTRIAL AND HAZARDOUS WASTES

THIS IS A GUIDANCE DOCUMENT AND SHOULD NOT BE INTERPRETED AS A REPLACEMENT TO THE RULES.
The rules for classifying and coding industrial wastes and hazardous wastes may be found in 30 Texas Administrative Code (TAC) Sections (§§) 335.501-.521 (Subchapter R).

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RG-022
Texas Commission on Environmental Quality

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Published and distributed
by the
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

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printed on recycled paper

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Chapter 1

Introduction

Who Should Read This Booklet

The main purpose of this guidance document is to help generators of industrial and hazardous waste follow state and federal requirements on

- classifying and coding these wastes,
- keeping proper records, and
- notifying the Texas Commission on Environmental Quality (TCEQ) about the wastes, when required.

Specifically, this document gives guidance on the regulations in Title 30 of the Texas Administrative Code (TAC), Chapter 335, Subchapter R (Waste Classification). The rules in Subchapter R apply both to wastes generated in Texas and to those generated outside the state and sent to Texas for treatment, storage, and/or disposal. Correct and timely compliance with the regulations on industrial and hazardous wastes helps to protect the state's environment and safeguard the health of Texas citizens.

Waste Classes

Figure 1-1 shows the main categories of hazardous and nonhazardous waste. The following paragraphs give brief descriptions of these categories—important terms that will be used throughout this booklet. (For more details, see the classification checklist in Chapter 3 and the definitions in Chapter 8.)

Hazardous Waste

A hazardous waste is one that is listed as such by the U.S. Environmental Protection Agency (EPA) or that exhibits one or more hazardous characteristics (also as specified by the EPA). Hazardous wastes are threatening to human health and the environment.

Listed Hazardous Waste

EPA lists over 400 wastes as hazardous. For more information see Part I-A of the checklist in Chapter 3.

Characteristically Hazardous Waste

Waste that displays one or more of four hazardous characteristics:

- ignitability (easily flammable—for example, solvents);
- reactivity (capable of rapid chemical reaction–for example, peroxides);
- corrosivity (highly acidic or alkaline, able to dissolve metals or burn the skin–for example, hydrochloric acid or sodium hydroxide); and
- toxicity (a waste that can release toxic constituents into the environment—for example, lead-based paint).

For more information on hazardous characteristics, see Part I-B of the checklist in Chapter 3.

Nonhazardous Waste

Any industrial waste that is not listed as hazardous and does not have hazardous characteristics. (Class 1 nonhazardous industrial waste can include certain levels of constituents and specified properties that, at higher levels, might otherwise render the waste hazardous—see Part II of the checklist in Chapter 3.)

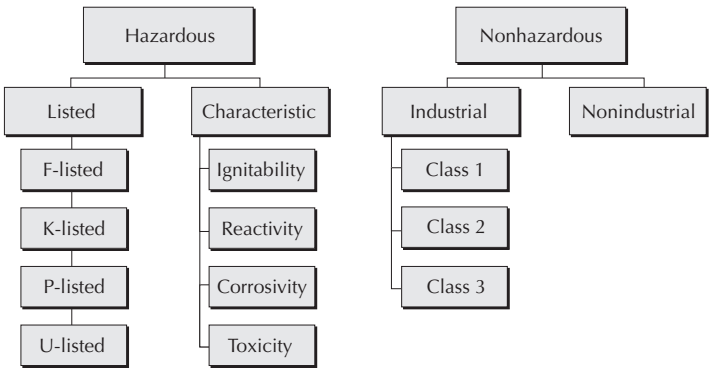
Industrial versus Nonindustrial Wastes

Industrial wastes result from (or are incidental to) operations of industry, manufacturing, mining, or agriculture—for example, wastes from power generation plants, manufacturing facilities, and laboratories serving an industry. *Nonindustrial wastes*, by contrast, come from sources such as schools, hospitals, churches, dry cleaners, most service stations, and laboratories serving the public.

Nonhazardous Industrial Waste

In this grouping, ***Class 1*** waste is considered potentially threatening to human health and the

Figure 1-1. Hazardous and Nonhazardous Wastes



environment if not properly managed, because of the constituents and properties this class can include. Therefore, there are special handling requirements for Class 1 wastes. An example is water contaminated with ethylene glycol.

Examples of ***Class 2*** wastes include waste-activated sludge from biological wastewater treatment. ***Class 3*** includes materials such as demolition debris—for example, bricks—that are insoluble, do not react with other materials, and do not decompose. Class 2 and 3 wastes are often accepted by local landfills. However, a Class 2 or 3 designation does not mean that the waste is incapable of causing harm in every management (or mismanagement) situation.

What This Booklet Explains How to Do

After you have worked through this booklet (and that includes consulting the rules referred to in it), you will be able to accomplish the following tasks:

- **Identify *which wastes* you must classify, code, and notify** the TCEQ about. Chapter 2 introduces a key concept—"waste streams"— that helps you decide these points.
- **Classify your waste.** Chapter 3 gives you a step-by-step approach for putting your waste into one of four categories: either *hazardous* waste or *nonhazardous* industrial waste Classes 1, 2, or 3.
- Know what kind of information (either from **process knowledge** about your facility's operation or from **analytical testing**) that you must **document** and keep on **file** (Chapter 4).
- **Understand the 8-character Texas waste code**. Chapter 5 explains the components of the waste code:
  - 4-character ***sequence number*** (may be a number, letters, or a combination; generally, identifies a particular waste or where it came from);
  - 3-digit ***form*** code; and
  - 1-character classification (from Chapter 3).
- **Know how to notify TCEQ** about your wastes and **which TCEQ form** to use (Chapter 6).

Some Things This Booklet Does NOT Cover

Non*hazardous *Non*industrial Waste.** The rules in 30 TAC Chapter 335, ***do NOT apply to **nonhazardous** waste generated by **nonindustrial** facilities.

Selective Coverage of Chapter 335

Also, please be aware that this guidance document only covers 2 subchapters (A and R) of 30 TAC Chapter 335, which contains 18 subchapters in all. This booklet covers only classification and coding, documentation you must create and keep on file, and notifications you must send to TCEQ (and the forms to use for that purpose). This booklet is not a substitute for the complete rules themselves. (You can obtain your own copies of the full, official state rules from the TCEQ's publications unit. Ways to contact this unit are listed under the heading "TCEQ and EPA Forms" in Chapter 6.)

Classification versus Risk Reduction

There is an important distinction between (1) classifying your wastes; and (2) meeting the ***risk reduction standards,*** which are set forth in 30 TAC Chapter 335, Subchapter S. Here are the most common situations where the risk reduction standards apply:

- a facility that handled industrial wastes is being closed;
- a site where unauthorized discharge of wastes occurred is being cleaned up.

If you are involved in a situation like these, you need to inform yourself about the risk reduction standards. The guidance document you are now reading does not cover this topic. (Again, you can obtain a copy of Subchapter S, and other information, from the TCEQ publications unit—see the heading "TCEQ and EPA Forms" in Chapter 6.)

Who Are "You" in This Booklet?

Throughout this guidance document, generators of industrial and/or hazardous wastes will be referred to as "generator," "generators," or—for a more direct way of writing—simply as "you." Also, 30 TAC Chapter 335, Subchapter R, will be referred to as "these rules" or "the rules." Finally, "this booklet," "this document," or "this guidance document" refers to *Guidelines for the Classification and Coding of Industrial and Hazardous Wastes*, TCEQ Publication Number RG-022—the booklet you are now reading.

Chapter 2

"Waste Streams"–A Key Concept

When the preceding chapter mentioned that this booklet will instruct you on how to classify, code and report about wastes, a question that naturally might have come to your mind is "***How*** do I know which wastes must be classified, coded, and reported?" (The general answer is that you must perform these processes on all hazardous wastes and nonhazardous industrial wastes.)

In discussing this point, federal regulators use the term *waste stream,* in both of the following senses: First, it can mean the total flow of all waste from homes, businesses, and industry. Second, within this total flow, smaller "waste streams" can be distinguished—for example, "the residential waste stream," "the recyclable waste stream," and others.

Similarly, within the overall flow of waste from your ordinary operations or processes, a number of particular waste streams can be identified. For example if your process ordinarily produces a hazardous acidic waste, and at some point you neutralize that waste, these are two separately identifiable "waste streams."

Each waste stream—the acidic waste and the neutralized waste, in this example–must be identified by an 8-character Texas waste code, which identifies the waste stream as a separate entity and gives information about its origin, general nature, and hazardous status. (Chapters 3 through 5 go into the details of how this 8-character code is arrived at.)

Table 2-1 gives examples of some situations in which the waste flow from an operation or process can produce more than one waste stream, each of which must be classified and coded; and an example of a situation that does *not* result in more than one waste stream. For specific guidance on specific waste streams, contact the TCEQ.

In general, whenever you have or suspect the existence of an additional, distinct waste stream, you must determine its classification (Chapter 3), arrive at a Texas waste code for it (Chapter 5), and in most cases notify TCEQ about the additional waste stream (Chapter 6—which also gives details about some of the exceptions to the requirements for notification: for example, a slight change or variation in a waste stream's composition may not require notification.)

Table 2-1. An Operation's Overall Waste Flow Can Produce Multiple "Waste Streams"

IF you have WASTES that are …	AND they come from PROCESSES that are …	THEN the wastes are considered …
different	similar	**different** "waste streams"—for example, a sludge removed from an electroplating vat is not the same waste stream as a liquid removed from an electroplating vat.
similar	different	**different** "waste streams"—for example, methylene chloride used in a paint- stripping operation is not the same waste stream as methylene chloride used in laboratory analysis.
similar	similar	**the same** "waste stream"—for example, a site may have several paint booths that perform the same activities with the same materials, and each produces drop cloth waste. These drop cloth wastes, from the various locations at this site, could be considered one waste stream as long as they were all classified the same (for more on classification, see Chapter 3).
altered physically or chemically by treatment	N/A	**different** "waste streams"—for example, if a sludge is dewatered, it may produce two new waste streams, one a solid and the other a liquid.

Chapter 3

Waste Classification Checklist

This chapter provides a checklist to help you classify your hazardous waste and your nonhazardous industrial waste. For an overview of these types of waste, refer back to Figure 1-1 in Chapter 1; for more details, refer to 30 TAC Chapter 335 Subchapter R Sections 335.501–508. (You can obtain your own copy of state rules from the TCEQ publications unit; ways to contact this unit are listed under the heading "TCEQ and EPA Forms" in Chapter 6.)

Process Knowledge vs. Analytical Testing

In determining a waste stream's classification, a generator may use *process knowledge* and/or *analytical testing*. Process knowledge is the owner or operator's knowledge about how the facility operates, how a waste was produced and handled, and other information based on operating experience. Analytical testing is information about a waste from laboratory analysis.

In the checklist, the nonhazardous classification criteria that could involve analytical testing have been marked with an *. This marking **does not** mean that analytical testing is the only way to evaluate these criteria. If sufficient process knowledge is available, little or no analysis may need to be performed. You should evaluate whether you have enough process knowledge about the waste to classify it or whether analytical testing is needed.

Documentation

Regardless of whether you rely on process knowledge or opt for analytical testing, you must fully document the information used in making your waste classification. **A completed checklist does not qualify as full documentation**. Documentation should be in a written and/or electronically stored format that is reasonably accessible and easily reproducible. For details on documentation requirements, see Chapter 4.

Part I. Hazardous Waste Determination

All waste generators should work through Part I of this checklist. In this part you will determine whether your waste is hazardous because (a) it is listed as hazardous by EPA or (b) it displays characteristics that EPA says make it hazardous.

In federal regulatory language, the first step in classifying your waste is called "making a *hazardous waste determination*." The definition of hazardous waste, based upon the Resource Conservation and Recovery Act (RCRA), is found in Title 40 of the Code of Federal Regulations (CFR), Part 261.

This TCEQ guidance document reflects the hazardous waste definition in the *Federal Register* as of July 1, 2004. If that definition changes, the generator is still responsible for making an accurate hazardous waste determination in accordance with the latest regulations—instead of with what is printed in this guidance document.

IF the answer to any of the questions in Part I is "Yes,"
THEN the waste is hazardous.

Possible *Exclusions* from Hazardous Classification

Under certain conditions, some types of wastes are excluded from being considered hazardous (40 CFR Sections 261.3–4). Generators may wish to review these exclusions before working through Part I of this checklist.

Part I-A. *Listed* Hazardous Waste Determination

The EPA lists some 400 hazardous wastes.

Information to Help You Make This Determination

Descriptions of listed waste are found in 40 CFR Part 261, Subpart D, Sections 261.31–33. These wastes are often referred to as follows:

- "F" listed waste (waste from nonspecific sources, Section 261.31);
- "K" listed waste (wastes from specific sources, Section 261.32);
- "P" listed waste (unused acutely hazardous off-specification materials as well as container residues and spill residues of these materials, Section 261.33);
- "U" listed waste (unused toxic hazardous off-specification materials as well as container residues and spill residues of these materials, Section 261.33).

QUESTION: Is the waste a listed hazardous waste, or is it mixed with or derived from one? ☐ Yes ☐ No

Part I-B. *Characteristic* Hazardous Waste Determination

Wastes may be hazardous if they display any of four characteristics: ignitability, corrosiveness, reactivity, or toxicity.

Information to Help You Make This Determination

Ignitability

Wastes that are hazardous because they may ignite include the following:

- Liquid wastes (other than those aqueous waste containing less than 24 percent alcohol by volume) that have a flash point less than 60°C (140°F). (The test method is the Pensky-Martens closed cup tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, or a Setaflash closed cup tester, using the test method specified in ASTM Standard D-3278-78.)
- Nonliquid wastes that, under standard temperature and pressure, are capable of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burn so vigorously and persistently that they create a hazard.
- Wastes that meet the definition of an ignitable compressed gas (see 49 CFR Section 173.300).
- Wastes that meet the definition of an oxidizer (see 49 CFR Section 173.151).

QUESTION: Is the waste ignitable according to 40 CFR Section 261.21? ☐ Yes ☐ No

Corrosiveness

Wastes that are hazardous because they are corrosive include the following:

- aqueous wastes with a pH of 2 units or below or of 12.5 units or above;
- liquid wastes that corrode steel at a rate greater than 6.35 mm (0.250 inches) per year.

QUESTION: Is the waste corrosive according to 40 CFR Section 261.22? ☐ Yes ☐ No

Reactivity

A waste is considered reactive if it meets any of the following conditions:

- It is capable of detonation or explosive decomposition or reaction
  - at standard temperature and pressure,
  - if subjected to a strong ignition source, or
  - if heated under confinement.
- When mixed with water, it is
  - potentially explosive,
  - reacts violently, or
  - generates toxic gases or vapors.
- If a cyanide or sulfide-bearing waste is exposed to pH conditions between 2 and 12.5, it can generate enough toxic gases, vapors, or fumes to present a danger to human health or the environment. Generally, if a waste generates **250** ppm or more of reactive cyanides or **500** ppm or more of reactive sulfides, it is considered a reactive waste. (It should be noted that these levels of reactive compounds are just guidance. Each waste must be evaluated for reactivity on a case-by-case basis).
- It is normally unstable and readily undergoes violent change without detonating.
- It is a forbidden explosive (as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53).
- It is a Class B explosive (see 49 CFR Section 173.88).

QUESTION: Is the waste reactive according to 40 CFR Section 261.23? ☐ Yes ☐ No

Toxicity

A waste is toxic if the toxicity characteristic leaching procedure (TCLP) shows that a representative sample from the waste contains one or more constituents at or above the levels listed in Table 3-1. The TCLP is described in EPA Method 1311 (SW-846).

QUESTION: Is the waste toxic according to 40 CFR Section 261.24? ☐ Yes ☐ No

Table 3-1. TCLP Regulatory Levels

arsenic —5.0 mg/l	1,4-dichlorobenzene — 7.5 mg/l	nitrobenzene — 2.0 mg/l
barium — 100.0 mg/l	1,2-dichloroethane — 0.5 mg/l	pentachlorophenol — 100.0 mg/l
benzene — 0.5 mg/l	1,1-dichloroethylene — 0.7 mg/l	pyridine — 5.0 mg/l
cadmium — 1.0 mg/l	2,4-dinitrotoluene — 0.13 mg/l	selenium — 1.0 mg/l
carbon tetrachloride — 0.5 mg/l	endrin — 0.02 mg/l	silver — 5.0 mg/l
chlordane — 0.03 mg/l	heptachlor (and its epoxide) — 0.008 mg/l	tetrachloroethylene — 0.7 mg/l
chlorobenzene — 100.0 mg/l	hexachlorobenzene — 0.13 mg/l	toxaphene — 0.5 mg/l
chloroform — 6.0 mg/l	hexachlorobutadiene — 0.5 mg/l	trichloroethylene — 0.5 mg/l
chromium — 5.0 mg/l	hexachloroethane — 3.0 mg/l	2,4,5-trichlorophenol — 400.0 mg/l
o-cresol — 200.0 mg/l	lead — 5.0 mg/l	2,4,6-trichlorophenol — 2.0 mg/l
m-cresol — 200.0 mg/l	lindane — 0.4 mg/l	2,4,5-TP (Silvex) — 1.0 mg/l
p-cresol — 200.0 mg/l	mercury — 0.2 mg/l	vinyl chloride — 0.2 mg/l
cresol — 200.0 mg/l	methoxychlor — 10.0 mg/l	
2,4-D — 10.0 mg/l	methyl ethyl ketone — 200.0 mg/l	

Review of Checklist Part I: Hazardous Waste

IF the answer to any of the preceding questions in Part I is "Yes,"
THEN the waste is HAZARDOUS; PROCEED to Chapter 4.

