130 ENVIRONMENTAL PARK

APPENDIX G5

LANDFILL GAS MONITORING PROBE BORING/COMPLETION LOGS

130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383

TYPE I PERMIT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN

ATTACHMENT H
CLOSURE PLAN

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014

Revised June 2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

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6/20/2014

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3 CLOSURE PROCEDURES

30 TAC §330.457

3.1 Closure Sequence

130 Environmental Park will conduct sequential closure as areas are completed to design grades of the landfill throughout the life of the landfill. The procedure allows for successive closure of fill areas by placement of final cover, construction of drainage and erosion control features, and establishment of vegetative cover. This procedure will be followed until all cells have been closed. All areas, regardless of the time of closure, will be closed in accordance with the applicable regulations and the closure plan, and a Final Cover Evaluation Report (FCER) will be submitted to TCEQ documenting closure activities.

3.2 Closure During Active Life

As described above, the final cover will be constructed as fill areas achieve the design contours. Should closure of the landfill become necessary at any time during the active life of the landfill, the following steps shall be taken:

- The final waste received will be placed and properly compacted.
- The Large Items Storage Area, Used/Scrap Tire Storage Area, Citizen's Convenience Center, Wood Waste Processing Area, Leachate Storage Area, and Truck Wheel Wash will be closed and dismantled as described in Section 4.2. All waste, waste residue and demolition materials from these facilities will be disposed in the landfill.
- Cell excavations will be filled with suitable material, and the site will be graded to promote runoff and prevent ponding.
- The top of the landfill will be regraded and reshaped as needed to provide the appropriate slope for positive drainage.
- The final cover system will be constructed consistent with the details included in Appendix H2 – Final Cover System Details.
- During the first growing season following application of final cover, the site will be vegetated with appropriate grasses to minimize erosion.
- A surface water management system will be constructed to minimize erosion.
- A closure certification will be prepared by a registered professional engineer and submitted to the TCEQ for approval.
- All proper notices and documentations will be filed with the appropriate agencies.

4 CLOSURE SCHEDULE

30 TAC §330.457, §330.461

4.1 Final Cover Construction

Final cover will be placed in separate construction phases as areas reach the design top of waste grades. Generally, the final cover will be placed in phases of 10 to 30 acres. Final cover placement over completed portions of the site will consist of the following steps:

- Survey controls will be implemented to control the filling of solid waste to the bottom level of the daily/intermediate cover layer elevation.
- The final cover system layers will be constructed. Testing of the various components of the final cover system will be performed in accordance with Attachment D8.
- A final cover certification report and an as-built survey will be prepared by an independent registered professional engineer and submitted to the TCEQ for approval.
- The TCEQ-approved final cover certification report will be maintained in the site operating record and the final cover log will be updated to reflect the area where final cover has been placed. The TCEQ region office will also be notified where final cover has been placed.

4.2 Closure of Storage and Transfer Units

The Large Item Storage Area, Citizen's Convenience Center, Used/scrap Tire Storage Area, Wood Waste Processing Area, Leachate Storage Facility, and Truck Wheel Wash will be closed in accordance with 30 TAC §330.459. The storage and transfer units may be closed during the active life of the landfill or upon final closure, except for the leachate storage facility which will remain operational throughout the post-closure care period. Closure of the leachate storage facility is addressed in Attachment I – Postclosure Plan. Closure activities for the storage and transfer units will be accomplished as outlined below.

- 130 Environmental Park, LLC will remove all waste, waste residues, and any recovered materials from the transfer and storage unit.
- The transfer and storage unit will be dismantled and removed offsite or disposed onsite.
- 130 Environmental Park, LLC will evacuate all materials to an authorized facility.

~~4.24.~~3 Final Closure Activities

Once the facility has received its final waste, the facility will be closed consistent with 30 TAC §330.457. The final closure activities will be accomplished as outlined below.

- No later than 90 days prior to initiation of final facility closure, a public notice of facility closure that contains the name, address, and physical location of the facility, the permit number, and the last date of intended receipt of waste will be placed in the newspaper of the largest circulation in the vicinity of the facility. 130 Environmental Park, LLC will also make available an adequate number of copies of the approved final closure and postclosure plan for public access and review.

- No later than 45 days prior to initiation of final closure activities for a landfill unit, 130 Environmental Park, LLC will provide written notification to the executive director of the TCEQ of the intent to close and place this notice in the operating record.

- Following notification of the executive director of the TCEQ of final facility closure, a minimum of one sign will be posted at the main entrance and all other frequently used points of access notifying all persons utilizing the facility of the closure date or date on which further receipt of waste is prohibited. In addition, barriers or gates will be installed at all access points following the closure date to adequately prevent unauthorized dumping of solid waste at the closed facility.

- Final closure activities will commence within 30 days after known final receipt of wastes, except as provided in Section 4.3.

