Please replace Part IV with the following pages

MSW AUTH NO. 2284A

PART IV – SITE OPERATING PLAN

CITY OF EL PASO, TEXAS
GREATER EL PASO LANDFILL MAJOR AMENDMENT
PROJECT NO. 155488

REVISION 1
MAY 16, 2025

Landfill Permit Amendment
Part IV – Site Operating Plan
MSW Auth No. 2284A

prepared for

City of El Paso, Texas
Greater El Paso Landfill Major Amendment
El Paso County, Texas

Project No. 155488

Revision 0, October 31, 2024
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prepared by

Burns & McDonnell Engineering Company, Inc.
6200 Bridge Point Pkwy, Building 4, Suite 400, Austin, TX 78730
Texas Firm Registration No. F-845

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List of Abbreviations

Abbreviation	Term/Phrase/Name
ADC	alternate daily cover
AST	aboveground storage tank
CESQG	Conditionally Exempt Small Quantity Generators
CFCs	chlorinated fluorocarbons
CFR	Code of Federal Regulations
Clint Landfill	Clint Landfill MSW Permit No. 1482
cy	cubic yards
DOT	Department of Transportation
EPA	United States Environmental Protection Agency
GEP Landfill or facility	Greater El Paso Landfill Municipal Solid Waste Permit No. 2284A
GLER	Geomembrane Liner Evaluation Report
hp	horsepower
IPaC	Information for Planning and Conservation
lbs	pounds
mg/kg	milligram per kilogram
MSW	municipal solid waste
NSPS	New Source Performance Standards
Owner/Operator	City of El Paso
PCB	polychlorinated biphenyl
RACM	Regulated asbestos containing material
SLER	Soils and Liner Evaluation Report
SOP	Site Operating Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission of Environmental Quality
USFWS	U.S. Fish and Wildlife Service
yd	yard

IV.1.0 Introduction [30 TAC §330.65(a)]

The Greater El Paso Landfill Municipal Solid Waste Permit No. 2284A (GEP Landfill or facility), is an existing facility located in southeast El Paso County approximately 26 miles from downtown El Paso, Texas, 3.5 miles northeast of Clint, and 6 miles southeast of Horizon City. The GEP Landfill is located immediately east of Interstate Highway 10 at Darrington Road. The GEP Landfill is owned and operated by the City of El Paso (owner/operator).

The GEP Landfill is approximately 311 acres in size. The owner/operator acquired the property which covers portions of Section 16 and 25 in Block 78, TSP4 of T&P surveys in 1981, 1995, and 1996. The City is the sole owner of the property which was purchased from Texas Pacific Land Trust.

The GEP Landfill is located east of and adjacent to the existing Clint Landfill MSW Permit No. 1482 (Clint Landfill). The two landfills share a common boundary and other features including the entrance road, fee collection station/field office, maintenance building, and fuel storage building. The two landfills also share all personnel and motorized vehicles. The fuel storage building houses a 10,000-gallon steel aboveground storage tank (AST) used for storage of diesel. The maintenance building is used for the routine maintenance of vehicles and equipment, as well as for storage of materials.

There is one entrance to the facility via Darrington Road located near the northwestern corner of the subject property. Patrons are able to bring solid waste to the facility, where it is disposed of in various landfill cells. Access to the facility is controlled by toll collections and scale operations. The perimeter of the facility is bound by an approximately six-foot-high chain link fence or equivalent. During non-work hours, gates at the entrance of the facility are locked.

The GEP Landfill is located in a generally undeveloped area east of the City of El Paso. There are no drains or surface areas at the site known to be connected to navigable waters of the United States.

The GEP Landfill has been divided into two parcels by a utility easement that bisects the property into a north parcel and south parcel. The parcels were developed independently of each other and will remain as such after closure due to the easement. Phase 1 is located north of the utility easement, while Phase 2 is located south of the utility easement. Defined individual cells represent discrete construction limits for extending the landfill base excavation and lining system.

This Site Operating Plan (SOP) is intended to provide general guidance for facility management for day-to-day operations at the GEP Landfill. The SOP will facilitate facility operation in compliance with applicable Texas Commission of Environmental Quality (TCEQ) regulations and current standards of practice in the industry, compatible with the design of the facility. The landfill operations reflect standards of practice in the solid waste industry and are compatible with the facility's permitted design. This SOP will also serve as a reference source and is to be used as a training tool for landfill personnel. The annual acceptance rate provided in this SOP is 2,000 tons per day. The quantities of waste received are expected to increase in conjunction to both population increase and economic activity. Unusual events such as extreme storms will cause temporary increases in the quantity of waste received.

Plans and procedures referenced in this SOP are either included as Appendices to the permit application or other permit documents. These documents, as modified from time to time and approved by the TCEQ, are made a part of the operating record. Compliance with these plans and procedures is required by this SOP. The approved site development plan, the site operating plan, the final closure plan, the post-closure maintenance plan, the landfill gas management plan, and all other documents and plans required by Title

30 Texas Administrative Code (TAC) Chapter 330 will become operational requirements and will be considered a part of the operating record of the facility.

In concert with the operating requirements presented in the main body of this SOP, the owner/operator will follow the other guidelines established in the appendices of this SOP.

IV.2.0 Recordkeeping Requirements [30 TAC §§330.121(a), 330.123, 330.125, 330.675]

To comply with 30 TAC §330.121(a), these plans and documents are part of the Site Operating Record. Any deviation from the permit and incorporated plans or other related documents associated with the permit is a violation of 30 TAC §330.