IF the answers are "No" to all the preceding questions,
AND the waste is NONINDUSTRIAL,
THEN STOP here.

IF the answers are "No" to all of the preceding questions,
AND the waste is INDUSTRIAL,
THEN PROCEED to Part II.

Part II: Nonhazardous Industrial Waste Classes 1 & 2

The determination in this part of the checklist applies only to nonhazardous industrial waste—see Figure 1-1 in Chapter 1. (This part of the checklist is based on regulations found in 30 TAC Sections 335.505–06 and 335.508).

IF the answer to any of the **un-numbered** questions in this part of the checklist is "Yes,"
THEN the nonhazardous industrial waste is a Class 1 waste.

IF all the answers to the **un-numbered** questions in this part are "No,"
THEN the industrial waste is a Class 2 waste.

Generator's Self-Classification

QUESTION: Has the generator chosen to classify its nonhazardous waste as Class 1? ☐ Yes ☐ No

Container Waste

IF the waste is a container, greater than 5 gallons in holding capacity, which has held

- a hazardous substance (as defined in 40 CFR Part 302 and listed in Appendix A of this guidance document),
- a hazardous waste (including acutely hazardous wastes),
- a Class 1 waste, and/or
- a material that would be classified as a hazardous or Class 1 waste if disposed of,

THEN answer questions 1 and 2. *(Please note that containers that have held acutely hazardous wastes must be triple-rinsed before they can be classified as empty).*

IF these conditions are not present in your situation,
THEN proceed to the next un-numbered question.

1. Has the container had all its residues removed? ☐ Yes ☐ No
2. Has the container been rendered unusable? ☐ Yes ☐ No

QUESTION: Are ***any*** of the answers to questions (1) or (2) above "NO"? ☐ Yes ☐ No

Regulated Asbestos-Containing Material (RACM)

(See Chapter 8, Definition of Terms, for information on RACM.)

QUESTION: Does the waste contain asbestos material identified as RACM, as defined in 40 CFR Part 61? * ☐ Yes ☐ No

Polychlorinated Biphenyls (PCBs)

QUESTION: Is the waste contaminated by a material that originally contained 50 or more parts per million (ppm) total PCBs? * ☐ Yes ☐ No

QUESTION: Does the waste contain 50 or more ppm PCBs?* ☐ Yes ☐ No

Petroleum Substance Waste

1. Is your waste specifically identified as a *petroleum substance* (see Chapter 8, Definitions of Terms) or contaminated with a material identified as a petroleum substance waste? ☐ Yes ☐ No
2. Does the waste contain more than 1,500 ppm total petroleum hydrocarbons (TPH)? ☐ Yes ☐ No

QUESTION: Are the answers to **both** of the numbered questions above "Yes"? (If one or both of the answers are "No," enter "No" for this question.) ☐ Yes ☐ No

"New Chemical Substance"

See "new chemical substances wastes" in Chapter 8, Definitions and Terms, for a description of how this particular type of waste may be classified as Class 2 or 3.

QUESTION: Is the waste from the production of a "new chemical substance," as defined by the federal Toxic Substances Control Act, 15 U.S.C.A. Section 2602(9)? ☐ Yes ☐ No

Out-of-State Origin

See "wastes generated out-of-state" in Chapter 8, Definitions of Terms, for details on how this particular type of waste may be classified as Class 2 or 3.

QUESTION: Is the waste generated outside Texas? ☐ Yes ☐ No

Constituent Levels and Specified Properties for Nonhazardous Industrial Class 1 Wastes

QUESTION: If the waste is a liquid, does it have a flash point of less than 65.6^{O}C (150^{O}F)? * ☐ Yes ☐ No

QUESTION: Is the waste a solid or semi-solid that—under conditions normally encountered in storage, transportation, and disposal—

- is liable to cause fires through friction or through retained heat from manufacturing or processing; or
- can be ignited readily, and when ignited burns so vigorously and persistently as to create a serious hazard? ☐ Yes ☐ No

QUESTION: Is the waste a semi-solid or solid that, when mixed with an equivalent weight of ASTM Type II laboratory distilled or deionized water, produces a solution with a pH of 2 or less or 12.5 or more? ☐ Yes ☐ No
(***Exception:*** for solidified, stabilized, encapsulated, or otherwise chemically bound wastes, an exception is provided in 30 TAC Section 335.505(3)) *

QUESTION: Does the waste leach Class 1 toxic constituents at or above the levels listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R when submitted to the toxicity characteristic leaching procedure (TCLP)? * ☐ Yes ☐ No
(For a copy of Table 1, Appendix 1, see Appendix C of this guidance document.)

(Where matrix interferences of the waste cause the Practical Quantitation Limit (PQL) of the specific analysis to be greater than the Maximum Concentration listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R, then the achievable PQL becomes the Maximum Concentration, provided that the generator maintains documentation that satisfactorily demonstrates to the TCEQ that lower levels of quantitation of a sample are not possible.)

A satisfactory demonstration includes the results from the analysis of the waste for that specific constituent by a laboratory using an appropriate method found in *Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods* (EPA SW-846); *Methods or Chemical Analysis of Water and Wastes* (EPA-600 series); *Standard Methods for the Examination of Water and Wastewater*; *American Society for Testing and Materials (ASTM) Standard Methods*; or an equivalent method approved by the TCEQ.

Lack of Class 2 or 3 Information

QUESTION: Is information lacking that demonstrates the waste belongs in Class 2 or 3? ☐ Yes ☐ No

Review of Checklist Part II: Class 1 or 2 Nonhazardous Industrial Waste

IF	the answer to any of the preceding **un-numbered** questions in Part II is "Yes,"
THEN	the nonhazardous industrial waste is a Class 1 waste.
PROCEED	to Chapter 4.

IF	the answers are "No" to all the preceding **un-numbered** questions in Part II,
THEN	the industrial waste is a Class 2 waste.
PROCEED	to Chapter 4.

IF	the answers are "No" to all of the preceding **un-numbered** questions in Part II,
AND	the industrial generator wishes to evaluate the waste for a possible Class 3 status,
THEN PROCEED	to Part III.

Part III: Nonhazardous Industrial Class 3 Waste

This part of the checklist applies only to nonhazardous, industrial waste that does not meet the definition of a Class 1 waste and is not specifically identified as a Class 2 waste. (The corresponding regulations for this part of the checklist can be found in 30 TAC Sections 335.507 and 335.508.)

Part III-A. Initial Determinations for Class 3 Status

IF the answer to any of the following questions in Part III-A is "Yes,"
THEN the nonhazardous, industrial waste ***cannot*** be considered a Class 3 waste.

Containers

QUESTION: Is the waste an empty container? ☐ Yes ☐ No

Medical Waste

(For a definition, see "medical wastes" in Chapter 8.)

QUESTION: Is the waste a medical waste regulated under 30 TAC Chapter 330, Subchapter Y? ☐ Yes ☐ No

Distilled Water Leaching Test

QUESTION: When subjected to the 7-day distilled water leaching test, does the waste leach constituents at or above the maximum contaminant levels listed in Table 3, Appendix 1 of 30 TAC Chapter 335, Subchapter R? * ☐ Yes ☐ No
(Table 3 is reproduced in Appendix D of this guidance document.)

Toxicity Characteristic Leaching Procedure

QUESTION: When submitted to the toxicity characteristic leaching procedure (TCLP), does the waste leach Class 1 toxic constituents listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R at or above their detection levels? * ☐ Yes ☐ No
(The list of Class 1 toxic constituents is reproduced in Appendix E of this guidance document.)

Exclusion: Excluded from this list of Class 1 toxic constituents are those addressed in the previous question (that is, constituents identified in Table 3, Appendix 1 of 30 TAC Chapter 335 Subchapter R).

Petroleum Hydrocarbons

QUESTION: Does the waste contain detectable levels of petroleum hydrocarbons (Method 1005)? * ☐ Yes ☐ No

Polychlorinated Biphenyls (PCBs)

QUESTION: Does the waste contain detectable levels of PCBs? * ☐ Yes ☐ No

Decomposition

QUESTION: Is the waste readily decomposable? ☐ Yes ☐ No

Review of Checklist Part III-A: Class 3 Nonhazardous Industrial Waste

IF the answer to any of the preceding questions in Part III-A is "Yes,"
THEN the nonhazardous, industrial waste ***cannot*** be considered a Class 3 waste.

IF all the answers to the preceding questions in Part III-A are "No,"
THEN proceed to Part III-B to continue the waste's evaluation for possible Class 3 status.

Part III-B: Final Determinations for Class 3 Status

Inertness

QUESTION: Is the waste inert? (Inertness refers to chemical inactivity of an element, a compound, or a waste.) ☐ Yes ☐ No

Insolubility

QUESTION: Is the waste essentially insoluble? ☐ Yes ☐ No
(***Note***: wastes that contain liquids are *NOT* considered insoluble.)

Review of Checklist Part III

IF the answer to any question under Part III-B is "No,"
THEN the nonhazardous, industrial waste ***cannot*** be considered a Class 3 waste.

IF all the answers to the questions in Part III-A are "No,"
AND all the answers to the questions in Part III-B are "YES,"
THEN the nonhazardous industrial waste is a Class 3 waste.

Part IV. Variance from Waste Classification

The TCEQ may determine, on a case-by-case basis, the merits of a variance request for a specific nonhazardous classification. The burden of justifying the need for a variance is on the requestor. The requestor must submit information sufficient to clearly indicate the issues involved, the reason(s) for the request, and both the positive and negative impacts that may result from the granting of the variance. (The regulations corresponding to these types of variance requests can be found in 30 TAC Section 335.514, Variance from Waste Classification Provisions.)

* **As a reminder**, these characteristics need not necessarily be addressed by analytical testing. A generator may be able to address them through process knowledge. For more information on process knowledge, please see Chapter 4 of this guidance document.

Chapter 4

Process Knowledge, Analytical Testing, and Documentation Requirements

Introduction

Now that you know how to classify your wastes, you are ready to compile supporting documentation. Documentation should support the classification and coding of a waste stream. You must properly document each waste stream generated by the facility, and keep that documentation for at least three years after the waste is no longer generated, stored, or recycled or until the site is closed.

The regulations on documentation requirements can be found in 30 TAC Section 335.9 (Record Keeping and Annual Reporting Procedures Applicable to Generators), Section 335.70 (Record Keeping), Section 335.510 (Sampling Documentation), Section 335.511 (Use of Process Knowledge), and Section 335.513 (Documentation Required).

The TCEQ randomly audits a portion of waste stream *notifications* (see Chapter 6) in order to ensure proper classification and coding of waste in Texas. When the TCEQ sends you a request for information for the purpose of an audit, you must send the agency the information that you have gathered to make your hazardous waste determination/waste classification. Please use Chapter 4 as a guide to compiling supporting documentation for each waste stream generated at your facility.

Process Knowledge

If process knowledge is used in classifying a waste, that knowledge must be documented and kept on file for three years. Process knowledge must be in writing or stored in some electronic form. It cannot be stored solely in someone's mind. The process knowledge must support a generator's reasoning about why the waste has been given a particular classification. It must also support the generator's reasoning about why a particular test method was not performed.

The following are some examples of process knowledge that may assist in classifying waste:

- description of the waste;
- date of initial waste generation;
- a detailed description of the process generating the waste (that is, identification of chemicals or other materials in the process that generated the waste stream (including any potential breakdown products);
- manufacturer's literature such as Material Safety Data Sheets—MSDSs (although they were not created for the purpose of determining Texas waste classification, and do not contain information on all constituents found in a product, MSDSs may be helpful);
- full description of activities that generated the waste stream;
- identification of potential contaminants; and
- other documentation generated in conjunction with the particular process.

Analytical Data

If a generator uses analytical data to classify a waste, the data must be supported by documentation of the sampling procedure and the analytical testing. The following lists specify information that must be maintained when analytical data is used for classification purposes.

Sampling Procedures

The following procedures must be documented:

- dates of sample collection;
- description of the site and/or unit from which the sample was taken, including sampling locations;
- the method and equipment used for sampling;
- a description of the sampling techniques, including collection, containerization, and preservation; and
- rationale—that is, supporting reasons—for the sampling plan (why the number, type, and location of samples taken accurately represent the waste stream being characterized).

Analytical Testing

Documentation of analytical testing must include the following:

- Analytical **results** (including quality control data).
- Analytical **methods** (including any preparatory methods).
- The **detection limits** for each analysis.
- **Name of laboratory** performing the analysis.
- **Chain of custody**—documentation tracking the condition of the waste containers. For example, were the waste containers and their seal intact or broken upon arrival at the laboratory? Were the containers full, half-full, or empty? Did all the containers arrive at the laboratory or just a partial shipment?
- Documentation that satisfactorily demonstrates that lower levels of *quantitation* are not possible (this is only necessary when the waste media causes the *Estimated Quantitation Limit* (EQL) of a Class 1 toxic constituent (as listed in Appendix E of this guidance document) to be greater than the concentration listed (*matrix interference*). (Terms in italics are explained in Chapter 8.)

Classification Checklist

Although the checklist in Chapter 3 can be used to help classify industrial and hazardous waste, a generator should support the checklist's "yes" or "no" responses with process knowledge and/or analytical data. A completed checklist by itself is not sufficient documentation to submit to the TCEQ in response to a random audit of classification.

For example, a generator answers "no" to the question "Is the waste ignitable according to 40 CFR Section 261.21?" You can support this response by submitting process knowledge, analytical data, or both. If process knowledge is used, it must be **specific**. A general statement such as "the waste is not ignitable" would not be sufficient.

Instead, you should document specific actions you took and their results, such as (1) reviewed all constituents that may be present in the waste; (2) determined that each constituent present in the waste does not meet the definition of an ignitable waste; and (3) determined that the process generating the waste does not introduce any ignitable characteristics to the waste stream. You should keep copies of your documentation demonstrating that the constituents in the waste stream would not cause the waste to exhibit the characteristic of ignitability.

Rule of Thumb about Documentation

Remember that documentation should demonstrate why a waste has been given a particular classification. Here's a good rule of thumb: if someone else can review your classification documentation, using the published criteria and/or the checklist, and arrive at the same classification you did, then you have probably done a good job of compiling supporting documentation for a waste classification. On the other hand, if someone reviews your classification and still has unanswered questions, then you may want to gather additional documentation (from process knowledge and/or analytical data) to support your classification of that waste stream.

Chapter 5

Texas Waste Code Formula

Chapter 5 describes the 8-digit Texas waste code that identifies each of your waste streams. (Part of the information to complete this waste code comes from the waste determination process (described in Chapter 3) and from the documentation you must compile and keep on hand (described in Chapter 4).)

The formula for the Texas waste code is given in Figure 5-1. The rules corresponding to this formula can be found in 30 TAC Section 335.503 (Waste Classification and Waste Coding Required).

Sequence Number

Although called a sequence "number," this part of the code may contain a mix of numbers and letters—alphanumeric; and sometimes it may consist of letters alone. Various types of 4-digit sequence numbers are used in the Texas waste code.

- An **arbitrary and unique 4-digit number from 0001 to 9999** (no alpha characters), which is assigned by the generator when adding a waste stream to Texas facility's *Notice of Registration* (see Chapter 6, Notification Requirements). Once assigned to a particular waste stream, a sequence number **cannot be reassigned** to another waste stream. Generators need not sequentially assign sequence numbers to a facility's waste streams.
- A **4-digit alphanumeric number** assigned by the TCEQ (under the **one-time shipment program**) to wastes generated by unregistered generators within Texas. (Spill waste not managed under the Emergency Response Program may be handled in this manner.)
- **"SPIL"** to be assigned only by the Emergency Response Team of the Field Operations Division **for spill wastes regulated under the Emergency Response Program.**
- **"OUTS"** to be used for **wastes generated outside of Texas**.
- **"CESQ"** to be used by **municipal hazardous and industrial CESQGs** (Conditionally Exempt Small-Quantity Generators).
- **"TSDF"** (treatment, storage, and disposal facilities), to be used by facilities that (1) receive and consolidate a waste stream with other like waste streams (thus not changing the form or composition of the waste); or (2) store a received waste without treating or changing its form or composition. This sequence number does not apply to wastes that are treated or altered in some other way. The "TSDF" designation is to be used only by **facilities that store and/or accumulate waste** from more than one site for subsequent shipment to a treatment or disposal facility.