- Final closure activities will be completed within 180 days of initiation of final closure activities, except as provided in Section 4.3. Within 10 days after completion of final closure activities, a certification signed by an independent licensed professional engineer will be submitted by registered mail to the TCEQ for review and approval. This certification will verify that final closure has been completed in accordance with the closure plan and will include all applicable documentation necessary for certification of final closure. Once approved, this certification will be placed in the operating record.

- Within 10 days after completion of final closure activities of all landfill units at the facility, a certified copy of an Affidavit to the Public in a form provided by the Executive Director (see Figure H1.2 for a sample) will be submitted by registered mail to the TCEQ in accordance with §330.19 and a copy placed in the operating record. In addition, a certified notation will be recorded on the deed to the facility or some other instrument that will in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and the use of the land is restricted according to the provisions specified in the Postclosure Care Plan and 30 TAC §330.~~465~~, Subchapter T. Within 10 days after completion of final closure activities of the facility, a certified copy of the modified deed or other

instrument will be submitted to the TCEQ and a copy placed in the operating record.

- In accordance with 30 TAC §330.171(c)(3)(C), if the facility has accepted RACM, a specific notation that the facility accepted RACM will be placed in the deed records for the facility with a diagram identifying the RACM disposal area. Concurrently, a notice of the deed recordation and a copy of the diagram identifying the asbestos disposal areas will be submitted to the executive director.

These steps in the closure process are depicted on Figure H1.1. Following receipt of the required final closure documents and an inspection report from the TCEQ region office verifying proper closure of the MSWLF facility, according to the approved closure plan, the executive director may acknowledge the termination of operation and closure of the facility and deem it properly closed. Postclosure care maintenance will begin immediately upon the date of final closure as approved by the TCEQ.

~~4.34.4~~ Provisions for Extending Closure Period

If 130 Environmental Park has remaining capacity in a landfill unit at the time of its closure, final closure activities will begin no later than one year after the most recent receipt of wastes. Any request for an extension beyond the one year deadline for the initiation of final closure will be submitted to the executive director for review and approval and will include all applicable documentation to demonstrate that the unit or site has the capacity to receive additional waste and that 130 Environmental Park, LLC has taken, and will continue to take, all steps necessary to prevent threats to human health and the environment.

If necessary, a request for an extension of the completion of final closure activities will be submitted to the executive director for approval. This request will include all applicable documentation necessary to demonstrate that final closure will, of necessity, take longer than 180 days and all steps have been taken and will continue to be taken to prevent threats to human health and the environment.

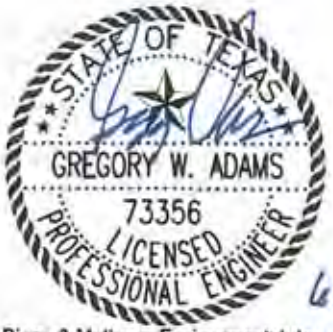
5 CLOSURE COST ESTIMATE

30 TAC §330.503(a)

The estimated cost of hiring a third party to close the largest area of the landfill requiring final closure at any time during the active life of the unit is ~~$10,097,680~~10,116,890.00. The detailed cost estimate is included in Part III, Attachment J – Cost Estimates for Closure and Post Closure Care.