In accordance with 30 TAC §330.123, the owner/operator will provide written notice in the form of a Soils and Liner Evaluation Report (SLER) and/or Geomembrane Liner Evaluation Report (GLER) detailing the construction and lining of a new disposal cell. The reports will be submitted to the TCEQ for review 14 days prior to the placement of any waste in the new cell. With the exception of the initial opening of the landfill, if verbal or written response from the TCEQ is not provided by the end of the 14th day following TCEQ receipt of the report(s), placement of solid waste may begin. All SLER and GLER approvals will be maintained in the Site Operating Record.

In accordance with 30 TAC §330.125(a), a copy of the permit, the approved Site Development Plan, the Site Operating Plan, the Final Closure Plan, the Post-closure Maintenance Plan, the Landfill Gas Management Plan, and any other required plan or other related document will be maintained at the landfill field office, located at the address below.

Environmental Services
City of El Paso
7968 San Paulo Dr.
El Paso, Texas 79907

The owner/operator will, within seven working days of completion or receipt of analytical data, as appropriate, record and retain in the operating record all information required by 30 TAC §330.125(b).

The information listed in **Table IV.2-1** will be recorded and retained in the Site Operating Record, per 30 TAC §330.125(c). The executive director will be notified in writing annually of each significant addition to the Site Operating Record.

The Site Operating Record will be maintained in an organized format which allows the information to be easily located and retrieved. All information contained in the Site Operating Record will be furnished upon request to the TCEQ executive director and will be made available for inspection by the executive director.

All information contained within the Site Operating Record and the different required plans will be retained for the active life of the facility including the post-closure care period as required by 330.125(d).

In accordance with 30 TAC §330.125(e), personnel training records will be maintained in accordance with 30 TAC §335.586(d) and (e).

In accordance with 30 TAC §330.125(f), the owner/operator will maintain personnel operator licenses issued in accordance with 30 TAC, Chapter 30, Subchapter F (relating to Municipal Solid Waste Facility Supervision) as required.

Consistent with 30 TAC §330.125(g) the executive director may set an alternative schedule for recordkeeping and notification.

To comply with 30 TAC §330.125(h), records documenting the annual waste acceptance rate will be maintained in the Site Operating Record. The annual acceptance rate will be documented on the quarterly and annual solid waste summary reports required by 30 TAC §330.675. The reports required by 30 TAC §330.675 will be provided to the executive director. The Waste Acceptance Plan form is provided in Part I/II, Appendix I/II.C – Waste Acceptance Plan. Whenever the annual waste acceptance rate exceeds the estimated waste acceptance rate, and the increase is not due to a temporary occurrence, the owner/operator will file an application to modify the permit application, including the revised estimated waste acceptance rate, in accordance with 30 TAC §305.70(l) within 90 days of the exceedance as recognized by the sum of the most recent four quarterly summary reports. The requested modification will include any necessary adjustments to the SOP to accommodate a larger waste acceptance rate.

Table IV.2-1: Recordkeeping Schedule

Records To Be Maintained	Rule Citation
All location restriction demonstrations	§330.125(b)(1)
Inspection records, training procedures, and notification procedures relating to excluding the receipt of prohibited waste	§330.125(b)(2)
All results from gas monitoring and any remediation plans relating to explosive and other gases (if required)	§330.125(b)(3)
Unit design documentation for leachate or gas condensate placement	§330.125(b)(4)
Groundwater monitoring and corrective action demonstration, certification, findings, monitoring, testing, and analytical data	§330.125(b)(5)
Closure and post-closure care plans and any monitoring, testing, or analytical data relating to post-closure requirements	§330.125(b)(6)
Any and all cost estimates and financial assurance documentation relating to financial assurance for closure and post-closure	§330.125(b)(7)
Any and all information demonstrating continued compliance with the small community exemption criteria	§330.125(b)(8)
Copies of all correspondence and responses relating to the operation of the facility, modifications to the permit, approvals, and other matters pertaining to technical assistance	§330.125(b)(9)
Any and all documents, manifests, trip tickets, etc., involving special waste	§330.125(b)(10)
Records of the application rate and total amount of any spray-applied alternative daily cover applied to the working face, if applicable	§330.125(b)(11)
Any other document(s) as specified by the approved permit or by the executive director	§330.125(b)(12)
Personnel training records in accordance with 30 TAC §335.586(d) and (e)	§330.125(e)
Personnel operator licenses in accordance with Chapter 30, Subchapter F	§330.125(f)
Alternative schedules and notification requirements, if applicable	§330.125(g)
Records to document the annual waste acceptance rate, including quarterly solid waste summary reports and the annual solid waste summary reports required by 30 TAC §330.603	§330.125(h)
Load inspection records	§330.127(5)(B)
Fire occurrence notices	§330.129
Inspection records and training procedures relating to fire prevention and site safety	§330.129
Access control breach and repair notices	§330.131

Records To Be Maintained	Rule Citation
All site inspection and maintenance documentation	§330.131
Record(s) of each unauthorized material removal event	§330.133(b)
Record of alternative operating hours, if applicable	§330.135(d)
Records of all landfill marker inspections	§330.143(a)
Reports and other submittals pertaining to landfill gas monitoring	§330.159
Water, crude oil and/or natural gas well location and plugging reports, if applicable	§330.161(a)-(c)
Cover inspection records	§330.165(h)