Form Code

The second series of numbers found in the Texas waste code is the "form code." The list of form codes as well as flowcharts that depict the choosing of a form code can be found in Appendix G.

Form codes are broken down into 10 major categories. They are Lab Packs, Inorganic Liquids, Organic Liquids, Inorganic Solids, Organic Solids, Inorganic Sludges, Organic Sludges, Inorganic Gases, Organic Gases, and Plant Trash. The various form codes and corresponding descriptions can be found under these categories in Appendix G.

In determining a waste stream's form code, TCEQ recommends that the generator first determine the major category into which the waste stream fits. Then review all the form code descriptions in that category to determine which code or codes best describe your waste stream. From this narrowed-down list, choose a form code for the waste stream.

Classification

The waste stream's classification completes the Texas waste code. As Figure 5-1 showed, this part of the Texas waste code will be "H" or "1", "2", or "3".

Stop! Are You about to Misclassify a Waste?

Table 5-1 provides additional information about using certain combinations of form and class codes.

Figure 5-1. Components of a Texas Waste Code

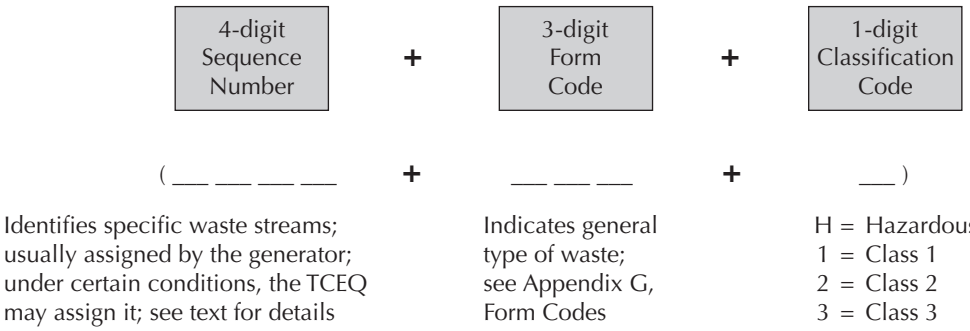


Table 5-1. Questions to Ask about Some Combinations of Coding and Classification

IF the waste is …	AND you assigned form codes …	Are you sure about a classification of …
Any Class 3 waste	Any form code	*Class 3?* (You must submit all supporting documentation)
Asbestos solids, debris, slurry, sludge, etc.	311, 515	*Class 2?* (Wastes that contain regulated asbestos-containing material are Class 1)
Oils	205, 206[a]	*Class 2?* (Wastes that contain more than 1,500 ppm total petroleum hydrocarbons are Class 1)
PCB-containing materials	297, 298, 394, 395, 396, 397, 398, 399, 494, 495, 496, 497, 498, 499, 598, 599, 698, 699	*Class 2?* (Wastes that contain 50 ppm or more PCBs are Class 1)
Petroleum-containing materials	205, 206[a], 296, 489, 510, 603, 606, 695, 696	(Petroleum substance wastes that contain more than 1,500 ppm total petroleum hydrocarbons are Class 1)
Plant trash	902 and 999[b]	*Hazardous, Class 1, or Class 3?* (Only wastes that are Class 2 may be given a form code for plant trash)
Spent lead acid batteries	309[c]	Hazardous

[a] If your waste oil is nonhazardous, is managed under 40 CFR 279 and 30 TAC 324, and is recycled 100 percent, then do not add to your Notice of Registration (the central record that the TCEQ compiles from waste notifications you send in—see Chapter 6, Notification Requirements and Forms).

[b] Only form codes 902 and 999 may be used.

[c] If all your lead acid batteries are managed under the "universal waste" rule in 40 CFR Part 273, then do not add to your Notice of Registration.

Chapter 6

Notification Requirements and Forms

This chapter describes forms and supporting documentation you must send to the TCEQ to notify the agency about waste streams that you generate. The regulations on notification can be found in 30 TAC Section 335.6 (Notification Requirements), Section 335.502 (Conversion to New Waste Notification and Classification System), Section 335.508 (Classification of Specific Industrial Solid Wastes), Section 335.509 (Waste Analysis), and Section 335.513 (Documentation Required).

Notifications about Industrial or Hazardous Waste

You must submit information about industrial or hazardous wastes no later than 90 days after the waste's initial generation and before handling, shipment, or disposal; use TCEQ form 00002 or the TCEQ State of Texas Environmental Electronic Reporting System (STEERS) software. (For information on obtaining TCEQ forms and how to access the STEERS information, see this chapter's section "TCEQ and EPA Forms.")

Please Note: All Large-Quantity Generators (LQG) **must** use STEERS to update their Notice of Registration (NOR). This requirement, effective December 15, 1997, is found in 30 TAC Section 335.6(b). Therefore, if you are a LQG and you need to update your NOR to replace inactivated waste code, please do so using STEERS.

The TCEQ uses the information submitted on these forms to create a record called the ***Notice of Registration***, which contains site-specific waste management information about industrial and municipal hazardous waste generators in Texas.

Notifications about New Chemical Substance Waste

For a Class 2 or Class 3 waste generated as the result of the production of a "new chemical substance" (see Chapter 8, Definitions of Terms), you must follow the instructions below:

- Give the TCEQ notice that the waste is from the production of a "new chemical substance."
- Submit all supporting reasons and documentation used in that waste's classification.
- Manage nonhazardous waste from the production of a "new chemical substance" as a Class 1 waste, unless you can provide appropriate analytical data and/or process knowledge demonstrating that the waste meets the definition of a Class 2 or Class 3, and the TCEQ concurs. (For definitions of Class 2 and 3, see Chapter 8 and the classification checklist in Chapter 3.)
- If you have not received concurrence or denial from the TCEQ within 120 days from the date of your request for review, you may manage the waste according to the requested classification, but you must give the TCEQ 10 working days written notice before managing the waste as a Class 2 or a Class 3.

Notifications about Class 2 and Class 3 Out-of-State Waste

If you want to ship a nonhazardous waste into Texas, it is automatically considered a Class 1 waste (and expected to be managed as such) unless

- you request the TCEQ to review your waste classification documentation supporting a lower classification such as Class 2 or 3; and
- the TCEQ concurs with the lower classification.

After concurrence from the TCEQ you must comply with the lower classification's requirements on shipping, record keeping, and disposal of the waste. If, after review of your documentation, the TCEQ disagrees with your waste classification, you must continue managing the nonhazardous waste as Class 1 waste.

Notifications about Other Industrial and Hazardous Wastes from out of State

Please note the following special requirements for the documentation of industrial and hazardous waste that is imported to Texas from foreign countries and other U.S. states.

- If out-of-state generators and importers of record want to bring hazardous waste into Texas, they must have an EPA Identification number. Generators and importers who do

not have this ID number must obtain one from the EPA, using EPA Form 8700-12.
- Out-of-state generators or importers of record must fill out a Uniform Hazardous Waste Manifest (TCEQ-00311) and place their EPA ID number in Box 1 of this form.
- In Box B of the Uniform Hazardous Waste Manifest, use one of the generic numbers for identifying the country or state of origin. For example: F0061 for hazardous and or nonhazardous industrial waste imported from Mexico, D0022 for Louisiana (Appendix H gives these codes). For more information about manifesting imported industrial and hazardous waste, see 40 CFR 262.60 and 30 TAC 335.76 (d).
- OUTS must be used as the 4-digit sequence number of the Texas waste code in Box I of the manifest.

Notifications about Alternate Analytical Methods

Generators who propose an alternate analytical method must validate their alternate method by demonstrating that it is equal to or superior in accuracy, precision, and sensitivity to the corresponding EPA-approved methods for analytical testing given in *Standard Methods for the Examination of Water and Wastewater,* SW-846, and EPA-600/4-79/020.

In making this demonstration, the generator must provide the TCEQ, at a minimum, the following documentation:

- a full description of the proposed method (including all equipment and reagents to be used);
- a description of type of waste and *waste matrices* to be analyzed (for definitions of terms in italics, see Chapter 8);
- comparative results of the proposed method and corresponding SW-846 or *ASTM* method;
- a complete assessment of interferences with the proposed method (see, for example, *matrix interference* in Chapter 8);
- a description of quality control procedures; and
- additional information as needed and/or requested by the TCEQ to adequately review the proposed alternate method.

TCEQ and EPA Forms

How to Order

Notification forms can be obtained in several ways:

- Contact the TCEQ regional office near you.
- On the Internet go to <www.tceq.texas.gov> and select the "Forms" link. Access the Forms Database and type in the form number. (The instructions for form TCEQ-00002 are in a separate download file).
- Fax your order to 512-239-4488, or order forms by voice at 512-239-0028, the TCEQ's publications unit. Be sure to give the form ***numbers*** that you want; this information will help the TCEQ get the correct form to you as quickly as possible.

How to Access STEERS

State of Texas Environmental Electronic Reporting System (STEERS) information, including an application package, can be obtained as follows:

- on the Internet, go to <https://www3.tceq.texas.gov/steers>; or
- call the STEERS Help Line at 512-239-6925.

Currently Available Forms

Notification forms available at the time of this printing include the following:

- The hazardous or industrial waste **"Initial Notification Form,"** used for initial notification about a site, and adding a waste stream to your Notice of Registration (see Chapter 6) or when recording a 6-digit waste code into one or more 8-digit waste codes. (form number: **TCEQ-00002**)
- The **"Hazardous or Industrial Waste Management Unit Form,"** used when adding information about a waste management unit to a Notice of Registration. (form number: **TCEQ-00002**)
- The **"Uniform Hazardous Waste Manifest,"** used by generators and transporters of hazardous waste and by owners or operators of hazardous waste treatment, storage, and disposal facilities for both inter- and intrastate transportation. (form number: **TCEQ-00311**–Only order form available on the Web)
- The **"One-Time Shipment Request … for Shipment of Class 1, 2, 3 and EPA Hazardous Waste,"** used by unregistered generators, not by generators that already have a site's Notice of Registration. (form number: **TCEQ-00757**)
- The EPA **"Notification of Regulated Waste Activity"** form, used when notifying EPA of a federally regulated hazardous waste activity—for example, the generation of hazardous waste. (form number: **EPA 8700-12**–Available on the Web as part of TCEQ-00002)

Chapter 7

Management of Mechanical Shredding Wastes

The regulations on mechanical shredding waste can be found in 30 TAC Section 335.508 (Classification of Specific Industrial Solid Wastes).

Wastes generated by the mechanical shredding of automobiles, appliances, or other items of scrap, used, or obsolete metals are handled according to the provisions of the Texas Solid Waste Disposal Act, Health and Safety Code, Section 361.019 (Vernon Pamphlet 1992), until the TCEQ develops specific standards for the classification of this waste and ensures adequate disposal capacity.

These provisions say that you can dispose of mechanical shredding wastes in a municipal landfill facility authorized to accept Class 1 and 2 industrial solid wastes, if the shredding waste:

- contains no free liquids, and
- is not a hazardous waste.

As mentioned earlier, TCEQ may establish other requirements.

Chapter 8

Definitions of Terms

For readers' convenience, this chapter gives the full version of some abbreviations and brief descriptions of some important terms used in this guidance document. Full, official definitions can be found in the sources cited. Nothing in this chapter takes the place of any definitions in laws, rules, or regulations.

Acutely hazardous wastes (40 Code of Federal Regulations (CFRs) Parts 261.31–33 and subject to the exclusion established in 40 CFR Part 261.5: EPA hazardous waste numbers F020, F022, F023, F026, and F027)—A subset of *listed hazardous waste*s that carry the "H" code; they are considered very harmful to human health and the environment.

ASTM—American Society for Testing and Material

CFR—Code of Federal Regulations

Characteristically hazardous waste (40 CFR Part 261 Subpart C)—Any waste that exhibits the characteristics of ignitability, corrosivity, reactivity, and/or toxicity as defined by the EPA in 40 CFR Part 261 Subpart C. These are often referred to as the "D" wastes. (Also see Chapter 3 of this guidance document.)

Class 1 waste [30 TAC Section 335.1(14)]—Any waste or mixture of waste that, because of its concentration or physical or chemical characteristics is toxic; corrosive; flammable; a strong sensitizer or irritant; a generator of sudden pressure by decomposition, heat, or other means; or may pose a substantial present or potential danger to human health or the environment when improperly processed, stored, transported, disposed of, or otherwise managed. (The checklist in Chapter 3 takes you through the process of distinguishing hazardous waste from nonhazardous Class 1 waste.)

Class 2 waste [30 TAC Section 335.1(15)]—Any individual waste or combination of waste that cannot be described as hazardous waste or as nonhazardous Class 1 or Class 3 waste.

Class 3 waste [30 TAC Section 335.1(16)]—Waste that is *inert* and *essentially insoluble* (see definitions of terms in italics), usually including but not limited to materials such as rock, brick, glass, dirt, certain plastics, rubber, and similar materials that are not readily decomposable.

Classification code (30 TAC Section 335.503)—This last digit of the Texas waste code represents the classification of the waste stream. The letter H represents hazardous wastes; and the number 1, 2, or 3 represents nonhazardous industrial waste Class 1, 2, or 3.

Conditionally Exempt Small-Quantity Generator (30 TAC Section 335.78)—Generators of less than 100 kg (220 lbs) per month of hazardous waste, or less than 1 kg (2.2 lbs) per month of *acutely hazardous waste* (see description of term in italics in this chapter).

Essential insolubility (30 TAC Section 335.507)**—** Is established when using:

- the Seven-Day Distilled Water Leachate Test, and the extract from the sample of waste does not leach greater than the Maximum Contaminant Level listed in Appendix 1, Table 3 of 30 TAC Chapter 335, Subchapter R;
- the test methods described in 40 Code of Federal Regulations Part 261, Appendix II, and the extract from the sample of waste does not exhibit detectable levels of the constituents found in Appendix 1, Table 1 of 30 TAC Chapter 335, Subchapter R;
- an appropriate test method, and a representative sampling of the waste does not exhibit detectable levels of total petroleum hydrocarbon (TPH); ("Petroleum substance wastes" are not subject to 30 TAC's subsection on essential insolubility.)
- an appropriate test method, and a representative sampling of the waste does not exhibit detectable levels of polychlorinated biphenyls (PCBs).

Form code (30 TAC Section 335.503)—This code describes the general type of waste stream. It consists of three numbers, the 5th, 6th, and 7th digits in the Texas waste code (see Figure 5-1 in Chapter 5). More than one form code may apply to a particular waste stream.

Hazardous substance (30 TAC Section 335.508)—Any substance designated as "hazardous" in 40 CFR Part 302 (Table 302.4) including, but not limited to, waste designated as hazardous in the Resource Conservation Recovery Act (RCRA).

Hazardous waste (40 CFR 261.3.)—The EPA defines a waste as hazardous if it exhibits one or more of four hazardous "characteristics," or if it is one of several hundred wastes "listed" as hazardous. For details, see Chapters 1 and 3 of this guidance document.

Hazardous waste determination (30 TAC Section 335.504)—An evaluation of a waste to determine whether it meets the RCRA definition of a hazardous waste.

Inert (30 TAC Section 335.507)—Inertness refers to the chemical inactivity of an element, compound, or waste. Ingredients added to mixtures chiefly for the purposes of bulk and/or weight are normally considered inert.

Listed hazardous wastes (40 CFR Part 261 Subpart D)—Specific wastes that have been identified by the EPA as hazardous. These are often referred to as the "F" wastes (waste from nonspecific sources); "K" wastes (wastes from specific sources); "P" wastes (acutely hazardous off-specification materials, container residues, and spill residues of these materials); and "U" wastes (toxic, hazardous off-specification materials, container residues, and spill residues).

A waste is considered hazardous if

- it is listed in 40 CFR Part 261 Subpart D, or
- is mixed with or derived from a waste listed there, and
- has not been provided a particular exclusion from the definition of hazardous as provided in 40 CFR Sections 261.3–4.

Matrix interference—Interference with the precision of analytical testing for a particular constituent in a waste stream due to other material(s) in the sample (contamination by carryover). See also waste matrices.

Medical wastes (30 TAC Section 335.508)—Nonhazardous medical wastes that are subject to the provisions of 30 TAC Chapter 330 Subchapter Y are designated as Class 2 wastes. An example of such waste would be needle-bearing syringes from plant infirmaries.