130 ENVIRONMENTAL PARK

APPENDIX H2
FINAL COVER SYSTEM DETAILS



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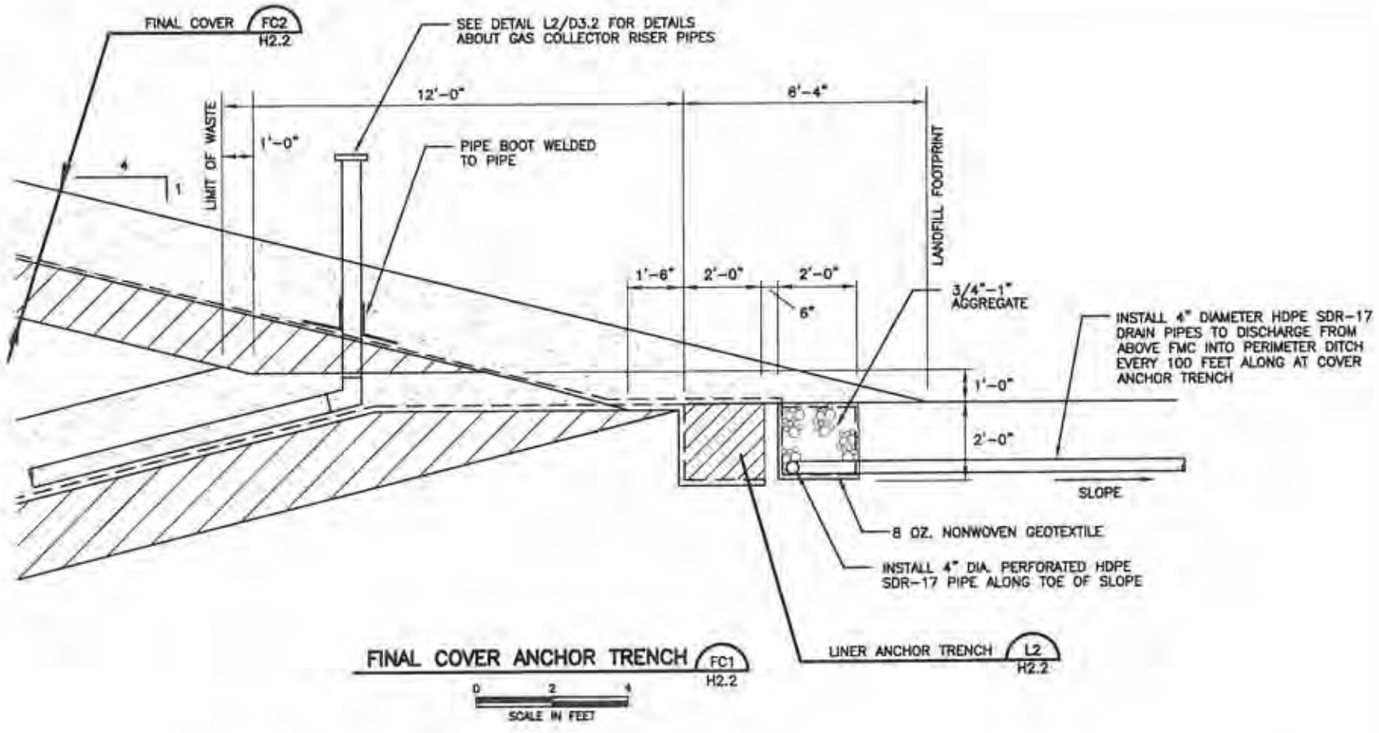
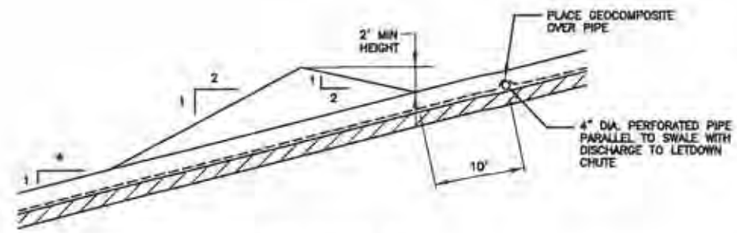


FINAL COVER ANCHOR TRENCH FC1 H2.2

0 2 4
SCALE IN FEET



SIDESLOPE SWALE FC3 H2.2

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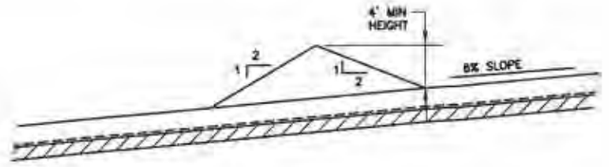

TOPSLOPE SWALE FC4 H2.2

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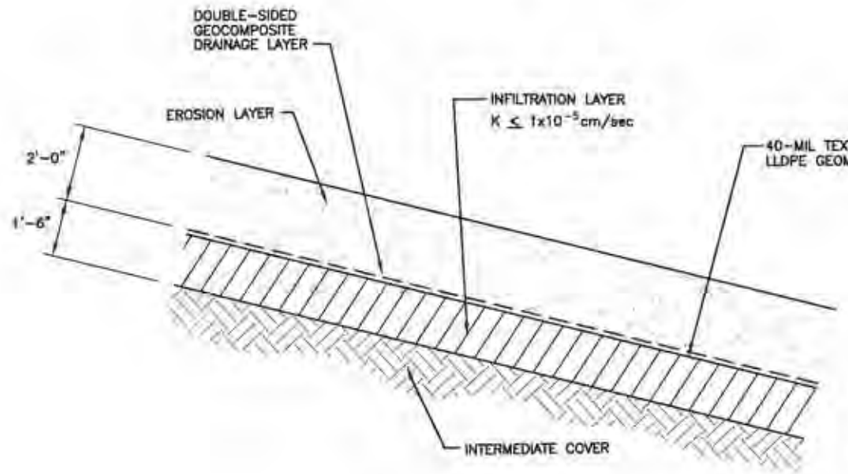
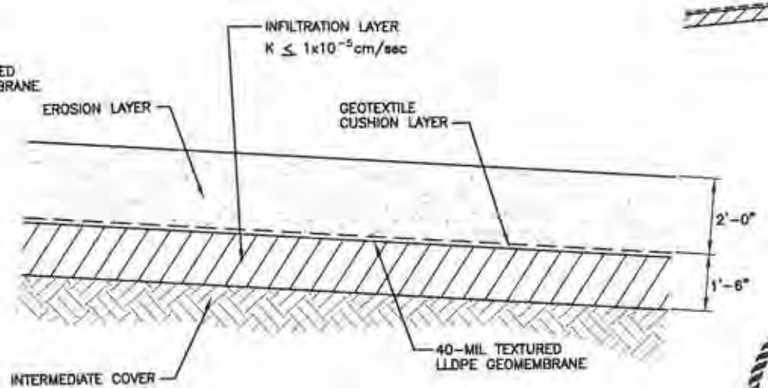