Table IV.3-2: GEP Landfill Facility Equipment List

Equipment Type	Number (Minimum)	Typical Size	Function
Dozers	1	240 horsepower (hp) or greater	Waste and soil spreading and compaction
Scraper	1	20 cubic yards (cy) or greater	Transportation of daily cover, firefighting support
Compactor	1	80,000 pounds (lbs) or greater	Waste spreading and compaction
Water Truck	1	At least 2500 gallons	Dust control, firefighting support
Water Tank	1	2500 gallons	Firefighting support
Portable Litter Screens	1	10 feet by 10 feet high	Active face litter control
Road Grader or Maintainer	1	Size varies, between 30,000 and 60,000 lbs	Grading of access roads, soil spreading
Excavator	1	2 cy Bucket or greater	Excavation of daily cover and other excavation projects
Articulated Hauler	5	23 cy or greater	Transportation of daily cover
Front End Bucket Loader	1	188 hp, 3.3 cy	Aggregate/waste handler
Roll Off	1	40 yard (yd) capacity	Material hauler
Backhoe	1	92 hp, 24,000 lb	Aggregate handler/digger
Submersible Leachate Pumps	1 per sump	Size varies	Transfer of leachate from sumps
Electronic Liquid Level Indicators	1 per sump	Size varies	Monitor leachate level in sumps
Diesel Aboveground Storage Tank	1	10,000 gallons	Diesel fuel storage

In addition to the items identified in **Table IV.3-2**, miscellaneous pickup trucks, and other light utility vehicles as well as various water pumps, instruments, and safety and training equipment will be on-site as necessary for operational efficiency.

Backup equipment will be available at the site, kept at an alternative location, or will be secured via contract as needed. The minimum types of machinery listed above should be operable at all times at the site. Backup equipment is available through the City of El Paso and includes one of each of the items listed above.

In the event of equipment repairs or during equipment maintenance periods, the facility will obtain equipment from other facilities, contractors, or local rental companies to avoid interruption of waste services.

IV.4.0 Fire Protection [30 TAC §330.129]

IV.4.1 Fire Protection Plan

The following steps are taken regularly at the facility by designated personnel to prevent fires:

- Prohibiting open burning of waste at all times at the landfill.
- Preventing burning waste from incoming waste loads from being dumped in the active area of the landfill. The Cashiers and equipment operators will be alert for signs of burning waste such as smoke, steam, or heat being released from incoming waste loads.
- Fuel spills will be contained and cleaned up immediately. Soil contaminated with spilled fuel will be excavated and, if authorized, disposed of at the working face. Contaminated soils may be excavated using a shovel for small areas or with heavy equipment as appropriate.
- Landfill equipment will not remain in the vicinity of exposed waste overnight.
- Equipment that is used at the working face will be routinely cleaned through the use of high-pressure water or steam cleaners. The high-pressure water or steam cleaning will remove combustible waste and caked material which can cause equipment to overheat and increase of fire potential. If equipment is cleaned at the working face, the amount of water used to clean will be minimized.
- Dead trees, brush, or vegetation adjacent to the landfill will be removed immediately, and grass and weeds mowed at least semi-annually so that forest, grass, or brush fires cannot spread to the landfill or off-site.
- Smoking is not permitted on the active areas of the landfill site or near the brush grinding operation.
- Soil cover will be used on a daily basis.

IV.4.2 Procedures in the Event of a Fire

Landfill staff will take the following steps, in accordance with this fire protection plan, if a fire is discovered:

- Contact the El Paso Fire Department by dialing 911. The nearest fire department will be notified via emergency dispatch.
- Alert other facility personnel.
- Contact the Director and Assistant Director of the City of El Paso Environmental Services.
- Assess the extent of fire, possibilities for the fire to spread, and alternatives for extinguishing the fire.
- Immediately direct vehicles out of the fire area and prevent unnecessary vehicles from entering the area.
- If it appears that the fire can be safely fought with available firefighting devices until the arrival of the Local Fire Department, attempt to contain or extinguish the fire.
- Upon arrival of Local Fire Department personnel, direct them to the fire and provide assistance as appropriate.
- Do not attempt to fight the fire alone. Do not attempt to fight the fire without adequate personal protective equipment. Be familiar with the use and limitations of firefighting equipment available onsite.

IV.4.3 Firefighting Methods

Firefighting methods for burning solid waste include smothering with soil, separating burning material from other waste, and spraying with water if available from an on-site water truck or detention pond. Small fires may be controlled with hand-held extinguishers. If the fire is at an active disposal area, if possible, the burning waste will be isolated or pushed away immediately before the fire can spread or firebreaks will be cut around the fire before it can spread. If moving the waste is not possible, or if it is unsafe, efforts will be made to cover the working face with earth immediately to smother the fire. The faster that soil can be placed over the fire, the more effective this method will be in controlling and extinguishing the fire. If a fire is in the working face, the burning area will be isolated and pushed away from the working face quickly, or firebreaks will be cut around the fire before it can spread. If this is not possible or is unsafe, efforts to cover the working face with earth will be initiated immediately to smother the fire. The stockpiled daily earthen cover material may be used for firefighting purposes. A reserve water tank will be maintained and dedicated to firefighting.

If a fire occurs on a vehicle or piece of equipment, the equipment operator will bring the vehicle or equipment to a safe stop. If safety personnel allow, the vehicle will be parked away from fuel supplies, uncovered solid wastes, and other vehicles. The engine will be shut off and the brake engaged to prevent movement of the vehicle or piece of equipment.