"New chemical substance" waste (30 TAC Section 335.508)—If a nonhazardous industrial waste is generated as a result of the commercial production of a "new chemical substance" as defined by the federal Toxic Substances Control Act, *United States Code Annotated* (U.S.C.A.), Title 15, Section 2602(9), the generator must manage that waste as a Class 1 waste, unless the generator can provide appropriate analytical data and/or process knowledge demonstrating that the waste is Class 2 or Class 3, and the TCEQ concurs. If the generator has not received concurrence or denial from the TCEQ within 120 days from the date of the request for review, the generator may manage the waste according to the requested classification, but not before giving 10 working days written notice to the TCEQ.

Notice of Registration (NOR)—TCEQ term for the information it collects in its database on each hazardous or industrial waste handler: generator, receiver, transporter, and recycler. The NOR includes the facility's physical and mailing addresses, information on waste streams that are generated or handled at the site, a list of individual units at the facility where wastes are managed, and other information. It also contains the state facility identification numbers and the EPA facility number, issued by the TCEQ. The NOR serves to verify the information submitted by each handler. When a generator registers with the TCEQ using form TCEQ-00002, the agency sends back a printout of the information in its database about the site and generator. The handler should keep the NOR current and in on-site files and check it periodically to make sure that it accurately reflects the facility's waste streams and waste management units.

Petroleum-hydrocarbon-containing wastes (30 TAC Section 335.508)—Wastes resulting from the cleanup of leaking underground storage tanks (USTs), which are regulated under 30 TAC Chapter 334 Subchapter K (relating to Petroleum Substance Waste), are not subject to classification under 30 TAC Chapter 335 Subchapter R (Waste Classification).

Petroleum substance—A crude oil, or any refined or unrefined fraction or derivative of crude oil, that is a liquid at standard conditions of temperature and pressure. These substances include the following:

- combinations or mixtures of basic petroleum substances, such as crude oils, crude oil fractions, petroleum feedstocks, and petroleum fractions;

- aviation gasolines, aviation jet fuels, distillate fuel oils, residual fuel oils, gas turbine fuel oils, illuminating oils, lubricants, building materials, insulating and waterproofing materials, used oils;
- solvents or a combination or mixture of solvents—except for any listed substance regulated as a hazardous waste under the federal Solid Waste Disposal Act, Subtitle C (*United States Code*, Title 42, Section 6921, et seq.)—that are liquid at standard conditions of temperature (20^{O} centigrade) and pressure (1 atmosphere). Examples include Stoddard solvent, petroleum spirits, mineral spirits, petroleum ether, varnish makers' and painters' naphthas, petroleum extender oils, and commercial hexane.

The following materials are ***not*** considered petroleum substances:

- polymerized materials, such as plastics, synthetic rubber, polystyrene, high- and low- density polyethylene;
- animal, microbial, and vegetable fats;
- food-grade oils;
- hardened asphalt and solid asphaltic materials, such as roofing shingles, roofing felt, hot mix and cold mix; and
- cosmetics.

Practical Quantitation Limits (PQLs)—See quantitation.

Process Knowledge—See examples in Chapter 4 under this subheading.

Quantitation—Generally, measurement of quantity or amounts. The word appears in a number of specialized terms used in waste regulation:

- ***Quantitation Limits*** (QLs) indicate the levels at which measurements can be "trusted."
- ***Practical Quantitation Limits*** (PQLs) and ***Estimated Quantitation Limits*** (EQLs) are levels that are routinely and reliably detected and quantitated in a variety of sample matrices. These are 3 to 5 times the Method Detection Limits (MDLs). (See Chapter 1, SW 846, 1992.)
- ***Method Detection Limits*** (MDLs) take into account the reagents, sample matrix, and preparation steps applied to a sample in specific analytical methods. (See 40 CFR Part 136, Appendix B; Chapter 1, SW 846, July 1992.)

RCRA—Resource Conservation and Recovery Act (amendment to the Solid Waste Disposal Act). Primarily designed to regulate five types of disposal activities: hazardous waste, solid waste, underground storage tanks, oil waste, and medical waste. In this guidance document, any mention of "RCRA" refers to RCRA Subtitle C, which applies to all handlers of hazardous waste, including generators; transporters; and operators of treatment, storage, and disposal (TSDF) facilities. (RCRA, a federal law, covers only whether a solid waste is either hazardous or nonhazardous. Texas regulations further subdivide nonhazardous waste into Classes 1, 2, and 3.)

Regulated asbestos-containing material (RACM) (30 TAC Sections 335.508)—RACM includes the following:

- **friable** asbestos containing more than 1 percent asbestos[1] that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure;
- **nonfriable** asbestos-containing material containing more than 1 percent asbestos as measured by the method found in 40 CFR Part 763, Subpart E, Appendix E, Section 1 that, when dry, *cannot* be crumbled, pulverized, or reduced to powder by hand pressure.
- **Category I** nonfriable asbestos includes packings, gaskets, resilient floor coverings, and asphalt roofing products);
- **Category II** nonfriable asbestos includes transite shingles, transite pipes, and any nonfriable asbestos material not defined as Category I.

Regulated generators (30 TAC Chapter 335 Subchapters A and C)—If you generate the following amounts of waste, you are a regulated generator and must follow regulations in Chapter 335:

Waste Type	Monthly Amount
Class 1	100 kg (220 lbs) or more
hazardous	100 kg (220 lbs) or more
acutely hazardous	1 kg (2.2 lbs) or more

If you generate less than the amounts shown above, you are considered a Conditionally Exempt Small-Quantity Generator and are not subject to regulations requiring notification, manifesting, and fees.

[1]As determined using the method specified in 40 CFR Part 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy.

Sequence number (30 TAC Section 335.503)—The first 4 digits of the waste code (actually these four characters may be numbers, letters, or a combination of the two). The sequence number is used as an internal numbering system determined by each generator. The number of a waste may range from 0001 to 9999, and can only be used once.

Solid waste (30 TAC Section 335.1 and 40 CFR Section 261.2)—Any discarded material such as garbage; refuse; sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; or other material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, municipal, commercial, mining, and agricultural operations. Solid wastes include any material that is abandoned by being disposed of; burned or incinerated; or accumulated, stored, or treated before or in lieu of these activities. Certain recycled materials are also considered wastes. Solid wastes are often referred to simply as "wastes." For the complete definition of a "solid waste," please refer to 30 TAC Section 335.1 (Solid Waste).

Specific industrial solid waste (30 TAC Section 335.508)—A nonhazardous waste for which specific classification criteria and/or a form code have been established.

Stabilized wastes (30 TAC Section 335.508)—Wastes that originally exhibit hazardous characteristics can be *stabilized* so that they are no longer hazardous and can meet the criteria for classification as Class 1 or 2 nonhazardous industrial waste. For example a waste containing lead that exhibits the hazardous characteristic of toxicity can be stabilized by mixing with cement in the proper proportion to reduce the toxicity or mobility of contaminants. Depending on the process(es) used, stabilization achieves varying degrees of long-term effectiveness.

Synthetic oils—Oils not derived from crude oil, including those derived from shale, coal, or a polymer-based starting material; and nonpolymeric synthetic fluids that are used as hydraulic fluids and heat transfer fluids, such as those based on phosphate esters, diphenyl oxide, or alkylated benzenes. Synthetic oils are generally used for the same purpose as oils, and they present relatively the same level of hazardousness after use.

TAC—Texas Administrative Code. Title 30 of TAC contains TCEQ rules on industrial solid waste and municipal hazardous waste, among other subjects.

TSDF—Treatment, storage, and disposal facilities.

Universal Waste (30 TAC Section 335.261 and 40 CFR Part 273)—This rule covers five types of waste:

- lamps as described in 40 CFR §273.5, and §335.261(b)(16)(F).
- mercury-containing thermostats as described in 40 CFR 273.4;
- all hazardous waste batteries as described in 40 CFR 273.2;
- some hazardous waste pesticides as described in 40 CFR 273.3;
- paint and paint-related waste as described in §335.262(b);

The rule establishes a reduced set of regulatory requirements for facilities managing universal waste, depending on whether the facility falls into one of four categories:

- small-quantity handler of universal waste (SQHUW),
- large-quantity handler of universal waste (LQHUW),
- transporter of universal waste, or
- final destination facilities.

In addition, the rules establish a petitioning procedure whereby additional wastes may be added to the universal waste rule.

U.S.C.A.—*United States Code Annotated*.

Used oil (30 TAC Section 335.1, 30 TAC Section 324 (relating to used oil), and 40 CFR Part 279 (relating to standards for management of used oil)[2]— Any oil refined from crude oil, or any synthetic oil, that has been used and, from such use, is contaminated by physical or chemical impurities and cannot be used for its intended purpose (that is, it is a spent material).

Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

Waste—Unwanted materials left over from a manufacturing process; refuse from places of human or animal habitation.

[2] Rules applicable to nonhazardous used oil, are found in Chapter 324, state regulations on recyclable used oil, and 40 CFR Part 279, federal regulations on used oil recycling.

Waste code—Also referred to as Texas waste code (30 TAC Section 335.503)—This 8-digit code identifies a waste stream. The first 4 digits are the ***sequence number***, the next 3 digits are the ***form code***, and the last digit is the waste's ***classification*** (sequence number + form code + classification code = waste code). (Some of the "digits" referred to here actually may be letters or a combination of letters and numbers.)

Waste matrices—Water and soil or sediment in which a waste is found.

Wastes generated out-of-state (30 TAC Section 335.508)—All nonhazardous industrial waste generated outside the state of Texas and transported into or through Texas for processing, storage, or disposal is classified as Class 1 unless the waste satisfies the Class 2 or 3 criteria as defined in 30 TAC Sections 335.506–8. A Class 2 or 3 waste determination, accompanied by all supporting process knowledge and analytical data, must be submitted to the TCEQ for approval.

Waste stream (30 TAC Section 335.503)—The total flow of solid waste from homes, businesses, institutions, and manufacturing plants that is recycled, burned, or disposed of in landfills; or segments of that total flow, such as the "residential waste stream" or the "recyclable waste stream." (It should be noted that the terms "waste stream", "solid waste", and "waste" are often used interchangeably by federal and state regulators as well as many members of the regulated community).

Appendix A

Hazardous Substances

Applicability: **Empty Container Class 2 Evaluations**

The following is a listing of materials identified as hazardous substances (40 CFR Table 302.4) in effect at the time of this guideline's printing. (As amended at 57 FR 61492, Dec. 24, 1992; 58 FR 35314, June 30, 1993; 59 FR 31551, June 20, 1994; 60 FR 7824 Feb. 9, 1995). Chemical Abstract Service (CAS) Registry Numbers of the materials are also provided.

Hazardous Substance	CAS Number
Acenaphthene	83329
Acenaphthylene	208968
Acetaldehyde	75070
Acetaldehyde, chloro-	107200
Acetaldehyde, trichloro-	75876
Acetamide, N-(aminothioxomethyl)-	591082
Acetamide, N-9H-fluoren-2-yl-	53963
Acetic acid	64197
Acetic acid (2,4-dichlorophenoxy)-	94757
Acetic anhydride	108247
Acetone	67641
Acetone cyanohydrin	75865
Acetonitrile	75058
Acetophenone	98862
2-Acetylaminofluorene	53963
Acetyl bromide	506967
Acetyl chloride	75365
1-Acetyl-2-thiourea	591082
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Adipic acid	124049
Aldicarb	116063
Aldicarb sulfone	1646884
Aldrin	309002
Allyl alcohol	107186
Allyl chloride	107051
Aluminum phosphide	20859738
Aluminum sulfate	10043013
Ametycin (7-amino-9-a-methoxymitosane)	50077
5-(Aminomethyl)-3-isoxazolol	2763964
4-Aminopyridine	504245
Amitrole	61825
Ammonia	7664417
Ammonium acetate	631618
Ammonium benzoate	1863634
Ammonium bicarbonate	1066337
Ammonium bichromate	7789095
Ammonium bifluoride	1341497
Ammonium bisulfite	10192300
Ammonium carbamate	1111780
Ammonium carbonate	506876
Ammonium chloride	12125029
Ammonium chromate	7788989
Ammonium citrate, dibasic	3012655
Ammonium fluoborate	13826830
Ammonium fluoride	12125018
Ammonium hydroxide	1336216
Ammonium oxalate	6009707
Ammonium picrate	131748
Ammonium silicofluoride	16919190
Ammonium sulfamate	7773060
Ammonium sulfide	12135761
Ammonium sulfite	10196040
Ammonium tartrate	14307438
Ammonium thiocyanate	1762954
Ammonium vanadate	7803556
Amyl acetate	628637
iso-	123922
sec-	626380
tert-	625161
Aniline	62533
Anthracene	120127
Antimony	7440360
Antimony pentachloride	7647189
Antimony potassium tartrate	28300745
Antimony tribromide	7789619
Antimony trichloride	10025919
Antimony trifluoride	7783564
Antimony trioxide	1309644
Aroclor 1016	12674112
Aroclor 1221	11104282
Aroclor 1232	11141165
Aroclor 1242	53469219
Aroclor 1248	12672296
Aroclor 1254	11097691
Aroclor 1260	11096825
Arsenic	7440382
Arsenic acid H_3AsO_4	1327522
Arsenic disulfide	1303328
Arsenic pentoxide, As_2O_5	1303282
Arsenic trichloride	7784341
Arsenic trioxide, As_2O_3	1327533
Arsenic trisulfide	1303339
Arsinic acid, dimethyl-	75605
Asbestos	1332214
Auramine	492808
Azaserine	115026
1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester	2212671
Aziridine, 2-methyl	75558
Barium cyanide	542621
Benz[c]acridine	225514

Hazardous Substance	CAS Number
Benzanthracene	56553
Benz[a]anthracene	57976
Benzene	71432
Benzene, dichloromethyl-	98873
Benzene, 2,6-diisocyanato-1-methyl-	91087
Benzene, m-dimethyl	108383
Benzene, o-dimethyl	95476
Benzene, p-dimethyl	106423
Benzenesulfonic acid chloride	98099
Benzene, (trichloromethyl)	98077
Benzidine	92875
Benzo[a]anthracene	56553
1,3-Benzodioxol-4-ol, 2,2-dimethyl-, (Bendiocarb phenol)	22961826
1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate (Bendiocarb)	22781233
Benzo[b]fluoranthene	205992
Benzo(k)fluoranthene	207089
Benzoic acid	65850
Benzoic acid, 2-hydroxy-, compound with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo-[2,3-b]indol- 5-yl methylcarbamate ester (1:1) (Physostigmine salicylate)	57647
Benzonitrile	100470
Benzo[rst]pentaphene	189559
Benzo[ghi]perylene	191242
Benzo[a]pyrene	50328
p-Benzoquinone	106514
Benzotrichloride	98077
Benzoyl chloride	98884
Benzyl chloride	100447
Beryllium chloride	7787475
Beryllium powder	7440417
Beryllium fluoride	7787497
Beryllium nitrate	13597994
alpha-BHC	319846
beta-BHC	319857
delta-BHC	319868
2,2′-Bioxirane	1464535
Bis(2-chloroethyl) ether	111444
Bis(2-chloroethoxy)methane	111911
Bis(dimethylthiocarbamoyl) sulfide	97745
Bis(2-ethylhexyl) phthalate	117817
Bromoacetone	598312
Bromoform	75252
4-Bromophenyl phenyl ether	101553
Brucine	357573
1-Butanol	71363
2-Butenal	123739
Butyl acetate	123864
iso-	110190
sec-	105464
tert-	540885
n-Butyl alcohol	71363
Butylamine	109739
iso-	78819
sec-	513495
sec-	13952846
tert-	75649
Butyl benzyl phthalate	85687
Butyric acid	107926
iso-Butyric acid	79312

Hazardous Substance	CAS Number
Cadmium	7440439
Cadmium acetate	543908
Cadmium bromide	7789426
Cadmium chloride	10108642
Calcium arsenate	7778441
Calcium arsenite	52740166
Calcium carbide	75207
Calcium chromate	13765190
Calcium cyanide $Ca(CN)_2$	592018
Calcium dodecylbenzenesulfonate	26264062
Calcium hypochlorite	7778543
Captan	133062
Carbamic acid, butyl-, 3-iodo-2-n-butylcarbamate)	55406536
Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl, methyl ester (Benomyl)	17804352
Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605217
Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester	101279
Carbamic acid, dimethyl-,1-[(dimethylamino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester	644644
Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester	119380
Carbamic acid, methyl-, 3-methylphenyl ester	1129415
Carbamic acid, [1,2-phenylenebis-(iminocarbonothioyl)]bis-, dimethyl ester	23564058
Carbamic acid, phenyl-, 1-methylethyl ester (Propham)	122429
Carbamic acid, methylnitroso-, ethyl ester	615532
Carbamic chloride, dimethyl-	79447
Carbamodithioic acid, dibutyl-, sodium salt	136301
Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester	95067
Carbamodithioic acid, diethyl-, sodium salt	148185
Carbamodithioic acid, dimethyl-, potassium salt	128030
Carbamodithioic acid, dimethyl-, sodium salt	128041
Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid	144343
Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt	51026289
Carbamodithioic acid, methyl-, monopotassium salt	137417
Carbamodithioic acid, methyl-, monosodium salt	137428
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro -2-propenyl) ester	2303175
Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester	2008415