SIDESLOPE



TOPSLOPE

FINAL COVER FC2 H2.2

0 2 4
SCALE IN FEET

STATE OF TEXAS
GREGORY W. ADAMS
73356
LICENSED
PROFESSIONAL ENGINEER
6/20/2014

ISSUED FOR PERMITTING PURPOSES ONLY

FINAL COVER DETAILS

130 ENVIRONMENTAL PARK, LLC
130 ENVIRONMENTAL PARK
TYPE I PERMIT APPLICATION

HIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	6/14	N.O.D. NO. 1 RESPONSE	GLW	GWA	GWA	GWA

DSN. GWA DATE : 10/13
DWN. GLW SCALE : GRAPHIC
CHK. GWA DWG : D3.8-FCDet.dwg
DRAWING H2.2

J:\128\06 130 Park\101\Xtd03\D3.8-FCDet.dwg Layout: H2.2 User: gwhite

130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383

TYPE I PERMIT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN

ATTACHMENT I
POSTCLOSURE PLAN

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014

Revised June 2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-834

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5 POSTCLOSURE CARE COST ESTIMATE I-6

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Firm Registration No. F-256

- Maintain and operate the landfill gas monitoring system in accordance with the requirements of §330.371. In accordance with 30 TAC §330.371, the minimum frequency of landfill gas monitoring will be quarterly. However, 130 Environmental Park, LLC reserves the right to request TCEQ approval of an alternate monitoring frequency. Such a request will be based on supporting data available at the time of the request.

2.2 Decreasing Postclosure Care Period

The length of the postclosure care maintenance period may be decreased by the TCEQ if 130 Environmental Park, LLC submits a documented certification, signed by an independent registered professional engineer and including all applicable documentation necessary to support the certification, which demonstrates that the reduced period is sufficient to protect human health and the environment. Applicable documentation may include data from monitoring of groundwater, surface water, leachate levels, and landfill gas. The certified documentation must be reviewed and approved by the TCEQ prior to decreasing the length of the postclosure care maintenance period.

2.3 Increasing Postclosure Care Period

The length of the postclosure care maintenance period may be increased by the TCEQ if it is determined that the increased duration is necessary to protect human health and the environment. It is understood that 130 Environmental Park, LLC will receive appropriate notification of any such proposed changes prior to the TCEQ's final determination.

2.4 Completion of Postclosure Care

At the completion of the postclosure care maintenance period, 130 Environmental Park, LLC will close the leachate storage facility in accordance with 30 TAC §330.459. Closure activities for the leachate storage facility will be accomplished as outlined below:

- 130 Environmental Park, LLC will remove all waste, waste residues, and any recovered materials from the leachate storage facility.
- The leachate storage facility and equipment will be dismantled and removed offsite.
- 130 Environmental Park, LLC will evacuate all materials to an authorized facility and disinfect all leachate handling equipment and appurtenances.

Upon completion of the postclosure care maintenance period, 130 Environmental Park, LLC will submit to the TCEQ documented certification signed by an independent licensed professional engineer and verifying that postclosure care maintenance has been completed in accordance with the approved postclosure plan. The submittal will include all documentation necessary for certification of completion of postclosure care maintenance. The certification will be placed in the site operating record upon approval. Certification of completion of the postclosure care maintenance period and voluntary permit revocation will be conducted in accordance with §330.465.

5 POSTCLOSURE CARE COST ESTIMATE

30 TAC §330.463(b)

The estimated cost of hiring a third party to conduct postclosure care activities in accordance with the postclosure plan is ~~$6,665,148~~6,715,148. The detailed cost estimate provided in Part III, Attachment J – Cost Estimates for Closure and Postclosure Care.