IV.4.3.1 Earthen Material Coverage

A stockpile of earthen material adequately sized to cover the working face will be maintained at all times within 1,900 feet of the working face or active disposal area. The source will be sized to cover the working face with a six-inch layer of earthen material within one hour of detecting a fire. The maximum size of the working face will be approximately 75,000 square feet. For covering this size of working face, the required stockpile will be 1,389 cubic yards, as calculated below.

Maximum size of working face = 75,000 square feet
Required stockpile = 75,000 square feet. x 0.5 feet x (1 cy/ 27 cubic feet) = 1,389 cy

The operator will maintain sufficient equipment for moving the soil stockpile and placing a six-inch soil cover over the working face within one hour of detecting a fire at the working face. This earthen volume would be distributed across the working face by one of the earthmovers required on-site (a front-end loader or bulldozer, see **Table IV.3-2**). Additional equipment will be used, if applicable, to smother the fire within one hour of being detected.

Example calculations for the length of time to cover the working face are provided in **Table IV.4-1**.

Table IV.4-1: Example Calculations for Time to Cover

Item	Value	Calculation
Volume of Daily Cover	1,389 cy	
Size of Haul Trucks	23 cy	
Number of Haul Trucks	5	
Number of Loads	61	1,389 cy ÷ 23 cy/truck = 60.4 loads
Time to Load	2 min	
Average Truck Speed	15 mph	
Average Truck Speed	1320 ft/min	15 mph x 5280 ft/mi ÷ 60 min/hr
Average Truck Time Round Trip:	2.9 min	1900 ft ÷ 1320 ft/min x 2 ways
Length of Time to Cover Working Face	59.8 min	(2 min + 2.9 min) x 61 trips ÷ 5 trucks
Distance from Working Face	1900 ft	

IV.4.4 Fire Equipment

The facility will be equipped with fire extinguishers of a type, size, location, and number as recommended by the local fire department. Each fire extinguisher will be fully charged and ready for use at all times. Each extinguisher will be inspected on an annual basis and recharged as necessary. A qualified service company will perform these inspections, and all extinguishers will display a current inspection tag. Inspection and recharging will be performed following each use. The fee station, maintenance building, fuel storage building, all landfill equipment, and landfill vehicles will be equipped with fire extinguishers.

Landfill equipment and vehicles will not return to work if the equipped fire extinguisher(s) was used and has not been replaced or refilled.

IV.4.5 Fire Protection Training

Training of on-site personnel in the use of fire extinguishers, fire prevention, response, and fire protection aspects of the SOP will be provided by established professionals on an annual basis. Personnel will be familiar with the use and limitations of firefighting equipment available onsite. Records of this training will be included in the Site Operating Record.

IV.4.6 Vehicle or Equipment Fire

If equipment or other site vehicles experience a fire, the operator will attempt to bring the vehicle or equipment to safe stop, away from fuel supplies, uncovered solid wastes, and other vehicles. The operator will attempt to shut off the engine and engage the brake. Lowering of any implements should be attempted to prevent subsequent movement of the vehicle.

IV.4.7 Structure Fire

The local fire department will be called at 911 for all structure fires. No site personnel will enter a structure on fire.

IV.4.8 TCEQ Notification

After any fire (related to waste management activities that cannot be extinguished within 10 minutes of discovery) occurs, the TCEQ regional office will be contacted. The notification to the regional office will include:

- Contact by telephone as soon as possible, but no later than four hours following the fire discovery, and
- Provide a well-written description of the cause and extent of the fire and the resulting fire response within 14 days of fire detection.

Landfill fires frequently cause concern on the part of nearby landowners, who turn to the TCEQ's regional office for information. Because of this, the facility will provide the appropriate TCEQ regional office as much information as possible regarding the fire and firefighting efforts, as soon as possible after the fire occurs.

The fire prevention and fire control procedures for the facility will be revisited following the occurrence of a significant fire to determine if modifications are warranted.

IV.5.0 Access Control [30 TAC §330.131]

IV.5.1 Site Security

Public access will be controlled to minimize unauthorized vehicular traffic, unauthorized and illegal dumping, and public exposure to hazards associated with landfills. Controlled access will be obtained by at least six-foot tall chain link security fences, or equivalent, and gates. An eight-foot gate controls access at the paved road entrance near the IH-10 and Darrington Road interchange. Two gates are located at each end of a utility easement that bisects the site. These gates will remain locked, and keys are limited to the owner(s) of the utility and the Landfill Manager or Designee. Conspicuous warning signs (NO TRESPASSING) legible from a distance of at least 25 feet will be placed at intervals on the fence surrounding the site. The fee collection booth and maintenance facility will be lighted after sundown.

IV.5.2 Vehicle Access

Public access roads to the landfill are paved, all-weather roads as described in **Section IV.16.0**. Only vehicles authorized by the Landfill Manager or Designee, landfill construction vehicles, landfill personnel vehicles, and authorized haul vehicles have access beyond the scale house or facility entrance. Only authorized haul vehicles or vehicles authorized by the Landfill Manager or Designee are allowed access to the working face. Signage will provide direction to customers and the public to the public entrances of the landfill. Speed limit and directional signs will be placed. On-site signage within the facility will provide direction to public unloading areas.

Vehicles transporting solid waste arriving at the waste disposal working face will be directed to an unloading area by facility personnel or signage. Operations at the working face will be conducted in a manner that allows the prompt and efficient unloading of waste. The approach to the unloading area will be wide enough to safely unload at least two vehicles side-by-side.

Facility personnel will comply with the schedule and notification requirements provided in **Table IV.5-1** for any access breach. Provisions for temporary and permanent repairs may include contracting equipment and materials in order to maintain access control and to direct personnel to oversee access points while repairs are performed.