Hazardous Substance	CAS Number
Carbamothioic acid, butylethyl-, S-propyl ester	1114712
Carbamothioic acid, cyclohexylethyl-, S-ethyl ester	1134232
Carbamothioic acid, dipropyl-, S-ethyl ester (EPTC)	759944
Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	52888809
Carbamothioic acid, dipropyl-, S-propyl ester	1929777
Carbaryl	63252
Carbofuran	1563662
Carbofuran, phenol	1563388
Carbosulfan	55285148
Carbon disulfide	75150
Carbon oxyfluoride	353504
Carbon tetrachloride	56235
Chlorambucil	305033
Chlordane	57749
Chlorine	7782505
Chlornaphazine	494031
p-Chloroaniline	106478
Chlorobenzene	108907
Chlorobenzilate	510156
p-Chloro-m-cresol	59507
Chlorodibromomethane	124481
Chloroethane	75003
2-Chloroethyl vinyl ether	110758
Chloroform	67663
Chloromethyl methyl ether	107302
2-Chloronaphthalene	91587
2-Chlorophenol	95578
4-Chlorophenyl phenyl ether	7005723
3-Chloropropionitrile	542767
Chlorosulfonic acid	7790945
4-Chloro-o-toluidine, hydrochloride	3165933
Chlorpyrifos	2921882
Chromic acetate	1066304
Chromic acid	11115745
Chromic sulfate	10101538
Chromium	7440473
Chromous chloride	10049055
Chrysene	218019
Cobaltous bromide	7789437
Cobaltous formate	544183
Cobaltous sulfamate	14017415
Copper	7440508
Copper, dimethyldithiocarbamate	137291
Copper cyanide CuCN	544923
Coumaphos	56724
Creosote	8001589
Cresol(s)	1319773
m-Cresol	108394
o-Cresol	95487
p-Cresol	106445
Cumene	98828
Cupric acetate	142712
Cupric acetoarsenite	12002038
Cupric chloride	7447394
Cupric nitrate	3251238
Cupric oxalate	5893663
Cupric sulfate	7758987
Cupric sulfate, ammoniated	10380297
Cupric tartrate	815827
Cyanides	57125
Cyanogen	460195
Cyanogen bromide (CN)Br	506683
Cyanogen chloride	506774
Cyclohexane	110827
Cyclohexanone	108941
2-Cyclohexyl-4,6-dinitrophenol	131895
Cyclophosphamide	50180
2,4-D Acid	94757
2,4-D (isopropyl) Esters	94111
	94791
	94804
	1320189
	1928387
	1928616
Butoxyethl	1929733
	2971382
Isooctyl	25168267
Dichlorophenoxyaceticacid-polyproxybutyl	53467111
Daunomycin	20830813
DDD	72548
DDE	72559
DDT	50293
Diallate	2303164
Diazinon	333415
Dibenzo[a,h]anthracene	53703
1,2-Dibromo-3-chloropropane	96128
Dibutylnitrosoamine	924163
Di-n-butyl phthalate	84742
Dicamba	1918009
Dichlobenil	1194656
Dichlone	117806
Dichlorobenzene	25321226
1,2-Dichlorobenzene	95501
1,3-Dichlorobenzene	541731
1,4-Dichlorobenzene	106467
3,3′-Dichlorobenzidine	91941
Dichlorobromomethane	75274
1,4-Dichloro-2-butene	764410
Dichlorodifluoromethane	75718
1,1-Dichloroethane	75343
1,2-Dichloroethane	107062
1,1-Dichloroethylene	75354
1,2-Dichloroethylene	156605
Dichloroethyl ether	111444
Dichloroisopropyl	108601
Dichloromethoxyethane	111911
Dichloromethyl ether	542881
2,4-Dichlorophenol	120832
2,6-Dichlorophenol	87650
Dichlorophenylarsine	696286
Dichloropropane	26638197
1,1-Dichloropropane	78999
1,3-Dichloropropane	142289
1,2-Dichloropropane	78875
Dichloropropane	8003198
Dichloropropene	26952238
2,3-Dichloropropene	78886
1,3-Dichloropropene	542756

Hazardous Substance	CAS Number
2,2-Dichloropropionic acid	75990
Dichlorvos	62737
Dicofol	115322
Dieldrin	60571
Diethylamine	109897
Diethylarsine	692422
1,4-Diethylenedioxide	123911
O,O-Diethyl S-methyl dithiophosphate	3288582
Diethyl-p-nitrophenyl phosphate	311455
Diethyl-o-phthalate	84662
O,O-Diethyl O-pyrazinyl phosphorothioate	297972
Diethylstilbestrol	56531
Dihydrosafrole	94586
Diisopropylfluorophosphate	55914
3,3′-Dimethoxybenzidine	119904
Dimethylamine	124403
p-Dimethylamino-azobenzene	60117
3,3′-Dimethylbenzidine	119937
1,1-Dimethylhydrazine	57147
1,2-Dimethylhydrazine	540738
alpha,alpha-Dimethylphenethylamine	122098
2,4-Dimethylphenol	105679
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dinitrobenzene (mixed)	25154545
m-Dinitrobenzene	99650
o-Dinitrobenzene	528290
p-Dinitrobenzene	100254
4,6-Dinitro-o-cresol and salts	534521
Dinitrophenol	25550587
2,5-Dinitrophenol	329715
2,6-Dinitrophenol	573568
2,4-Dinitrophenol	51285
Dinitrotoluene	25321146
3,4-Dinitrotoluene	610399
2,4-Dinitrotoluene	121142
2,6-Dinitrotoluene	606202
Dinoseb	88857
Di-n-octyl phthalate	117840
1,2-Diphenylhydrazine	122667
Diphosphoramide, octamethyl-	152169
Diphosphoric acid, tetraethyl ester	107493
Dipropylamine	142847
Di-n-propylnitrosamine	621647
Diquat	85007
Disulfoton	298044
Dithiobiuret	541537
1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl]oxime (Tirpate)	26419738
Diuron	330541
Dodecylbenzenesulfonic acid	27176870
Endosulfan	115297
alpha-Endosulfan	959988
beta-Endosulfan	33213659
Endosulfan sulfate	1031078
Endothall	145733
Endrin & metabolites	72208
Endrin aldehyde	7421934
Epichlorohydrin	106898
Epinephrine	51434
Ethanimidiothioic acid, 2-(dimethylamino-N-hydroxy-2-oxo-, methyl ester (A2213)	30558431
Ethanimidiothioic acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester (Oxamyl)	23135220
Ethanimidothioic acid, N,N′-[thiobis[(methylimino) carbonyloxy]] bis-, dimethyl ester (Thiodicarb)	59669260
Ethanol, 2,2′-oxybis-, dicarbamate (Diethylene glycol, dicarbamate)	5952261
Ethion	563122
Ethyl acetate	141786
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl carbamate	51796
Ethyl cyanide	107120
Ethylenebisdithiocarbamic acid, salts & esters	111546
Ethylenediamine	107153
Ethylenediamine-tetraacetic acid (EDTA)	60004
Ethylene dibromide	106934
Ethylene glycol monoethyl ether	110805
Ethylene oxide	75218
Ethylenethiourea	96457
Ethylenimine	151564
Ethyl ether	60297
Ethyl methacrylate	97632
Famphur	52857
Ferric ammonium citrate	1185575
Ferric ammonium oxalate	2944674
Ferric chloride	7705080
Ferric fluoride	7783508
Ferric nitrate	10421484
Ferric sulfate	10028225
Ferrous ammonium sulfate	10045893
Ferrous chloride	7758943
Ferrous sulfate	7720787
Fluoranthene	206440
Fluorene	86737
Fluorine	7782414
Fluoroacetamide	640197
Fluoroacetic acid, sodium salt	62748
Formaldehyde	50000
Formic acid	64186
Fumaric acid	110178
Furan	110009
Furfural	98011
Glauramine	492808
Glycidylaldehyde	765344
Guanidine, N-methyl-N′-nitro-N-nitroso-	70257
Guthion	86500

Hazardous Substance	CAS Number
Heptachlor	76448
Heptachlor epoxide	1024573
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachlorocyclohexane (all isomers)	608731
Hexachlorocyclohexane (gamma isomer - Lindane)	58899
Hexachlorocyclopentadiene	77474
Hexachloroethane	67721
Hexachlorophene	70304
Hexachloropropene	1888717
Hexaethyl tetraphosphate	757584
Hydrazine	302012
Hydrazine, 1,2-diethyl-	1615801
Hydrochloric acid	7647010
Hydrocyanic acid	74908
Hydrofluoric acid	7664393
Hydrogen sulfide H_2S	7783064
Hydroperoxide, 1-methyl-1-phenylethyl	80159
Indeno(1,2,3-cd)pyrene	193395
Iron, tris (dimethylcarbamodithioato-S,S′)-	14484641
Isobutyl alcohol	78831
Isodrin	465736
Isophorone	78591
Isoprene	78795
Isopropanolamine dodecylbenzenesulfonate	42504461
Isosafrole	120581
3(2H)-Isoxazolone, 5-(aminomethyl)-	2763964
Kepone	143500
Lasiocarpine	303344
Lead	7439921
Lead acetate	301042
Lead arsenate	7784409
Lead chloride	7758954
Lead fluoborate	13814965
Lead fluoride	7783462
Lead iodide	10101630
Lead nitrate	10099748
Lead phosphate	7446277
Lead stearate	7428480
Lead subacetate	1335326
Lead sulfate	15739807
Lead sulfide	1314870
Lead thiocyanate	592870
Lithium chromate	14307358
Malathion	121755
Maleic acid	110167
Maleic anhydride	108316
Maleic hydrazide	123331
Manganese dimethyldithiocarbamate	15339363
Melphalan	148823
Mercaptodimethur	2032657
Mercuric cyanide	592041
Mercuric nitrate	10045940
Mercuric sulfate	7783359
Mercuric thiocyanate	592858
Mercurous nitrate	10415755
Mercury	7439976
Mercury fulminate	628864
Methacrylonitrile	126987
Methanesulfonic acid, ethyl ester	62500
Methanimidamide, N,N-dimethyl-N′-[3-[[(methylamino)carbonyl] oxylphenyl]-, monohydrochloride	23422539
Methanimidamide, N,N-dimethyl-N′-[2-methyl-4-[[(methylamino) carbonyl]oxy]phenyl]-	17702577
Methanol	67561
Methapyrilene	91805
Methomyl	16752775
Methoxychlor	72435
Methyl bromide	74839
1-Methylbutadiene	504609
Methyl chloride	74873
Methyl chlorocarbonate	79221
3-Methylcholanthrene	56495
4,4′-Methylene(bis)chloroaniline	101144
Methylene bromide	74953
Methylene chloride	75092
Methyl ethyl ketone (MEK)	78933
Methyl ethyl ketone peroxide	1338234
Methyl hydrazine	60344
Methyl iodide	74884
Methyl isobutyl ketone	108101
Methyl isocyanate	624839
Methylmercaptan	74931
Methyl methacrylate	80626
Methyl parathion	298000
Methylthiouracil	56042
Mevinphos	7786347
Mexacarbate	315184
Mitomycin C	50077
Monoethylamine	75047
Monomethylamine	74895
Naled	300765
1-Naphthalenamine	134327
2-Naphthalenamine	91598
Naphthalene	91203
1,4-Naphthalenedione	130154
Naphthenic acid	1338245
alpha-Naphthylthiourea	86884
Nickel	7440020
Nickel ammonium sulfate	15699180
Nickel carbonyl	13463393
Nickel chloride	7718549
Nickel cyanide $Ni(CN)_2$	557197
Nickel hydroxide	12054487
Nickel nitrate	14216752
Nickel sulfate	7786814
Nicotine, & salts	54115
Nitric acid	7697372
p-Nitroaniline	100016
Nitrobenzene	98953
Nitrogen dioxide NO_2	10102440
Nitrogen oxide NO	10102439
Nitroglycerine	55630
Nitrophenol (mixed)	25154556
m-Nitrophenol	554847

Hazardous Substance	CAS Number
o-Nitrophenol	88755
p-Nitrophenol	100027
2-Nitropropane	79469
N-Nitrosodiethanolamine	1116547
N-Nitrosodiethylamine	55185
N-Nitrosodimethylamine	62759
N-Nitrosodiphenylamine	86306
N-Nitrosopyrrolidine	930552
Nitrotoluene	1321126
m-Nitrotoluene	99081
o-Nitrotoluene	88722
p-Nitrotoluene	99990
5-Nitro-o-toluidine	99558
Osmium tetroxide OsO_4	20816120
Paraformaldehyde	30525894
Paraldehyde	123637
Parathion	56382
Pentachlorobenzene	608935
Pentachloroethane	76017
Pentachloronitrobenzene	82688
Pentachlorophenol	87865
Perchloroethylene	127184
Phenacetin	62442
Phenanthrene	85018
Phenol	108952
Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate)	64006
Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate (Promecarb)	2631370
Phenylmercury acetate	62384
Phenylthiourea	103855
Phorate	298022
Phosgene	75445
Phosphine	7803512
Phosphoric acid	7664382
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester	60515
Phosphorus	7723140
Phosphorus oxychloride	10025873
Phosphorus pentasulfide	1314803
Phosphorus trichloride	7719122
Phthalic anhydride	85449
Piperidine, 1-nitroso-	100754
Piperidine, 1,1'-(tetrathiodicarbonothioyl)bis-(Bis(pentamenthylene)thiuram tetrasulfide)	120547
Polychlorinated biphenyls (PCBs)	1336363
Aroclor 1016	12674112
Aroclor 1221	11104282
Aroclor 1232	11141165
Aroclor 1242	53469219
Aroclor 1248	12672296
Aroclor 1254	11097691
Aroclor 1260	11096825
Potassium arsenate	7784410
Potassium arsenite	10124502
Potassium bichromate	7778509
Potassium chromate	7789006
Potassium cyanide KCN	151508
Potassium hydroxide	1310583
Potassium permanganate	7722647
Potassium silver cyanide	506616
Pronamide	23950585
1,3-Propane sultone	1120714
Propanedinitrile	109773
Propargite	2312358
Propargyl alcohol	107197
Propionic acid	79094
Propionic anhydride	123626
n-Propylamine	107108
Propylene oxide	75569
Pyrene	129000
Pyrethrins	121299
Pyridine	110861
Pyridine, 2-methyl-	109068
Pyrrolo[2,3-b] indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-Physostigmine	57476
Quinoline	91225
Reserpine	50555
Resorcinol	108463
Saccharin and salts	81072
Safrole	94597
Selenious acid	7783008
Selenium	7782492
Selenium dioxide	7446084
Selenium sulfide SeS_2	7488564
Selenourea	630104
Silver	7440224
Silver cyanide AgCN	506649
Silver nitrate	7761888
Silvex (2,4,5-TP)	93721
Sodium	7440235
Sodium arsenate	7631892
Sodium arsenite	7784465
Sodium azide	26628228
Sodium bichromate	10588019
Sodium bifluoride	1333831
Sodium bisulfite	7631905
Sodium chromate	7775113
Sodium cyanide NaCN	143339
Sodium dodecyl-benzenesulfonate	25155300
Sodium fluoride	7681494
Sodium hydrosulfide	16721805
Sodium hydroxide	1310732
Sodium hypochlorite	7681529
Sodium methylate	124414
Sodium nitrite	7632000
Sodium phosphate, dibasic	7558794
Sodium phosphate, tribasic	7601549
Sodium selenite	10102188
Streptozotocin	18883664
Strontium chromate	7789062
Strychnine, & salts	57249
Styrene	100425
Sulfur monochloride	12771083