130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383

TYPE I PERMIT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN

ATTACHMENT J
COST ESTIMATES FOR CLOSURE AND POSTCLOSURE CARE

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014

Revised June 2014

Biggs & Mathews Environmental, Inc.
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Prepared by

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Closure Cost Estimate Calculations

APPENDIX J2
Postclosure Care Cost Estimate Calculations

APPENDIX J3
Evidence of Financial Assurance

6/20/2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

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J-2 Postclosure Care Cost Estimate

DRAWINGS

J.1 Largest Area Requiring Final Closure

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Table J-1
Closure Cost Estimate

No.	ITEM		COST
1.0	**Engineering Costs**		
1.1	Topographic Survey	$	16,640.00
1.2	Boundary Survey	$	9,360.00
1.3	Site Evaluation	$	15,600.00
1.4	Development of Plans	$	75,000.00
1.5	Administration	$	12,000.00
1.6	Inspection and Testing	$	412,500.00
1.7	Groundwater Consultant	$	-
1.8	Permit Compliance Package	$	12,000.00
	Engineering Total	$	553,100.00
2.0	**Construction Costs**		
2.1	Final Cover System		
2.1.1	Infiltration Layer	$	810,000.00
2.1.2	Flexible Membrane Cover	$	1,275,000.00
2.1.3	Drainage Layer	$	990,000.00
2.1.4	Cushion Layer	$	140,000.00
2.1.5	Erosion Layer	$	1,012,500.00
2.1.6	General Fill	$	1,692,900.00
2.2	LFG Control System	$	1,837,500.00
2.3	Vegetation	$	225,000.00
2.4	Site Grading and Drainage	$	375,000.00
2.5	Site Fencing and Security	$	-
2.6	Leachate Collection System	$	-
2.7	Monitor Wells	$	-
2.8	Gas Probes	$	-
2.9	Storage and Transfer Units		
2.9.1	Cleaning, Dismantling and Disposal	$	25,000.00
2.9.2	Large Item Storage Area Materials	$	7,200.00
2.9.3	Citizen's Convenience Center Materials	$	800.00
2.9.4	Used/Scrap Tire Storage Area Materials	$	1,000.00
2.9.5	Wood Waste Processing Area Materials	$	4,000.00
2.9.6	Truck Wheel Wash Materials	$	4,000.00
	Construction Total	$	8,399,900.00
	Engineering and Construction Total	$	8,953,000.00
	Contingency	$	895,300.00
3.0	**Administrative Costs**		
3.1	Contract Performance Bond	$	179,060.00
3.2	TCEQ Contract Admin/Legal Fees	$	89,530.00
	Total	$	10,116,890.00

***This closure cost estimate was developed in 2014 dollars.**

Table J-2
Postclosure Care Cost Estimate

No.	ITEM	ANNUAL COST
1.0	Engineering Costs	$ 93,640.00
2.0	Construction / Maintenance Costs	$ 30,178.00
3.0	Leachate Disposal Costs	$ 13,575.00
4.0	Landfill Gas Management Costs	$ 47,750.00
	Subtotal	$ 185,143.00
	10% Contingency	$ 18,514.30
5.0	Administration	$ 18,514.30
	Annual Postclosure Costs	$ 222,171.60
	Closure of Leachate Storage Facility	$ 50,000.00
	Total Postclosure Costs	$ 6,715,148.00

*This postclosure cost estimate was developed in 2014 dollars.

130 ENVIRONMENTAL PARK

APPENDIX J1
CLOSURE COST ESTIMATE CALCULATIONS

Biggs & Mathews Environmental, Inc.
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Includes pages J1-1 through J1-5

2.6 Leachate Collection System Completion

At the time of closure, the leachate collection system will have been installed in existing cells. No additional expenses will be incurred for this item.

2.7 Groundwater Monitoring Well Installation

Groundwater monitoring wells will have been installed during site development. No additional expenses will be incurred for this item.

2.8 Landfill Gas Probe Installation

Landfill gas probes will have been installed during site development. No additional expenses will be incurred for this item.

2.9 Storage and Transfer Units

~~Storage and transfer units at 130 Environmental Park include~~ Materials from the large item storage area, ~~reusable material staging area,~~ citizen's convenience center, used/scrap tire storage area, wood waste processing area, ~~leachate storage facility,~~ and truck wheel wash. ~~All waste materials that are processed or stored~~ will be disposed at an authorized facility.~~the active working face prior to closure.~~ Materials from the reusable material processing area will be used in the final closure construction. The citizen's convenience center containers will be cleaned. The leachate storage ~~tanks~~ facility will remain on site to collect generated leachate during postclosure conditions.

3.0 ADMINISTRATIVE COSTS

3.1 Contract Performance Bond

The cost of a performance bond is two percent of the total cost of engineering and construction.

3.2 TCEQ Administration of Contracts and Legal Fees

One percent of the total cost of engineering and construction has been included to account for TCEQ administration of contracts and legal fees.

130 Environmental Park
CLOSURE COST ESTIMATE

Required: Estimate the cost to hire a third party to conduct final closure activities.

References:
1. Texas Natural Resources Conservation Commmission, *Cost Estimate Handbook for Closure and Postclosure Care*, Version 1, August 1993.
2. *2012 RS Means Heavy Construction Cost Data*, 26th Annual Edition.
3. Construction costs from recent similar construction projects and cost estimates from heavy construction contractors.