Table IV.5-1: Notification Requirements

Requirements	Access Breach Repaired within 8 hours	Access Breach Not permanently repaired in 8 hours
Notify TCEQ region office of breach and repair schedule	Not required	Within 24 hours
Notify any local pollution agency with jurisdiction that has requested to be notified	Not required	Within 24 hours
Make temporary repairs	Not required	Within 24 hours
Make permanent repairs	Within 8 hours	Within schedule submitted to regional office in initial notice
Notify regional office when permanent repair completed	Not required	Within schedule submitted to regional office in initial notice

IV.6.0 Unloading of Waste [30 TAC §330.133]

In accordance with 30 TAC §330.133(a), the unloading of solid waste will be confined to as small an area as practical. The maximum size of the unloading and working face area combined will be 300 feet in length by 250 feet in width. There will be one unloading area for both commercial haulers and residential haulers. Trained staff will monitor all incoming loads at the unloading area during operating hours.

In accordance with 30 TAC §330.133(b), the unloading of waste in unauthorized areas is prohibited. Any waste deposited in an unauthorized area will be removed immediately and disposed of properly. A trained employee will be present at all times during operating hours to monitor all incoming loads of waste and will direct traffic to the designated unloading area. Trained personnel will also be on duty during operating hours at the working face to direct and monitor unloading of solid waste.

Trained personnel will monitor the incoming waste. These personnel will be familiar with the rules and regulations governing the various types of waste that can or cannot be accepted into the facility, including knowledge of 30 TAC §330.133. The facility is not required to accept any solid waste that may cause problems in maintaining full and continuous compliance with the permit. The staff involved with unloading or inspection of waste will have 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. A record of unauthorized material removal will be maintained in the Site Operating Record.

Certain wastes are prohibited from disposal at this facility. Prohibited wastes are described in **Section IV.3.5** of this plan. The unloading of unauthorized wastes at the facility will not be allowed. In accordance with 30 TAC §330.133(c), necessary steps will be taken by the landfill operator to ensure compliance. Any prohibited waste will be returned immediately to the transporter or generator of the waste or otherwise properly managed by the facility. The driver may be advised where the waste may be disposed of legally and will be responsible for the proper disposal of this rejected waste.

If the unauthorized waste is not discovered until after the vehicle that delivered it is gone, the waste will be segregated upon discovery 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 facility and properly dispose of the waste as soon as possible. In the event that identification is not possible, the Landfill Manager or Designee/supervisor will notify the TCEQ and seek guidance on how to dispose of the waste as soon as practical, no later than 24 hours after discovery.

IV.7.0 Facility Operating Hours [30 TAC §330.135]

In accordance with 30 TAC §330.135 (a), (b), and (c), the hours of waste operations are to be as follows:

- The waste acceptance hours are from 7:00 a.m. to 4:00 p.m. Monday through Saturday. These hours will be posted on a sign at the entrance to the landfill. The landfill is open on Saturdays to better accommodate the high volume of incoming traffic.
- The site operating hours are between 5:00 a.m. and 7:00 p.m. seven days a week. Transportation of materials and heavy equipment operation outside operating hours is not allowed.
- During special clean-up events such as neighborhood clean-up days, and after damaging storms or similar natural events, the site may observe a modified schedule, as necessary, with the authorization of the TCEQ. Steps for modifying the schedule due to severe weather are presented in the Severe Weather plan located in **Section IV.28.0**.

Daily cover will be applied as soon as possible, but not more than one hour after closure to the public on the working face.

In accordance with 30 TAC, §330.135(d), the facility operator will record in the Site Operating Record the dates, times, and duration when any alternative operating hours are utilized.

IV.11.0 Landfill Markers and Benchmark [30 TAC §330.143]

The Landfill markers are steel or wooden posts (or other TCEQ-approved material) and extend at least 6 feet above the ground surface. To comply with 30 TAC §330.143(a), the markers' visibility will be maintained by removing vegetation and markers will be placed in sufficient numbers to clearly indicate the required boundaries. Markers that are removed or destroyed will be replaced within 15 days of their removal or destruction. Markers determined not to meet regulatory requirements will be replaced within 15 days. Landfill markers will be inspected on a monthly basis and will be maintained and repaired on a scheduled basis. Records of all inspections will be maintained in the Site Operating Record. Markers are repainted, repaired, or replaced to maintain visibility within 15 days.

Landfill markers clearly mark significant features as described in 30 TAC §330.143(b). The executive director may modify specific marker requirements to accommodate unique site-specific conditions. Landfill marker requirements in accordance with 30 TAC §330.143 are provided in **Table IV.11-1**.

Table IV.11-1: Landfill Marker Requirements

Marker	Color	Marker Placement
Site Boundary	Black	Placed at each corner of the site and along each boundary line at intervals no greater than 300 feet.
Buffer Zone	Yellow	Placed at each boundary corner and along each boundary line at intervals no greater than 300 feet.
Easements	Green	Placed along the centerline of an easement and along the boundary of a right-of-way at each corner within the facility and at the intersection of the facility boundary at intervals no greater than 300 feet.
Grid System	White	Placed no greater than 100 feet apart measured along perpendicular lines. Where markers cannot be seen from opposite boundaries, intermediate markers must be installed, where feasible.
Liner Area	Red	Placed so that all areas for which a SLER/GLER has been submitted and approved by the TCEQ are readily determinable.
Floodplain	Blue	Placed at intervals no greater than 300 feet or closer to retain visual continuity at any area within the 100-year floodplain.