Hazardous Substance	CAS Number
Sulfuric acid	7664939
2,4,5-T acid	93765
2,4,5-T amines	2008460
	1319728
	3813147
	6369966
	6369977
2,4,5-T (n-butyl) esters	93798
	1928478
	2545597
Isooctyl	25168154
Methylpropyl	61792072
2,4,5-T salts	13560991
1,2,4,5-Tetrachlorobenzene	95943
2,3,7,8-Tetrachloro-dibenzo-p-dioxin (TCDD)	1746016
1,1,1,2-Tetrachloroethane	630206
1,1,2,2-Tetrachloroethane	79345
2,3,4,6-Tetrachlorophenol	58902
Tetraethyllead	78002
Tetraethyldithiopyrophosphate	3689245
Tetrahydrofuran	109999
Tetranitromethane	509148
Thallium	7440280
Thallium(I) acetate	563688
Thallium(I) carbonate	6533739
Thallium chloride TlCl	7791120
Thallium(I) nitrate	10102451
Thallium oxide Tl_2O_3	1314325
Thallium selenite	12039520
Thallium(I) sulfate	7446186
2H-1,3,5-Thiadiazine-2-thione, tetrahydro-3,5-dimethyl- (Dazomet)	533744
Thioacetamide	62555
Thiofanox	39196184
Thioperoxydicarbonic diamide, tetrabutyl (Tetrabutylthiuram disulfide)	1634022
Thioperoxydicarbonic diamide, tetraethyl (Disulfiram)	97778
Thiophenol	108985
Thiosemicarbazide	79196
Thiourea	62566
Thiourea, (2-chlorophenyl)-	5344821
Thiram	137268
Toluene	108883
Toluenediamine	95807
Toluene diisocyanate	584849
o-Toluidine	95534
p-Toluidine	106490
o-Toluidine hydrochloride	636215
Toxaphene	8001352
2,4,5-TP esters	32534955
Trichlorfon	52686
1,2,4-Trichlorobenzene	120821
1,1,1-Trichloroethane	71556
1,1,2-Trichloroethane	79005
Trichloroethene (Trichloroethylene)	79016
Trichloromethanesulfenyl chloride	594423
Trichloromonofluoromethane	75694
Trichlorophenol	25167822
2,3,4-Trichlorophenol	15950660
2,3,5-Trichlorophenol	933788
2,3,6-Trichlorophenol	933755
3,4,5-Trichlorophenol	609198
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
Triethanolamine dodecylbenzenesulfonate	27323417
Triethylamine	121448
Trimethylamine	75503
1,3,5-Trinitrobenzene	99354
Tris(2,3-dibromopropyl)phosphate	126727
Trypan blue	72571
Uracil mustard	66751
Uranyl acetate	541093
Uranyl nitrate	10102064
Urea, N-ethyl-N-nitroso-	759739
Urea, N-methyl-N-nitroso-	684935
Vanadium pentoxide	1314621
Vanadyl sulfate	27774136
Vinyl chloride	75014
Vinyl acetate	108054
Vinylamine, N-methyl-N-nitroso-	4549400
Warfarin, and salts, when present at concentrations greater than 0.3%	81812
Xylene (mixed)	1330207
Xylenol	1300716
Zinc	7440666
Zinc acetate	557346
Zinc ammonium chloride	52628258
Zinc, bis(dimethyl carbomodithioato-S,S')- (Ziram)	137304
Zinc, bis(diethylcarbamo dithioato-S,S')- (Ethyl Ziram)	14324551
Zinc borate	1332076
Zinc bromide	7699458
Zinc carbonate	3486359
Zinc chloride	7646857
Zinc cyanide $Zn(CN)_2$	557211
Zinc fluoride	7783495
Zinc formate	557415
Zinc hydrosulfite	7779864
Zinc nitrate	7779886
Zinc phenolsulfonate	127822
Zinc phosphide Zn_3P_2, when present at concentrations greater than 10%	1314847
Zinc silicofluoride	16871719
Zinc sulfate	7733020
Zirconium nitrate	13746899
Zirconium potassium fluoride	16923958
Zirconium sulfate	14644612
Zirconium tetrachloride	10026116

Appendix B

Ignitable Solids

(30 TAC Chapter 335 Subchapter R Appendix 1 Table 2)

Constituents listed from Department of Transportation Regulations, 49 CFR Part 173 Subpart E, October 1, 1993. Note: The presence of a constituent on this table in a nonhazardous waste does not automatically identify that waste as a Class 1 ignitable waste. The constituents on this table are examples of materials which could be considered Class 1 ignitable waste. The physical characteristics of the waste will be the determining factor as to whether or not a waste is ignitable. Refer to 30 TAC §335.505(2) (relating to Class 1 Waste Determination) for the Class 1 ignitable criteria.

Compound or Material	Compound or Material
Aluminum, metallic, powder	Celluloid
Alkali metal amalgams	Cerium
Alkali metal amides	Cesium metal
Aluminum alkyl halides	Chromic acid or chromic acid mixture, dry
Aluminum alkyl hydrides	Cobalt naphthenates, powder
Aluminum alkyls	Cobalt resinate
Aluminum borohydrides	Decaborane
Aluminum carbide	2-Diazo-1-naphthol-4-sulphochloride
Aluminum ferrosilicon powder	2-Diazo-1-naphthol-5-sulphochloride
Aluminum hydride	2,5-Diethoxy-4-morpholinobenzene-diazonium zinc choride
Aluminum phosphide	Diethylzinc
Aluminum resinate	4-Dimethylamino-6-(2-dimethyaminoethoxy)-toluene-2-diazonium zinc chloride
Aluminum silicon powder	Dimethylzinc
Ammonium picrate	Dinitrophenolates
2,2′-Azodi(2,4-dimethyl-4-methoxyvaleronitrile)	Dinitroresorcinol
2,2′-Azodi(2,4-dimethylvaleronitrile)	N,N′-Dinitroso-N,N′-dimethylterephthalamide
1,1′ Azodi(hexahydrobenzonitrile)	N,N′-Dinitrosopentamethylenetetramine
2,2′-Azodi(2-methyl-butyronitrile)	Diphenyloxide-4,4′-disulfohydrazide
Azodiisobutryonitrile	Dipicryl sulfide
Barium, metallic	4-Dipropylaminobenzenediazonium zinc chloride
Barium alloys, pyrophoric	Ferrocerium
Barium azide	Ferrosilicon
Benzene-1,3-disulfohydrazide	Ferrous metal
Benzene sulfohydrazide	Hafnium powder
4-(Benzyl(ethly)amino)-3-ethoxy-benzenediazonium zinc chloride	Hexamine
4-(Benzyl(methyl)amino)-3-ethoxy-benzenediazonium zinc chloride	Hydrides, metal
Borneol	3-(2-Hydroxyethoxy)-4-pyrrolidin-1-ylbenzenediazo-nium zinc chloride
Boron trifluoride dimethyl etherate	Iron oxide, spent
5-tert-Butyl-2,4,6-trinitro-m-xylene	Isosorbide dinitrate mixture
Calcium, metallic	Lead phosphite, dibasic
Calcium carbide	Lithium acetylide-ethylene diamine complex
Calcium chlorite	Lithium alkyls
Calcium cyanamide	Lithium aluminum hydride
Calcium dithionite	Lithium amide, powdered
Calcium hypochlorite	Lithium borohydride
Calcium manganese silicon	Lithium ferrosilicon
Calcium silicon powder	Lithium hydride
Calcium phosphide	Lithium metal
Calcium pyrophoric	Lithium nitride
Calcium resinate	Lithium silicon
Calcium silicide	Magnesium granules
Camphor, synthetic	Magnesium aluminum phosphide
Carbon, activated	

Compound or Material	Compound or Material
Magnesium diamide	Sodium aluminum hydride
Magnesium phosphide	Sodium amide
Magnesium silicide	Sodium borohydride
Maneb	Sodium chlorite
Manganese resinate	Sodium2-diazo-1-naphthol-4-sulphonate
Methyl magnesium bromide	Sodium2-diazo-1-naphthol-5-sulphonate
Methyldichlorosilane	Sodium dichloro-s-triazinetrione
Mono-(trichloro)tetra(monopotassium dichloro)-penta-s-triazinetrione	Sodium dinitro-ortho-cresolate
N-Methyl-N′-nitronitrosoguanidine	Sodium hydride
Naphthalene	Sodium hydrosulfite
Nitrocellulose mixtures	Sodium methylate
Nitroguanidine	Sodium nitrite and mixtures
p-Nitrosodimethylaniline	Sodium picramate, wet
Paraformaldehyde	Sodium potassium alloys
Pentaborane	Sodium sulfide, anhydrous
Peratic acid	Stannic phosphide
Phosphorous, amorphous, red	Strontium phosphide
Phosphorous, white or yellow	Sulfur
Phosphoric anhydride	Titanium metal powder
Phosphorous pentachloride	Titanium hydride
Phosphorus pentasulfide	Trichloroisocyanuric acid
Phosphorus sesquisulfide	Trichlorosilane
Phosphorus trisulfide	Trichloro-s-triazinetrione
Picric acid	Trinitrobenzoic acid
Potassium, metallic	Trinitrophenol
Potassium dichloro-s-triazinetrione	Trinitrotoluene
Potassium borohydride	Urea nitrate
Potassium dithionite	Zinc ammonium nitrite
Potassium phosphide	Zinc phosphide
Potassium sulfide, anhydrous	Zinc powder
Rubidium metal	Zinc resinate
Silicon powder, amorphous	Zirconium hydride, powdered
Silver picrate	Zirconium picramate
Sodium, metallic	Zirconium powder
	Zirconium scrap

Appendix C

Class 1 Toxic Constituents' Maximum Leachable Concentrations

(30 TAC Chapter 335 Subchapter R Appendix 1 Table 1)

Applicability: **Class 1, 2, and 3 Waste Evaluations**

Values are based on information contained in Federal Registers Vol. 55 / Friday, July 27, 1990; Vol. 56 / June 7, 1991; and Integrated Risk Information Systems, Environmental Protection Agency, and 40 CFR 264 Appendix 9.

Compound	CAS No.	Concentration (mg/l)
Acenaphthene	83-32-9	210
Acetone	67-64-1	400
Acetonitrile	75-05-8	20
Acetophenone	98-86-2	400
Acrylamide	79-06-1	0.08
Acrylonitrile	107-13-1	0.6
Aniline	62-53-3	60
Anthracene	120-12-7	1050
Antimony	7440-36-0	1
Arsenic	7440-38-2	1.8
Barium	7440-39-3	100.0
Benzene	71-43-2	0.50
Benzidine	92-87-5	0.002
Beryllium	7440-41-7	0.08
Bis(2-chloroethyl) ether	111-44-4	0.3
Bis(2-ethylhexyl) phthalate	117-81-7	30
Bromodichloromethane	75-27-4	0.3
Bromomethane	74-83-9	5
Butylbenzyl phthalate	85-68-7	700
Cadmium	7440-43-9	0.5
Carbon disulfide	75-15-0	400
Carbon tetrachloride	56-23-5	0.50
Chlordane	57-74-9	0.03
Chlorobenzene	108-90-7	70
Chloroform	67-66-3	6.0
Chloro-m-cresol, p	59-50-7	7000
2-Chlorophenol	95-57-8	20
Chromium	7440-47-3	5.0
m-Cresol	108-39-4	200.0*
o-Cresol	95-48-7	200.0*
p-Cresol	106-44-5	200.0*
DDD	72-54-8	1
DDE	72-55-9	1
DDT	50-29-3	1
Dibutyl phthalate	84-74-2	400
1,4-Dichlorobenzene	106-46-7	7.5
3,3-Dichlorobenzidine	91-94-1	0.8
1,2-Dichloroethane	107-06-2	0.50
Dichlorodifluoromethane	75-71-8	700
1,1-Dichloroethylene	75-35-4	0.6
1,3-Dichloropropene	542-75-6	1
2,4-Dichlorophenol	120-83-2	10
2,4-Dichlorophenoxy-acetic acid (2,4-D)	94-75-7	10.0
Dieldrin	60-57-1	0.02
Diethyl phthalate	84-66-2	3000
Dimethoate	60-51-5	70
2,4-Dimethyphenol	105-67-9	70
2,6-Dimethyphenol	576-26-1	21
m-Dinitrobenzene	99-65-0	0.4
2,4-Dinitrophenol	51-28-5	7
2,4-Dinitrotoluene (and 2,6-, mixture)	602-01-7	0.13
Dinoseb	88-85-7	3.5
1,4-Dioxane	123-91-1	30
Dioxins (Polychlorinated dibenzo-p-dioxins)		
2,3,7,8-TCDD	1746-01-6	0.005
1,2,3,7,8-PeCDD	40321-76-4	0.010
1,2,3,4,7,8-HxCDD	57653-85-7	0.050
1,2,3,6,7,8-HxCDD	34465-46-8	0.050
1,2,3,7,8,9-HxCDD		0.050
Diphenylamine	122-39-4	90
1,2-Diphenylhydrazine	122-66-7	0.4
Disulfoton	298-04-4	0.1
Endosulfan	959-98-8	0.2
Endrin	72-20-8	.02
2-Ethoxyethanol	10-80-5	1400
Ethylbenzene	100-41-4	400
Ethylene dibromide	106-93-4	0.004
Ethylene glycol	107-21-1	7000
Fluoranthene	206-44-0	140
Fluorene	86-73-7	140
Furans (Polychlorinated dibenzofurans)		
2,3,7,8-TCDF	51207-31-9	0.050
1,2,3,7,8-PeCDF		0.100
2,3,4,7,8-PeCDF		0.010
1,2,3,4,7,8-HxCDF		0.050
1,2,3,6,7,8-HxCDF		0.050
1,2,3,7,8,9-HxCDF		0.050
Heptachlor	76-44-8	0.008
Heptachlor epoxide	1024-57-3	0.04
Hexachlorobenzene	118-74-1	0.13
Hexachloro-1,3-butadiene	87-68-3	0.4
Hexachlorocyclopentadiene	77-47-4	20
Hexachloroethane	67-72-1	3.0
Hexachlorophene	70-30-4	1
Isobutyl alcohol	78-83-1	1000
Isophorone	78-59-1	90

Appendix C — Class 1 Toxic Constituents' Maximum Leachable Concentrations (MCLs)

Compound	CAS No.	Concentration (mg/l)	Compound	CAS No.	Concentration (mg/l)
Lead	7439-92-1	1.5	Pyridine	110-86-1	4
Lindane	58-89-9	0.3	Selenium	7782-49-2	1.0
Mercury	7439-97-6	0.2	Silver	7440-22-4	5.0
Methacrylonitrile	126-98-7	0.4	Styrene	100-42-5	700
Methomyl	16752-77-5	90	1,1,1,2-Tetrachloroethane	630-20-6	10
Methoxychlor	72-43-5	10.0	1,1,2,2-Tetrachloroethane	79-34-5	2
2-Methoxyethanol	109-86-4	14.0	Tetrachloroethylene	127-18-4	0.7
Methyl ethyl ketone	78-93-3	200.0	2,3,4,6-Tetrachlorophenol	58-90-2	100
Methyl isobutyl ketone	108-10-1	200	Toluene	108-88-3	1000
Methylene chloride	75-09-2	50	Toxaphene	8001-35-2	0.3
Methyl parathion	298-00-0	0.9	trans-1,3-Dichloropropene	542-75-6	1
Mirex	2385-85-5	0.7	Tribromomethane (Bromoform)	75-25-2	70
Nickel	7440-02-0	70	1,2,4-Trichlorobenzene	120-82-1	70
Nitrobenzene	98-95-3	2.0	1,1,1-Trichloroethane	71-55-6	300
N-Nitroso-di-n-butylamine	924-16-3	0.06	Trichloroethylene	79-01-6	0.5
N-Nitrosodiphenylamine	86-30-6	70	1,1,2-Trichloroethane	79-00-5	6
N-Nitrosomethylethylamine	10595-95-6	0.02	Trichlorofluoromethane	75-69-4	1000
N-Nitroso-n-propylamine	621-64-7	0.05	2,4,5-Trichlorophenoxy-propionic acid (2,4,5-TP or Silvex)	93-72-1	1.0
N-Nitrosopyrrolidine	930-55-2	0.2			
p-Phenylenediamine	106-50-3	20			
Parathion	56-38-2	20			
Pentachlorobenzene	608-93-5	3	1,2,3-Trichloropropane	96-18-4	20
Pentachloronitrobenzene	82-68-8	10	2,4,5-Trichlorophenol	95-95-4	400.0
Pentachlorophenol	87-86-5	100.0	2,4,6-Trichlorophenol	88-06-2	2
Phenol	108-95-2	2000	Vanadium pentoxide	1314-62-1	30
Pronamide	23950-58-5	300	Vinyl chloride	75-01-4	0.2
Pyrene	129-00-0	5.9	Xylenes (all isomers)	1330-82-1	7000

* If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol concentration is used. The Maximum Concentration for total cresol is 200.0 mg/l.

Appendix D

7-Day Distilled Water Leachate Test's Maximum Contaminant Levels

(30 TAC Chapter 335 Subchapter R APPENDIX 1 Table 3)

Applicability: **Class 3 Waste Evaluations**

Values obtained from 40 Code of Federal Regulations Part 141, Subparts B and G, Maximum Contaminant Levels and 40 Code of Federal Regulations Part 143, Total Dissolved Solids.