Solution:

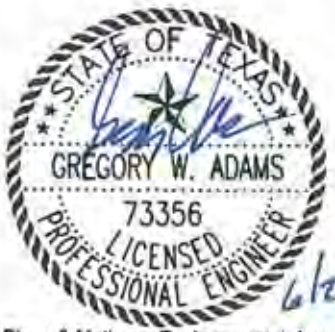
Final closure will require construction of final cover over	75 total acres
Final closure will require administrative closure of	520 acres
Final closure will require the installation of	0 monitor wells
Final closure will require the installation of	0 gas probes
Final closure will require the installation of	75 acres of LFG Control System

No.	ITEM	QTY	UNIT	UNIT COST	TOTAL COST
1.0	**Engineering Costs**				
1.1	Topographic Survey	520	ac	$ 32.00	$ 16,640.00
1.2	Boundary Survey	520	ac	$ 18.00	$ 9,360.00
1.3	Site Evaluation	520	ac	$ 30.00	$ 15,600.00
1.4	Development of Plans	75	ac	$ 1,000.00	$ 75,000.00
1.5	Administration	1	LS	$ 12,000.00	$ 12,000.00
1.6	Inspection and Testing	75	ac	$ 5,500.00	$ 412,500.00
1.7	Groundwater Consultant	0	LS	NA	$ -
1.8	Permit Compliance Package	1	LS	$ 12,000.00	$ 12,000.00
	Engineering Total				$ 553,100.00
2.0	**Construction Costs**				
2.1	Final Cover System				
2.1.1	Infiltration Layer	75	ac	$ 10,800.00	$ 810,000.00
2.1.2	Flexible Membrane Cover	75	ac	$ 17,000.00	$ 1,275,000.00
2.1.3	Drainage Layer	55	ac	$ 18,000.00	$ 990,000.00
2.1.4	Cushion Layer	20	ac	$ 7,000.00	$ 140,000.00
2.1.5	Erosion Layer	75	ac	$ 13,500.00	$ 1,012,500.00
2.1.6	General Fill	594,000	cy	$ 2.85	$ 1,692,900.00
2.2	LFG Control System	75	ac	$ 24,500.00	$ 1,837,500.00
2.3	Vegetation	75	ac	$ 3,000.00	$ 225,000.00
2.4	Site Grading and Drainage	75	ac	$ 5,000.00	$ 375,000.00
2.5	Site Fencing and Security	0	ac	NA	$ -
2.6	Leachate Collection System	0	lf	NA	$ -
2.7	Monitor Wells	0	ea	NA	$ -
2.8	Gas Probes	0	ea	NA	$ -
2.9	Storage and Transfer Units				
2.9.1	Cleaning, Dismantling and Disposal	1	ls	$ 25,000.00	$ 25,000.00
2.9.2	Large Item Storage Area Materials	180	tn	$ 40.00	$ 7,200.00
2.9.3	Citizen's Convenience Center Materials	20	tn	$ 40.00	$ 800.00
2.9.4	Used/Scrap Tire Storage Area Materials	25	tn	$ 40.00	$ 1,000.00
2.9.5	Wood Waste Processing Area Materials	100	tn	$ 40.00	$ 4,000.00
2.9.6	Truck Wheel Wash Materials	100	tn	$ 40.00	$ 4,000.00
	Construction Total				$ 8,399,000.00
	Engineering and Construction Total				$ 8,952,000.00
	Contingency	10	%		$ 895,300.00
3.0	**Administrative Costs**				
3.1	Contract Performance Bond	2.0	%		$ 179,060.00
3.2	TCEQ Contract Admin/Legal Fees	1.0	%		$ 89,530.00
	Total				$ 10,115,890.00

***This closure cost estimate was developed in 2014 dollars.**

130 ENVIRONMENTAL PARK

APPENDIX J2
POSTCLOSURE CARE COST ESTIMATE CALCULATIONS



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Includes pages J2-1 through J2-3

and mowing. This item also Includes plugging groundwater monitoring wells and gas monitoring probes and cleaning and removal of the leachate storage tanks at the end of the postclosure care period.

3.0 LEACHATE DISPOSAL

During the postclosure care period, the volume of leachate being generated should decrease substantially due to the completion of the final cover system. From Part III, Attachment D6 – Leachate and Contaminated Water Management Plan, Appendix D6-B, an average leachate generation rate of 190 gallons per acre per year was used to determine the volume of leachate generated during the period. This amounts to 271,500 gallons per year with a disposal rate of $0.05 per gallon for disposal costs. A one-time cost to address the closure of the leachate storage facility at the end of the postclosure period is included in the total postclosure cost.

4.0 LANDFILL GAS MANAGEMENT SYSTEM

The installed active LFG control system will require routine O&M. The annual O&M cost for the active system is assumed to be $250.00 per acre. This item includes correcting problems identified during site inspections, maintenance and repair of the system as necessary. The cost estimate is based on an average annual value.