A landfill grid system will be installed unless written approval from the executive director has been received. The grid system will encompass at least the area expected to be filled within the next three-year period and marks will be spaced no greater than 100 feet apart measured along perpendicular lines. Where markers cannot be seen from opposite boundaries, intermediate markers will be installed, where feasible.

The SLER/GLER markers will be placed so that approved areas can be readily determined and maintained through construction and operation period. These markers will be located so that they are not destroyed during operations. The location of the liner markers will be tied into the landfill grid system and will be reported on each SLER or GLER submitted. The liner area markers will not be placed inside construction areas.

IV.13.0 Disposal of Large Items [30 TAC §330.147]

In accordance with 30 TAC §330.147(a), large, heavy, or bulky items which cannot be incorporated in the regular spreading, compaction, and covering operations at landfills will be recycled, when feasible. These large items will be collected at the existing public drop-off area located near the facility entrance. Facility personnel will remove the items from the site often enough to prevent these items from becoming a nuisance and to preclude the discharge of any pollutants from the area.

In accordance with 30 TAC §330.147(b), items 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. To comply with 30 TAC §330.147(c), refrigerators, freezers, air conditioners, and any other items containing CFCs will be handled in accordance with 40 CFR §82.156(f), as amended.

For large items that are not excluded from the disposal waste stream, care will be taken to ensure that:

- Large items are excluded from the initial five feet of waste placed over the protective cover of a liner.
- Large items are placed such that they do not interfere with continued waste filling.
- Other smaller, MSW is placed and compacted around the large items.

IV.14.0 Odor Management Plan [30 TAC §330.149]

The facility will comply with all applicable rules concerning burning and air pollution control. In accordance with 30 TAC §330.55, the construction and operation of the facility will comply with 30 TAC §330, Subchapter U. The owner/operator will ensure that any unit of the MSW facility does not violate any applicable requirement of the approved state implementation plan developed under the Federal Clean Air Act, §110, as amended, and 30 TAC §330.15(d) of this title (relating to General Prohibitions), which prohibits the open burning of waste at any municipal solid waste landfill facility.

The owner/operator will ensure that the municipal solid waste facility does not violate any applicable air quality requirement in Part III, Appendix III.H – Landfill Gas Management Plan.

The site will be operated in accordance with the New Source Performance Standards (NSPS) for MSW landfills.

Odors will be controlled at the site, and if they occur, they will be reduced in accordance with the Odor Management Plan.

IV.14.1 Odor Management Plan

Sources of Odor. Potential odor sources associated with a MSW landfill include the wastes being delivered to the landfill, the open working face, ponded water, leachate, and landfill gas. Many of the wastes received at a landfill are a source of odor upon receipt, such as sludges and dead animals. Other wastes have the potential for becoming sources as they biodegrade during the decomposition process. Ponded water and landfill gas could become sources of odor as well.

Odor Control. Methods used to control odors include waste management procedures, the placement of cover materials, the control of ponded water, landfill gas control, and appropriate leachate management. These methods, described below, are also included in Part III, Appendix III.H – Landfill Gas Management Plan as appropriate.

Wastes will be deposited at the working face, spread into layers that can be readily compacted, and covered with daily cover, per 30 TAC §330.165(a) in order to control odors. Dead animals will be covered immediately upon placement into the working face with three feet of waste or two feet of soil. Waste that is identified as particularly odorous by the gate attendant or equipment operator will be buried immediately upon receipt in the working face with prompt compaction and covered with incoming waste and/or daily cover. Leachate is collected in sumps and managed in accordance with the Part III, Appendix III.C – Leachate and Contaminated Water Plan. Leachate collected will be monitored for odors. If odors from the leachate management areas are observed, materials may be used to neutralize and reduce odors or leachate may be disposed off-site at an authorized facility.

If these methods are unsuccessful, additional measures may include limiting the size of the working face, increasing the thickness of cover, identifying wastes streams that require special attention, and using misters or chemical deodorizers.

IV.16.0 Site Access Roads [30 TAC §330.153]

The permanent access road to the site is a paved road extending from a point 500 feet north of the intersection of Interstate Highway 10 and Darrington Road. Landfill haul and access roads are shown on Drawing III.A.3 in Part III, Attachment III.A.

Perimeter access roads will consist of 8 inches of existing native sandy material compacted to 95 percent of maximum dry density in accordance with ASTM D 698. Cell access roads for final cover conditions will consist of 12 inches of soil cement with a 2-inch thick millings layer on top. Perimeter access road and cell access road details are provided on Drawing III.B.6 in Part III, Attachment III.B. The facility will abide by the following aspects regarding site access roads.

In accordance with 30 TAC §330.153(a), tracked mud and associated debris at the entrance to the facility and on the public roadway at the entrance to the facility and trash on public roadways will be removed at least once per day on days when mud and associated debris are being tracked onto the public roadway. For tracking of mud and trash onto public roadways, the paved entrance road will provide mud control for the waste hauling vehicles prior to exiting the site and returning to public access roads (i.e., mud on vehicles will spin-off on the site access roads before the vehicle returns to the public access road). Street-sweeper-type equipment will be used to remove mud accumulations on roads. The facility will keep records to demonstrate compliance with the requirement.

Dust from on-site and other access roadways will not become a nuisance to surrounding areas. Per 30 TAC §330.153(b), a water source and necessary equipment or other means of dust control approved by the TCEQ executive director will be provided. For dust from on-site and other access roadways, the landfill haul roads and access roads will be maintained in a reasonable dust-free condition by periodic spraying from a water truck.