Constituent	MCL (mg/l)
Arsenic	0.05
Barium	1
*Benzene	0.005
Cadmium	0.005
*Carbon tetrachloride	0.005
Chlordane	0.002
*Chlorobenzene	0.1
Chromium	0.1
2,4-D	0.07
*Dibromochloropropane	0.0002
*ortho-Dichlorobenzene	0.6
*para-Dichlorobenzene	0.075
*1,2-Dichloroethane	0.005
*1,1-Dichloroethylene	0.007
*trans-1,2-Dichloroethylene	0.1
*1,2-Dichloropropane	0.005
*Ethylbenzene	0.7
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Lead	0.05
Mercury	0.002
Methoxychlor	0.04
Pentachlorophenol	0.001
Selenium	0.05
Silver	0.05
*Styrene	0.1
*Tetrachloroethylene	0.005
*1,1,1-Trichloroethane	0.20
*Trichloroethylene	0.005
*Toluene	1
Toxaphene	0.003
2,4,5-TP (Silvex)	0.05
*Vinyl chloride	0.002
*Xylenes (total)	10
Total dissolved solids	500

* For a Class 3 waste classification, these constituents must also be evaluated using the test methods described in 40 Code of Federal Regulations, Part 261, Appendix II. See §335.507 (4) (A) (ii) for additional information.

Appendix E

Class 1 Toxic Constituents

(other than those identified in Appendix C, *and their Estimated Quantitation Limits [EQLs])*

Applicability: **Class 3 Waste Evaluations**

This table is to be utilized by the generator in evaluating detection limits for the identified constituents. The EQLs in this table are defined as the lowest detectable levels that can be reliably achieved using the Toxicity Characteristic Leaching Procedure (TCLP) at the time of the printing of this guideline. Applicable EPA method numbers are provided and can be found in EPA Report SW-846 "Test Methods for Evaluating Solid Waste" except where noted. Please note that more than one test method may be available for a particular constituent. Synonyms are provided in brackets "[]".

Constituent	EQL (mg/l)	Method(s)
Acenaphthene	0.2	8100
	0.01	8270
	0.02	8250
Acetone	0.1	8240
Acetonitrile	0.1	8015
[Methyl cyanide]	0.1	8030
Acetophenone	0.001	8250
	0.01	8270
Acrylamide	0.005	8015
Acrylonitrile	0.005	8030
[Vinyl cyanide]	0.005	8240
Anthracene	0.2	8100
	0.02	8250
	0.01	8270
Aniline	0.01	8250
[Benzyl amine]	0.01	8270
Antimony	0.2	204
	0.3	6010
	2.0	7040
	0.03	7041
	2.0	7000A
Benzidine [Dianiline]	0.44	8250
Beryllium	**	210
	0.003	6010
	0.05	7090
	0.002	7091
	0.05	7000A
Bis(2-chloroethyl) ether	0.057	8250
[Dichloroethyl ether]	0.01	8270
Bis(2-ethylhexyl)	0.02	8060
phthalate	0.25	8250
	0.01	8270
Bromodichloromethane	0.001	8010
	0.005	8240
Bromomethane	0.003	8010
[Methylbromide]	0.01	8240
Butylbenzyl phthalate	0.005	8060
[Benzylbutyl phthalate]	0.025	8250
	0.01	8270
Carbon disulfide [CS_2]	0.005	8240
Chloroform	0.0005	8010
	0.005	8240
p-Chloro-m-cresol	0.005	8040
	0.02	8270
2-Chlorophenol	0.003	8040
[o-Chlorophenol]	0.01	8270
m-Cresol	0.01	8270
o-Cresol	0.01	8270
p-Cresol	0.01	8270
DDD [Dichlorodiphenyl-	0.0001	8080
dichloroethane]	0.028	8250
	0.01	8270
DDE [Dichlorodiphenyl-	0.00004	8080
ethylene]	0.056	8250
	0.01	8270
DDT [Dichlorodiphenyl-	0.0001	8080
trichloroethane]	0.047	8250
	0.01	8270
Dibutyl phthalate	0.005	8060
	0.01	8270
1,4-Dichlorobenzene	0.004	8010
	0.003	8020
	0.013	8120
	0.01	8270
3,3-Dichlorobenzidine	0.02	8270
Dichlorodifluoromethane	0.01	8010
	0.005	8240
1,3-Dichloropropene	0.003	8010
	0.005	8240
2,4-Dichlorophenol	0.05	8040
	0.01	8270
Dieldrin	0.00002	8080
	0.01	8270
Diethyl phthalate	0.005	8060
	0.01	8270
Dimethoate	0.02	8270
2,4-Dimethylphenol	0.003	8040
	0.01	8270
2,6-Dimethylphenol	**	**
m-Dinitrobenzene	0.01	8270

Constituent	EQL (mg/l)	Method(s)
2,4-Dinitrophenol	0.13	8040
	0.05	8270
2,4-Dinitrotoluene	0.0002	8090
(and 2,6-, mixture)	0.01	8270
Dinoseb	0.007	8150
	0.02	8270
1,4-Dioxane	0.15	8015
Dioxins (Polychlorinated dibenzo-p-dioxins)		
2,3,7,8-TCDD	0.000005	8280
1,2,3,7,8-PeCdd	0.00001	8280
1,2,3,4,7,8-HxCDD	0.00001	8280
1,2,3,6,7,8-HxCDD	0.00001	8280
1,2,3,7,8,9-HxCDD	0.00001	8280
Diphenylamine	0.01	8270
1,2-Diphenylhydrazine	0.2	1625
Disulfoton	0.002	8140
	0.01	8270
Endosulfan	0.0001	8080
	0.056	8250
Endrin	0.00006	8080
	0.01	8250
2-Ethoxyethanol	**	**
Ethylene dibromide [EDB]	0.5	6231
(Standard Methods for Examination of Water and Wastewater)		
Ethylene glycol	**	**
Fluoranthene	0.2	8100
	0.01	8270
Fluorene	0.2	8100
	0.01	8270
Furans (Polychlorinated dibenzofurans)		
2,3,7,8-TCDF	0.00001	8280
1,2,3,7,8-PeCDF	0.00001	8280
2,3,4,7,8-PeCDF	0.00001	8280
1,2,3,4,7,8-HxCDF	0.00001	8280
1,2,3,6,7,8-HxCDF	0.00001	8280
1,2,3,7,8,9-HxCDF	0.00001	8280
Hexachlorobenzene	0.0005	8120
	0.0	8270
Hexachloro-1,3-butadiene	0.0034	8120
	0.01	8270
Hexachlorocyclopentadiene	0.004	8120
	0.01	8270
Hexachloroethane	0.0003	8120
	0.01	8270
Hexachlorophene	0.05	8270
Isobutyl alcohol	0.05	8015
Isophorone	0.06	8090
	0.01	8270
Lindane	0.00004	8080
	0.01	8250
	0.00004	608
	0.01	625
Methacrylonitrile	0.005	8015
Methomyl	0.09	632
2-Methoxyethanol	**	**

Constituent	EQL (mg/l)	Method(s)
Methyl ethyl ketone [MEK]	0.01	8015
	0.1	8240
Methyl isobutyl ketone [MIBK]	**	8015
	0.005	8240
Methylene chloride	0.005	8010
[Dichloromethane]	0.005	8240
Methyl parathion	0.0003	8140
	0.01	8270
Mirex	**	**
Nickel	0.04	249
	0.05	6010
	0.4	7520
	0.04	7000A
Nitrobenzene	0.04	8090
	0.01	8250
	0.01	8270
N-Nitroso-di-n-butylamine	0.01	8270
N-Nitrosodiphenylamine	0.01	8270
N-Nitrosomethylethylamine	0.02	8270
N-Nitroso-n-propylamine	0.01	8270
N-Nitrosopyrrolidine	0.01	8270
p-Phenylenediamine	0.01	8270
Parathion	0.01	8270
	0.0003	8140
Pentachlorobenzene	0.02	8270
Pentachloronitrobenzene	0.01	8270
Phenol	0.001	8040
	0.01	8270
Pronamide	0.01	8270
Pyrene	0.2	8100
	0.01	8270
Pyridine	0.005	8240
	0.01	8270
1,1,1,2-Tetrachloroethane	0.005	8010
	0.005	8240
1,1,2,2-Tetrachloroethane	0.0003	8010
	0.005	8240
2,3,4,6-Tetrachlorophenol	0.01	8270
trans-1,3-Dichloropropene	0.0034	8010
	0.005	8240
Tribromomethane [Bromoform]	0.002	8010
	0.005	8240
1,2,4-Trichlorobenzene	0.01	8270
1,1,2-Trichloroethane	0.0002	8010
[1,1,2-TCE]	0.005	8240
Trichlorofluoromethane	0.01	8010
[Freon 11]	0.005	8240
1,2,3-Trichloropropane	0.01	8010
	0.005	8240
2,4,5-Trichlorophenol	0.01	8270
2,4,6-Trichlorophenol	0.006	8040
	0.01	8270
Vanadium pentoxide	0.2	286
	0.08	6010
	2.0	7910
	0.04	7911

* If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol concentration is used.
** This information not available at time of publication.

Appendix F

7-Day Distilled Water Leachate Test Procedure

(30 TAC Chapter 335 Subchapter R Appendix 4)

Applicability: **Class 3 Waste Evaluations**

This test is intended only for dry, solid wastes, i.e., waste materials without any free liquids.

1. Place a 250 gram (dry weight) representative sample of the waste material in a 1500 milliliter Erlenmeyer flask.
2. Add 1 liter of deionized or distilled water into the flask and mechanically stir the material at a low speed for five (5) minutes.
3. Stopper the flask and allow to stand for seven (7) days.
4. At the end of seven (7) days, filter the supernatant solution through a 0.45 micron filter, collecting the supernatant into a separate flask.
5. Subject the filtered leachate to the appropriate analysis.

Appendix G

Form Codes

(30 TAC Chapter 335 Subchapter R Appendix 3)

Applicability: **All Waste**

In determining a waste stream's form code, it is recommended that the generator first determine into which major category the waste stream fits (e.g. inorganic liquids). The generator should then review all the form code descriptors in that category to determine which code or codes best describe the generator's waste stream. The generator should then choose, from the narrowed-down list, a form code for the waste stream.

Form codes are fairly generic in their descriptions. It is possible that more than one form code may be applicable to a particular waste stream. Generators should assign the form code which best describes the waste stream. If more than one form code can "best describe" the waste stream, then the generator should choose one of those several codes.

Code	Waste Description
	— Lab Packs —
	Lab Packs *— Lab packs of mixed wastes, chemicals, lab wastes*
001	Lab packs of old chemicals only
002	Lab packs of debris only
003	Mixed lab packs
004	Lab packs containing acute hazardous wastes
009	Other lab packs (Specify in Comments)
	— Liquids —
	Inorganic Liquids *— Waste that is primarily inorganic and highly fluid (e.g., aqueous), with low suspended inorganic solids and low organic content*
101	Aqueous waste with low solvents
102	Aqueous waste with low other toxic organics
103	Spent acid with metals
104	Spent acid without metals
105	Acidic aqueous waste
106	Caustic solution with metals but no cyanides
107	Caustic solution with metals and cyanides
108	Caustic solution with cyanides but no metals
109	Spent caustic
110	Caustic aqueous waste
111	Aqueous waste with reactive sulfides
112	Aqueous waste with other reactives (e.g., explosives)
113	Other aqueous waste with high dissolved solids
114	Other aqueous waste with low dissolved solids
115	Scrubber water
116	Leachate
117	Waste liquid mercury
119	Other inorganic liquids (Specify in Comments)
198	Nonhazardous photographic chemical wastes (inorganic)
199	Brine solution that could also bear the form code 113
	Organic Liquids *— Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content*
201	Concentrated solvent-water solution
202	Halogenated (e.g., chlorinated) solvent
203	Non-halogenated solvent
204	Halogenated/non-halogenated solvent mixture
205	Oil-water emulsion or mixture
206	Waste oil
207	Concentrated aqueous solution of other organics
208	Concentrated phenolics
209	Organic paint, ink, lacquer, or vanish
210	Adhesives or epoxies
211	Paint thinner or petroleum distillates
212	Reactive or polymerizable organic liquids
219	Other organic liquids (Specify in Comments)
296	Ethylene glycol based antifreeze

Code	Waste Description
297	Nonhazardous liquids containing greater than or equal to (>) 50 and less than (<) 500 ppm PCBs
298	Nonhazardous liquids containing greater than or equal to (>) 500 ppm PCBs
299	Nonhazardous photographic chemical waste (organic)

— Solids —

*(These codes **do not** apply to pumpable waste.)*

Inorganic Solids** — Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; **not pumpable

301	Soil contaminated with organics
302	Soil contaminated with inorganics only
303	Ash, slag, or other residue from incineration of wastes
304	Other "dry" ash, slag, or thermal residue
305	"Dry" lime or metal hydroxide solids chemically "fixed"
306	"Dry" lime or metal hydroxide solids not "fixed"
307	Metal scale, filings, or scrap
308	Empty or crushed metal drums or containers
309	Batteries or battery parts, casings, cores
310	Spent solid filters or adsorbents
311	Asbestos solids and debris
312	Metal-cyanide salts/chemicals
313	Reactive cyanide salts/chemicals
314	Reactive sulfide salts/chemicals
315	Other reactive salts/chemicals
316	Other metal salts/chemicals
319	Other waste inorganic solids (Specify in Comments)
388	Empty or crushed glass containers
389	Nonhazardous sandblasting waste
390	Nonhazardous concrete/cement/ construction debris
391	Nonhazardous dewatered wastewater treatment sludge
392	Nonhazardous dewatered air pollution control device sludge
393	Catalyst waste
394	Nonhazardous solids containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
395	Nonhazardous solids containing greater than or equal to (>) 500 ppm PCBs
396	Nonhazardous electrical equipment/devices containing greater than or equal to (>) 50ppm and less than (<) 500 ppm PCBs
397	Nonhazardous electrical equipment/devices containing greater than or equal to (>) 500 ppm PCBs
398	Nonhazardous soils containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
399	Nonhazardous soils containing greater than or equal to (>) 500 ppm PCBs

Organic Solids** — Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; **not pumpable

401	Halogenated pesticide solid
402	Non-halogenated pesticide solid
403	Solids resins or polymerized organics
404	Spent carbon
405	Reactive organic solid
406	Empty fiber or plastic containers
407	Other halogenated organic solids (Specify in Comments)
409	Other non-halogenated organic solids (Specify in Comments)
488	Wood debris
489	Petroleum contaminated solids
490	Sand blasting waste
491	Dewatered biological treatment sludge
492	Dewatered sewage or other untreated biological sludge
493	Catalyst waste
494	Solids containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
495	Solids containing greater than or equal to (>) 500 ppm PCBs
496	Electrical equipment/devices containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
497	Electrical equipment/devices containing greater than or equal to (>) 500 ppm PCBs
498	Soil containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
499	Soils containing greater than or equal to (>) 500 ppm PCBs

— Sludges —

(These codes only apply to pumpable waste.)

Inorganic Sludges** — Waste that is primarily inorganic, with moderate-to-high water content and low organic content, and **pumpable

501	Lime sludge without metals
502	Lime sludge with metals/metal hydroxide sludge

Code	Waste Description
503	Wastewater treatment sludge with toxic organics
504	Other wastewater treatment sludge
505	Untreated plating sludge without cyanides
506	Untreated plating sludge with cyanides
507	Other sludge with cyanides
508	Sludge with reactive sulfides
509	Sludge with other reactives
510	Degreasing sludge with metal scale or filings
511	Air pollution control device sludge (e.g., fly ash, wet scrubber sludge)
512	Sediment or lagoon dragout contaminated with organics
513	Sediment or lagoon dragout contaminated with inorganics only
514	Drilling mud
515	Asbestos slurry or sludge
516	Chloride or other brine sludge
519	Other inorganic sludges (Specify in Comments)
597	Catalyst waste
598	Nonhazardous sludges containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
599	Nonhazardous sludges containing greater than or equal to (>) 500 ppm PCBs

Organic Sludges *— Waste that is primarily organic with low-to-moderate inorganic solids content and water content, and* ***pumpable***

601	Still bottoms of halogenated (e.g., chlorinated) solvents or other organic liquids
602	Still bottoms on non-halogenated solvents or other organic liquids
603	Oily sludge
604	Organic paint or ink sludge
605	Reactive or polymerizable organics
606	Resins, tars, or tarry sludge
607	Biological treatment sludge
608	Sewage or other untreated biological sludge
609	Other organic sludges (Specify in Comments)
695	Petroleum contaminated sludges other than still bottoms and oily sludges
696	Grease
697	Catalyst waste
698	Nonhazardous sludges containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs
699	Nonhazardous sludges containing greater than or equal to (>) 500 ppm PCBs

— Gases —

Inorganic Gases *— Waste that is primarily inorganic with a low organic content and is a gas at atmospheric pressure*

701	Inorganic gases

Organic Gases *— Waste that is primarily organic with low-to-moderate inorganic content and is a gas at atmospheric pressure*

801	Organic gases

— Plant Trash —

(In order to be considered for one of the two plant refuse designations, a waste must first meet the following two criteria.