5.0 ADMINISTRATION

The cost for a third party to administer postclosure care activities is assumed at 10 percent of the annual postclosure costs.

130 Environmental Park
POSTCLOSURE COST ESTIMATE

Required: Estimate the cost to hire a third party to conduct postclosure care activities.

References: 1. Texas Natural Resources Conservation Commmission, *Cost Estimate Handbook for Closure and Postclosure Care*, Version 1, August 1993.

Solution:

Postclosure care period =	**30**	years
Permit area =	**520**	acres
Waste footprint[1] =	**191**	acres
Number of monitor wells =	**25**	wells
Number of gas probes and buildings =	**36**	probes

No.	ITEM	ANNUAL QTY	UNIT	UNIT COST	TOTAL COST
1.0	**Engineering Costs**				
1.1	Postclosure Plan	NA	LS	NA	$ -
1.2	Site Inspections	520	ac	$ 25.00	$ 13,000.00
1.3	Correctional Plan and Specifications	191	ac	$ 40.00	$ 7,640.00
1.4.1	Groundwater Monitoring	50	event	$ 1,100.00	$ 55,000.00
1.4.2	Landfill Gas Monitoring	144	event	$ 125.00	$ 18,000.00
2.0	**Construction / Maintenance Costs**	191	ac	$ 158.00	$ 30,178.00
3.0	**Leachate Disposal**	271,500	gal	$ 0.05	$ 13,575.00
4.0	**Landfill Gas Management**	191	ac	$ 250.00	$ 47,750.00
	Subtotal				$ 185,143.00
	Contingency	10	%		$ 18,514.30
5.0	**Administration**	10	%		$ 18,514.30
	Annual Postclosure Cost				$ 222,171.60
	Closure of Leachate Storage Facility	1	LS	$ 50,000.00	$ 50,000.00
	Total Postclosure Cost				$ 6,714,148.00

***This postclosure cost estimate was developed in 2014 dollars.**

[1]The waste footprint includes the final cover in place and largest area requiring final closure.

130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383

TYPE I PERMIT APPLICATION

PART IV

SITE OPERATING PLAN

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014

Revised June 2014

Biggs & Mathews, Inc.
Firm Registration No. F-834

Prepared by

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6/25/14

Biggs & Mathews, Inc.
Firm Registration No. F-834

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LIST OF ACRONYMS

ADC – Alternative Daily Cover
ADCOP – Alternative Daily Cover Operating Plan
CFR – Code of Federal Regulations
EPA – U.S. Environmental Protection Agency
GLER – geosynthetics liner evaluation report
LCS – leachate collection system
LFG – landfill gas
MSW – municipal solid waste
non-RACM – nonregulated asbestos-containing material
OSHA – Occupational Safety and Health Administration
PCB – polychlorinated biphenyls
RACM – regulated asbestos-containing material
SLER – soil liner evaluation report
SOP – site operating plan
SPCC – Spill Prevention, Control, and Countermeasures Plan
SWPPP – Stormwater Pollution Prevention Plan
TAC – Texas Administrative Code
TCEQ – Texas Commission on Environmental Quality
TxDOT – Texas Department of Transportation
TPWD – Texas Parks and Wildlife Department
WMTX – Waste Management of Texas, Inc.
WWTP – wastewater treatment plant

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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.

(5) 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.

(6) Liquids Restrictions. The following wastes are prohibited from disposal:

(a) Bulk or noncontainerized 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.

(ii) The container is designated to hold liquids for use other than storage.

(iii) The waste is household waste.

(7) Regulated hazardous waste as defined in 30 TAC §330.3.

(8) Polychlorinated biphenyls (PCB) wastes, except as permitted under 40 CFR Part 761.

(9) Radioactive substances as defined in Chapter 336, except as authorized in Chapter 336 or that are subject to an exemption of the Department of Health Services.

In addition, this facility will not accept for disposal medical waste, sewage, dead animals and/or slaughterhouse waste, sludge, grease trap waste, grit trap waste, liquid waste from municipal sources, municipal hazardous waste from conditionally exempt small quantity generators, or out-of-state wastes. The facility will not accept contaminated soil that exceeds 1,500 parts per million (ppm) or a constituent of concern exceeding levels in §335.521(a)(1), Table 1. The facility will not accept Class 1 industrial solid wastes, except for wastes that are Class 1 only because of asbestos content.

Known prohibited wastes detected during the inspection will be returned immediately to the hauler. If the hauler is not available, the waste will be safely stored until provisions for removal can be arranged.

Known prohibited wastes detected during the inspection will be returned immediately to the hauler. If the hauler is not available, the waste will be safely stored until provisions for removal can be arranged.

If prohibited wastes are received and/or disposed of in the landfill, the TCEQ will be notified. As soon as is practical, the prohibited waste will be removed from the site and arrangements made for its proper management at an approved facility.