In accordance with 30 TAC §330.153(c), all on-site and other access roadways will be maintained in a clean and safe condition. Litter and any other debris on-site and other access roadways will be picked up at least daily and taken to the disposal area to the extent that landfill staff can accomplish the task in one day.

Access roadways will be graded to minimize depressions, ruts, and potholes at least once per week. For maintenance of on-site and other access roadways, the operator may stockpile concrete rubble, masonry, or other similar material used in maintaining passable access roads. Grading equipment will be used as necessary to control or remove mud accumulations on roads.

IV.22.0 Landfill Cover [30 TAC §330.165]

IV.22.1 Daily Cover [30 TAC §330.165(a)]

Facility personnel will apply six inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste at the end of each operating day to control disease vectors, fires, odors, windblown litter or waste, and scavenging, unless a more frequent interval is required by the executive director to control disease vectors, fires, odors, windblown litter or waste, and scavenging.

IV.22.2 Intermediate Cover [30 TAC §330.165(c)]

Facility personnel will cover all areas that have received waste but will be inactive for longer than 180 days with intermediate or final cover. Intermediate cover will include six inches of suitable earthen material that is capable of sustaining native plant growth and will be seeded or sodded following its application in order to control erosion or will be a material approved by the executive director that will otherwise control erosion. This intermediate cover will not be less than 12 inches of suitable earthen material and will be graded to prevent ponding of water, and plant growth or other erosion control features will be maintained. Runoff from areas which have intact intermediate cover will not be considered as having come into contact with the working face or leachate for the purpose of 30 TAC §330.207.

IV.22.3 Alternative Material Daily Cover [30 TAC §330.165(d)]

IV.22.3.1 Description and Thickness of Material

Alternate daily cover (ADC) material (Posi-Shell or equivalent) is spray applied using a standard hydroseeding machine. The material consists of powdered clay (with adhesives and water conditioners), reinforcing fibers, and coloring. The material is mixed with water to form the base mixture. Once applied, the coating forms a blanket over the waste which ranges from approximately 1/16 to 1/2 inches thick. A material safety data sheet for Posi-Shell is provided in **Appendix IV.A**.

IV.22.3.2 Effects on Vectors, Fires, Odors, and Windblown Litter

ADC will provide the same effective control from vectors, fires, odor, and windblown litter as daily cover soil.

- Vector Control: Application of ADC to the working face is an effective vector deterrent. The ADC forms a seal that isolates food sources and inhibits flies from laying additional larvae. ADC discourages other vectors such as rodents and birds.
- Fire Control: ADC is an effective fire control material. First, the coating effectively seals the waste from the atmosphere causing the interstitial gases to eventually become oxygen-depleted and less susceptible to ignition. Second, ADC is nonflammable. When an acetylene torch is applied directly to the ADC, ignition of the ADC or underlying waste does not occur. The ADC utilized passes the ASTM E1354 and D4982 tests for non-flammability.
- Odor Control: The alkaline ADC formulation has an inherent capability to suppress odors. By applying the material as a daily cover, typical landfill odors will be reduced by the calcium oxide (lime) content of the mixture. ADC applied to putrid waste will effectively suppress odors by sealing the outer face of the waste with an alkaline surface layer.

- Windblown Litter Control: ADC is effective for litter control. Due to the stucco-like consistency of the material, a shell is formed over the waste that prevents litter from being carried away by winds.

IV.22.3.3 Operational Methods Utilized for ADC Placement

The ADC will be mixed with water in a standard 1,500-gallon hydroseeding machine (or equivalent), which will be attached/towed by standard landfill heavy equipment. ADC will be sprayed using the hydroseeding machine and will be applied from two directions to eliminate spray shadow and ensure sufficient cover of the waste in all directions. ADC will not be used before or during a heavy rainstorm. The use of ADC will be limited to a 24-hour period, after which either waste or daily cover will be placed.

IV.22.3.4 Landfill Closure Greater than 24 Hours

ADC shall not be used when the landfill is closed for a period greater than 24 hours.

IV.22.3.5 Management and Compliance of ADC

ADC will not exceed constituent limitations imposed on waste authorized to be disposed at the facility. The executive director may require runoff from areas that have ADC to be tested for compliance with the Texas Pollutant Discharge Elimination System stormwater discharge limits, or manage the runoff as contaminated water.

IV.22.4 Final Cover [30 TAC §330.165(f)]

The facility will install final cover for the landfill in accordance with Part III, Appendix III.I – Closure Plan and 30 TAC Chapter 330, Subchapter K.

IV.22.5 Erosion of Cover [30 TAC §330.165(g)]

Erosion of final or intermediate cover will be repaired within five days of detection by restoring the cover material, grading, compacting, and seeding unless the commission's regional office approves otherwise, based on the extent of the damage requiring more time to repair or if the repairs are delayed because of weather conditions. An eroded area is considered to be deep enough to jeopardize the final or intermediate cover if it exceeds four inches in depth as measured from the vertical plane from the erosion features and the 90-degree intersection of this plane with the horizontal slop face or surface. The date of detection of erosion and date of completion of repairs, including reasons for any delays, will be documented in the cover inspection record required under 30 TAC §330.165(h). Refer to **Table IV.3-3** for inspection frequencies and other occasions for conducting inspections of intermediate and final cover. The periodic inspections and restorations are required during the entire operational life and for the post-closure maintenance period.