First*, the waste* ***must*** *be a Class 2 waste. This means that a proper classification determination must be performed for each item which a facility is considering as one of the plant refuse designations. A waste is not a Class 2 solely because it has been designated as a plant refuse waste.* ***Hazardous*** *and* ***Class 1 wastes*** *are* ***not eligible*** *for designation as one of the plant refuses.*

Second*, the waste must meet the particular definition of the plant refuse term. For more information on these terms, please refer to the terms listed in this table as well as the "Definitions" section which follows this table.)*

902	**Supplemental plant production refuse** – any Class 2 waste from production, manufacturing, or laboratory operations as long as the total amount of the supplemental plant production refuse does not exceed twenty percent of the total plant trash (form code 999) volume or weight, whichever is less – this could include, but is not limited to, such things as metal parts, floor sweepings, and off-specification materials
999	**Plant Trash** – any Class 2 waste originating in the facility offices, laboratory, plant production area or food services/cafeteria operations that is composed of paper, cardboard, linings, wrappings, paper and/or wooden packaging materials, uncontaminated food wastes and/or packaging, cafeteria wastes, glass, aluminum foil, aluminum cans, aluminum scrap, stainless steel, steel, iron scrap, plastics, styrofoam, rope, twine, uncontaminated rubber, uncontaminated wooden materials, equipment belts, wirings, uncontaminated cloth, metal bindings, empty containers with a holding capacity of less than five gallons, uncontaminated floor sweepings, and personal cosmetics generated by facility personnel (does not include cosmetics generated as a result of manufacturing or plant production operations).

Form Code Definitions

The following are definitions of terms utilized in form codes:

Acidic – A material having a pH less than 7.0.

Alkaline – A material having a pH greater than 7.0.

Aqueous – A water solution containing organic and/or inorganic constituents dissolved in solution.

Caustic – A material which is corrosive or irritating to living tissue and has a pH greater than 7.

Inorganic – Chemicals that are not organic (i.e., water, carbon dioxide, carbon disulfide, iron, zinc, steel). Generally, if a waste is composed of more than 50% inorganic materials, it is considered an inorganic waste.

Organic – Chemicals composed primarily of carbon and hydrogen and their derivatives. (i.e. methylene chloride, benzene, petroleum products). In general, if a waste is composed of 50% or more organic materials, it is considered an organic waste.

Plant Trash – Includes the following Class 2 wastes which are produced as a result of plant production, manufacturing, laboratory, general office, cafeteria or food service operations; paper, cardboard, linings, wrappings, paper or wood packaging materials, food wastes, cafeteria wastes, glass, aluminum foil, aluminum cans, aluminum scrap, stainless steel, steel, iron scrap, plastics, styrofoam, rope, twine, uncontaminated rubber, uncontaminated wooden materials, equipment belts, wirings, uncontaminated cloth, metal bindings, empty containers with a holding capacity of less than five gallons, uncontaminated floor sweepings, and personal cosmetics generated by facility personnel (does not include cosmetics generated as a result of manufacturing or plant production operations). **Please note that hazardous waste and Class 1 waste can not be designated as "plant office refuse".** Plant trash shall not include oils, lubricants of any type, oil filters, contaminated soils, sludges, or wastewaters.

Examples of "plant trash" include Class 2 soda cans, lunch sacks, food scraps, envelopes, plastic binders, empty boxes, pallets, styrofoam shipping boxes, chemical container liners, shrink wrap, and broken glassware.

As another example, used typing paper from the secretarial area could be considered "plant trash" because it resulted from general office operations. (Please note that typing paper would normally be considered a Class 2 waste unless it were contaminated with something to cause it to be considered a hazardous or Class 1 waste. For example, if typing paper were used to clean up a spill of a F003 waste, it would be considered a hazardous waste.)

As another example, a Class 2 off-specification production chemical could not be considered "plant trash" because it does not meet the definition of a "plant trash". However, the Class 2 off-specification production chemical might be considered a "supplemental plant production refuse" as long as the weight/volume limits established for "supplemental plant production refuse" were not exceeded. (For more information on "supplemental plant production refuse" and weight/volume limits, please see "Supplemental Plant Production Refuse" in these definitions.

Reactive – A material is reactive if it is capable of detonation or explosive decomposition:
1. at standard temperature and pressure, or
2. if subjected to a strong ignition source, or
3. heated under confinement.

A material is also considered reactive if, when mixed with water it is:
1. potentially explosive, or
2. reacts violently, or
3. generates toxic gases or vapors (i.e. hydrogencyanide or hydrogensulfide).

A material is also considered reactive if it is:
1. normally unstable and readily undergoes violent changes, or
2. a forbidden explosive (see 49 CFR §173.53), or
3. a Class B explosive (see 49 CFR §173.88).

Solvent – A liquid used to dissolve another material.

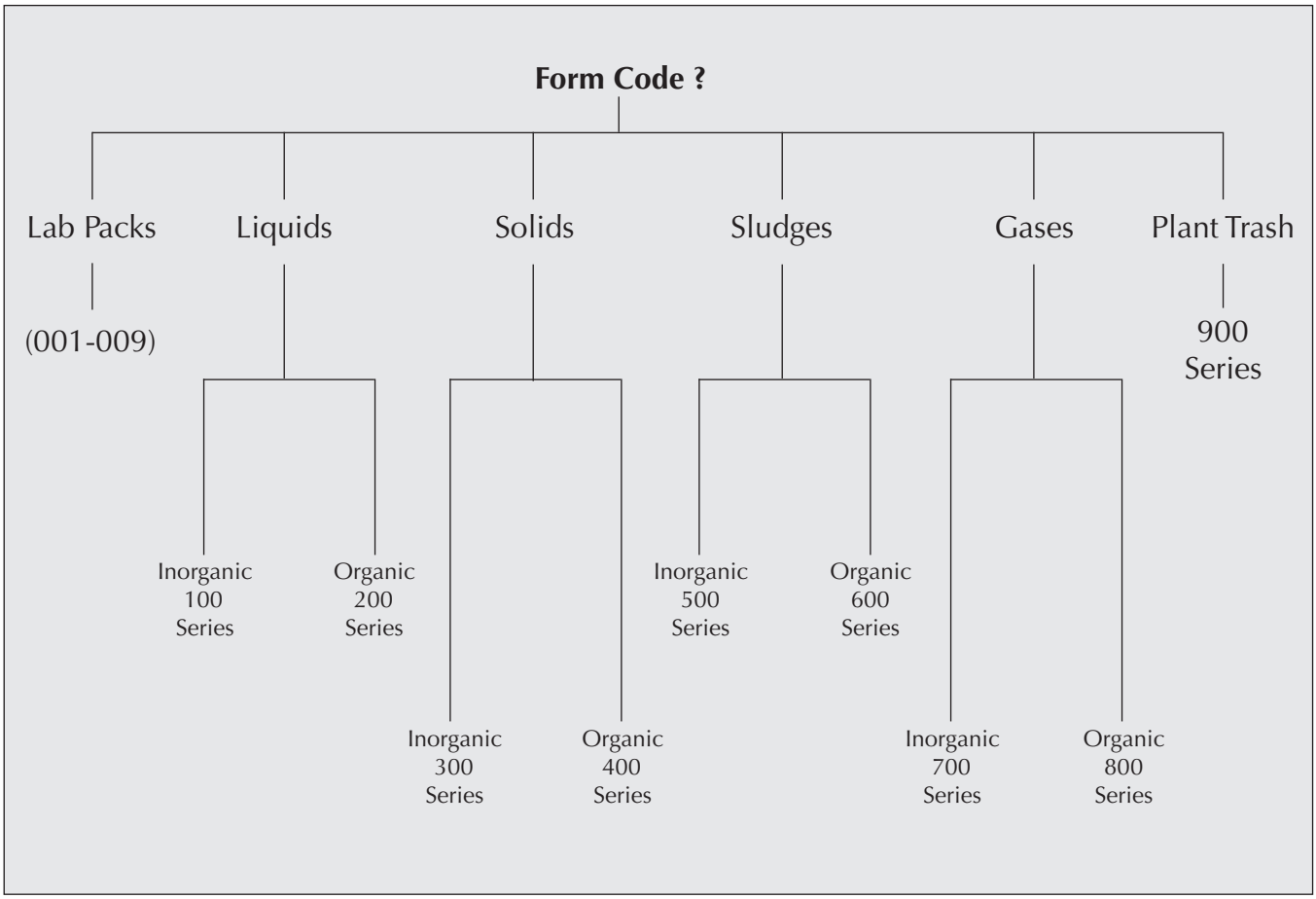
Supplemental Plant Production Refuse – Any **Class 2 Waste from production, manufacturing, or laboratory operations** can be designated as **"supplemental plant production refuse"** (form code 999) as long as the total amount of the supplemental plant production refuse **does not exceed twenty percent of the total plant production refuse volume or weight, whichever is less.**

Individual wastes which have been designated "supplemental plant production refuse" may be designated by the generator at a later time as a separate waste in order to maintain the "supplemental plant production refuse" at a level below 20% of the "plant trash" amount. For any waste stream so redesignated, the generator must provide the initial notification information required pursuant to 30 TAC Chapter 335.

Please note that hazardous waste and Class 1 waste can not be designated as "supplemental plant production refuse".

Examples of "supplemental plant production refuse" include Class 2 steel shavings, empty metal containers, aerosol cans, old chemicals, safety equipment, and machine parts.

Please note that when a site notifies the Commission that it generates "supplemental plant production refuse", it must include a list of those wastes which are expected to be included in the "supplemental plant production refuse" designation. If that list increases, the generator must notify the Commission of the additions to that list; otherwise, the Commission will not view the additions as "supplemental plant production refuse".



Lab Packs – 001-009 series

Examples:

1. Lab pack containing debris — **002**
2. Lab pack containing old unused or partially used chemicals — **001**

Plant Trash – 900 series

Examples:

1. Office debris (i.e., paper, plastic, aluminum cans and fax paper) — **999**
2. Scrap plastic from molds of toys and souvenirs — **902**
3. Packing debris from unpacking of raw materials — **999**

Liquids

Inorganic – 100 series

(Waste that is primarily inorganic and highly fluid, (e.g., aqueous), with low suspended solids and low organic content.)

Examples:

1. 99% water with 1% methanol — **101**
2. 98% water with 2% methyl ethyl ketone MEK — **102**
3. Waste sulfuric acid from plastics cleaning — **104**
4. Water with 0.73% potassium permanganate — **114**
5. Leachate from landfills — **116**
6. Waste photographic fixer — **198**

Organic – 200 series

(Waste that is primarily organic and is highly fluid, with low inorganic solids and low-to-moderate water content.)

Examples:

1. Solvent mixture 65% methylene chloride, 30% phenol, 5% cresol — **204**
2. 95% motor oil, 5% water emulsion — **205**
3. Used hydraulic oil — **206**
4. Unused varnish and organic paint — **209**
5. Waste ethylene glycol antifreeze — **296**

Solids

Inorganic – 300 series

*(Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; **not pumpable**.)*

Examples:

1. Soil contaminated with naptha — **301**
2. Incinerator ash — **303**
3. Crushed RCRA empty metal drums — **308**
4. Lead acid batteries, chips and cores — **309**
5. Concrete, plaster and other construction debris — **390**
6. Metalic catalyst waste — **393**

Organic – 400 series

*(Waste that is primarily organic and solid, with low-to-moderate inorganic and water content; **not pumpable**.)*

Examples:

1. Unused malathion pellets — **402**
2. Spent carbon from filters — **404**
3. Wooden house exterior debris — **488**
4. Paper contaminated with oil — **489**
5. Sand blasting waste from petroleum tanks — **490**
6. Dewatered sewage sludge — **492**

Sludges

Inorganic – 500 series

*(Waste that is primarily inorganic, with moderate-to-high water content, and low organic content, and **pumpable**.)*

Examples:

1. Wastewater treatment sludge containing phenolics — **503**
2. Zinc plating wastewater sludge containing cyanide — **506**
3. Sludge from pollution removal scrubber — **511**
4. Sediment pond dragout contaminated with lead — **513**
5. Water based drilling mud with brine — **514**
6. Waste metal catalyst with 0.89% organics — **597**

Organic – 600 series

*(Waste that is primarily organic, with moderate-to-high water content, and low inorganic content, and **pumpable**.)*

Examples:

1. Still bottoms from naptha recovery — **602**
2. Ink and paint sludge from printing billboards — **604**
3. Bioremediation sludge from oil spill cleanup — **607**
4. Motor repair facility sludge with grease — **603**
5. Refinery wastewater sludge with petroleum compounds — **695**
6. Waste lubricating grease — **696**

Gases

Inorganic – 701

(Waste that is primarily inorganic with a low organic content and is a gas at atmospheric pressure.)

Organic – 801

(Waste that is primarily organic with low-to-moderate inorganic content and is a gas at atmospheric pressure.)

Appendix H

Codes for Out-of-State Waste Generators and Receivers

Codes for States of the United States			
State or Country	Abbreviation	Generator No.	Receiver No.
Alabama	AL	D0001	D0001
Alaska	AK	D0002	D0002
Arizona	AZ	D0004	D0004
Arkansas	AR	D0005	D0005
California	CA	D0006	D0006
Colorado	CO	D0008	D0008
Connecticut	CT	D0009	D0009
Delaware	DE	D0010	D0010
Dist. of Columbia		D0011	D0011
Florida	FL	D0012	D0012
Georgia	GA	D0013	D0013
Hawaii	HI	D0015	D0015
Idaho	ID	D0016	D0016
Illinois	IL	D0017	D0017
Indiana	IN	D0018	D0018
Iowa	IA	D0019	D0019
Kansas	KS	D0020	D0020
Kentucky	KY	D0021	D0021
Louisiana	LA	D0022	D0022
Maine	ME	D0023	D0023
Maryland	MD	D0024	D0024
Massachusetts	MA	D0025	D0025
Michigan	MI	D0026	D0026
Minnesota	MN	D0027	D0027
Mississippi	MS	D0028	D0028
Missouri	MO	D0029	D0029
Montana	MT	D0030	D0030
Nebraska	NE	D0031	D0031
Nevada	NV	D0032	D0032
New Hampshire	NH	D0033	D0033
New Jersey	NJ	D0034	D0034
New Mexico	NM	D0035	D0035
New York	NY	D0036	D0036
North Carolina	NC	D0037	D0037
North Dakota	ND	D0038	D0038
Ohio	OH	D0039	D0039
Oklahoma	OK	D0040	D0040
Oregon	OR	D0041	D0041
Pennsylvania	PA	D0042	D0042
Rhode Island	RI	D0044	D0044
South Carolina	SC	D0045	D0045
South Dakota	SD	D0046	D0046
Tennessee	TN	D0047	D0047
Utah	UT	D0049	D0049
Vermont	VT	D0050	D0050
Virginia	VA	D0051	D0051
Washington	WA	D0053	D0053
West Virginia	WV	D0054	D0054
Wisconsin	WI	D0055	D0055
Wyoming	WY	D0056	D0056

Country Codes		
State or Country	Generator No.	Receiver No.
American Samoa	D0083	D0083
Australia	F0095	F0095
Austria	F0078	F0078
Bahamas Islands	F0002	F0002
Belgium	F0069	F0069
Belize	F0091	F0091
Brazil	F0086	F0086
Cambodia	F0001	F0001
Canada	F0063	F0063
Chile	F0007	F0007
China	F0005	F0005
Columbia	F0003	F0003
Denmark	F0067	F0067
El Salvador	F0097	F0097
England	F0064	F0064
Finland	F0070	F0070
France	F0076	F0076
Germany	F0068	F0068
Greece	F0084	F0084
Guam	D0075	D0075
Haiti	F0093	F0093
Holland	F0079	F0079
Honduras	F0011	F0011
Hong Kong	F0080	F0080
India	F0006	F0006
Italy	F0090	F0090
Jamaica	F0089	F0089
Japan	F0062	F0062
Luxemburg	F0092	F0092
Malaysia	F0077	F0077
Marshall Islands	F0074	F0074
Mexico	F0061	F0061
Navajo Nation	D0057	D0057
Netherlands	F0071	F0071
Netherlands Antilles (A,B,C)	F0010	F0010
Nicaragua	F0094	F0094
Norway	F0081	F0081
Offshore beyond 12 mi.	F0087	F0087
Pacific Islands	F0072	F0072
Panama	F0082	F0082
Peru	F0085	F0085
Puerto Rico	D0060	D0060
Saudi Arabia	F0088	F0088
Slovenia	F0009	F0009
South Africa	F0004	F0004
Spain	F0065	F0065
Sweden	F0096	F0096
Taiwan	F0099	F0099
Thailand	F0008	F0008
Trinidad de Tobago	F0098	F0098
Venezuela	F0073	F0073
Virgin Islands	D0066	D0066