IV.22.6 Cover Inspection Record [30 TAC §330.165(h)]

The facility will keep a cover application record on-site readily available for inspection by commission representatives and authorized agents or employees of local governments having jurisdiction. This record will specify the date cover (no exposed waste) was accomplished, how it was accomplished, and the last area covered. This applies to daily, intermediate, and ADC. For final cover, this record will 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. The cover inspection record will document inspections required under **Section IV.22.5**, the findings, and corrective action taken when necessary.

APPENDIX IV.A – POSI-SHELL MATERIAL SAFETY DATA SHEET

GHS Safety Data Sheet SDS

LSC Environmental Products, LLC
Issue Date: December 14, 2021

1 Identification

Supplier	LSC Environmental Products, LLC 2183 Pennsylvania Ave Apalachin, NY 13732
Telephone:	607-625-3050
Fax:	607-625-2688
Web:	www.lscenv.com
Product Name	**Posi-Shell® Base Mix**
Description:	Sodium Montmorillonite Clay (SMC) with Synthetic Fibers and Coloring
CAS Number:	N/A
Recommended Use:	Spray Applied Environmental Coatings.

2 Hazards Identification

Route of Entry:		Eye Contact, Skin Contact, Inhalation
Hazards:	Eye:	May cause mechanical irritation.
	Skin:	May cause drying resulting in dermatitis.
	Ingestion:	No known health effects.
	Inhalation:	Acute: Short term exposure may cause mechanical irritation resulting in dry cough. May aggravate existing respiratory illness. Chronic: Repeated inhalation of respirable* crystalline silica above exposure limits can cause lung disease, including silicosis and lung cancer.

NFPA: Not regulated, Non-hazardous

3 Composition / Information on Ingredients

Component	CAS#	Amount
Sodium Montmorillonite Clay (SMC)*	N/A	> 90%

*Typical western SMC contains 1-6% crystalline silica as quartz CAS# 14808-60-7.

4 First-Aid Measures

Eye:	Flush eyes and under eye lids with plenty of water until irritation ceases. Contact physician if irritation persists.
Skin:	Wash with soap and water until clean. Contact physician if irritation develops.
Ingestion:	None known.
Inhalation:	Move to area free from dust. If symptoms of irritation persist, contact physician. Inhalation may aggravate existing respiratory illness.

5 Fire Fighting Measures

Flammability: Non-flammable

6 Accidental Release Measures

Personal Precaution: Avoid breathing dust; wear respirator approved for silica bearing dust.
Cleanup: Vacuum to avoid generating airborne dust. Avoid using water. Material becomes slippery when wet.

7 Handling and Storage

Handling: Use NIOSH/MSHA respirators approved for silica bearing dust when airborne SMC dust levels exceed PEL/TLVs. Clean up spills promptly to avoid making dust. Storage area floors may become slippery if wetted.
Storage: Store in a dry place.

8 Exposure Controls / Personal Protection

Exposure Guidelines (Inhalation):

Component	OSHA PEL (8 hr TWA)	ACGIH TVL
Crystalline Silica as Quartz	0.1 mg/m^3	0.1 mg/m^3
Particles not Otherwise Regulated		
Total Dust	15 mg/m^3	N/A
Respirable Dust	5 mg/m^3	N/A

Engineering Controls: None required for outdoor mixing and application. Use local ventilation to maintain PELs/TLVs if handling indoors.

Personal Protective Equipment:
- Eye and Face Protection: Wear safety glasses or goggles during loading and application to protect from dust, splashing, and spray mist.
- Skin Protection: Wear work gloves and approved work clothing. Personal hygiene measures, such as washing hands and face after working with materials, are recommended.
- Respiratory Protection: When handling generates dust wear P95 dust mask.

9 Physical and Chemical Properties

Appearance: Off-white dry powder. Small quantity of brown powder and fine white fibers also present in package.

Odor:	Not Determined
pH:	8-10 (5% aqueous suspension)
Relative Density (H2O=1):	2.45-2.55
Bulk Density (at 20º C):	55 lbs/cu ft as dry product
Melting Point:	Approx. 1450º C
Solubility in Water:	<2% soluble by weight.
Flammability:	Non-flammable

10 Stability and Reactivity

Stability:	Stable
Hazardous Decomposition Products:	None under normal handling conditions.
Hazardous Polymerization:	Will not occur.
Incompatible Materials:	Hydrofluoric Acid.

11 Toxicological Information

Carcinogenicity:

- Sodium Montmorillonite Clay is not listed by ACGIH, IARC, NTP, or OSHA.
- IARC, 1997, concludes that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica from occupational sources (IARC Class 1), that carcinogenicity was not detected in all industrial circumstances studied and that carcinogenicity may depend on characteristics of the crystalline silica or on external factors affecting its biological activity. NTP classifies respirable crystalline silica as "known to be a human carcinogen" (NTP 9th Report on Carcinogens - 2000). ACGIH classifies crystalline silica quartz as a suspected human carcinogen (A2).

12 Ecological Information

No information available.

13 Disposal Considerations

Bury in licensed landfill according to local, state, and federal regulations.

14 Transportation Information

US DOT: Non-regulated

15 Regulatory Information

None of the components in this product are known to be regulated by national or international regulatory bodies.

16 Other Information

SDS Status: Revised from MSDS format in 2015 to comply with GHS requirements.

All information presented herein is believed to be accurate; however, it is the user's responsibility to determine in advance of need that the information is current and suitable for their circumstances.
No warranty or guarantee, expressed or implied, is made by LSC Environmental Products, LLC as to this information or as to the safety, toxicity, or effect of the use of this product.