If hazardous waste or PCB wastes are discovered at the active working face, the landfill office and site manager will be immediately notified. The prohibited waste will be separated or isolated from other municipal solid waste, if practical, by facility personnel trained in proper handling of hazardous waste or PCB wastes. TCEQ will be notified if hazardous waste or PCB wastes is discovered at the active working face. The waste will be manifested and transported to an approved facility for disposal. Should an incident occur at the facility involving the removal of hazardous waste or PCB wastes requiring clean-up, a remediation plan will be developed and submitted to TCEQ for approval.

6 GENERAL INSTRUCTIONS

30 TAC §330.127(6)

6.1 General Site Safety

Site safety will be promoted by properly trained personnel using well-maintained equipment to perform standard work procedures. Site safety will be enhanced by limiting access to the active areas to only authorized personnel. In the event of an emergency, planned emergency response procedures will be followed.

Well-maintained equipment is vital to the safe conduct of daily landfilling operations. Therefore, all site equipment will be maintained in proper working order and all safety guards, backup alarms, and engine kill switches will be operational. The facility will perform an equipment check at the beginning of each workday. The facility will inspect the fire extinguishers and first aid kits monthly. Records of all inspections will be maintained as part of the site operating record.

Access to the site is limited to authorized personnel as described in Section 8 of this SOP. Access is controlled by a combination of signs and physical barriers. Site personnel are responsible to be alert for the entrance of unauthorized personnel.

In the event of an emergency, site personnel will assess the situation, notify the site manager or designated supervisor, and take appropriate actions such as rendering aid, calling for assistance, and closing access to the emergency scene. Emergency numbers will be posted beside the telephone in the gatehouse.

These include:

OFFICE	PHONE
Caldwell County EMS	911 or 512-398-7320
Lockhart Fire and Rescue Department	911 or 512-398-2321
Chisholm Trail Fire Rescue	911 or 512-213-0323
Lockhart Police Department	911 or 512-398-4401
Caldwell County Sheriff Department	911 or 512-398-6777

6.2 Preparedness and Prevention Measures

Preparedness and prevention measures have been developed to minimize both the frequency and severity of accidents and emergency situations threatening human health. Preparedness and prevention measures depend largely on the attentiveness and state of readiness of facility personnel. Preparedness and prevention measures have been developed for one general category and two specific areas of the site: the gatehouse and the on-site access routes. These preparedness and prevention measures are detailed in the following sections.

6.2.1 General

General preparedness and prevention measures that will be followed are:

- Employee breaks or rest periods will be provided to minimize fatigue, improve alertness, and thereby reduce accident potential.
- Access controls will provide for the safety of non-landfill personnel.
- Routine preventive maintenance of equipment will be provided.
- Site inspections of the working areas will be performed by a management representative.
- Appropriate personal safety equipment will be kept on site and maintained in good repair.
- Adequate turning areas for hauling vehicles will be provided.
- Scavenging and unauthorized salvaging will not be allowed.
- Waste unloading will be restricted to designated areas only.
- Site personnel will be alert for possible hazardous or other unauthorized wastes.
- Non-approved wastes will be controlled or contained and removed as necessary.
- Smoking is not allowed on the active areas of the landfill.

6.2.2 Gatehouse

Preventative measures that will be followed in the gatehouse include the following:

- Visually screen all incoming waste loads for unauthorized wastes.
- Monitor to see that all waste loads are adequately covered, or otherwise protected or contained.

- Visually observe incoming vehicles for evidence of improper operation, faulty equipment, or other conditions that could be hazardous to personnel or other persons on site.
- Maintain access to appropriate emergency equipment and first-aid materials.
- Provide emergency telephone numbers that are conspicuously posted in the gatehouse.
- Display signs warning transporters that particular wastes, including regulated hazardous wastes and other nonallowable special wastes, are prohibited.

6.2.3 Landfill Entrance Road, Haul Road, and Access Road

Landfill entrance road, haul road, and access road preventative measures include the following:

- Display speed limit, directional, and other precautionary signs.
- Provide road passable for two-way traffic.
- Maintain roadway free from obstructions.
- Enforce requirements for safe operation of vehicles on site.

7 FIRE PROTECTION PLAN

30 TAC §330.129

7.1 Fire Prevention Procedures

The following steps will be taken regularly by designated landfill personnel to prevent fires:

- Open burning of waste is prohibited at all times.
- Incoming loads with burning waste will not be dumped in the active working face of the landfill. The gate attendant and equipment operators will be alert for signs of burning waste such as smoke, steam, or heat being released from incoming waste loads.
- Should an incoming load with burning waste be observed at the gatehouse or active working face, the gate attendant or equipment operator will direct the driver to a designated area away from the active working face to unload. The burning waste will then be extinguished with water, fire extinguishers, or will be covered with soil to smother the fire.
- Fuel spills will be contained and cleaned up immediately.
- Dead trees, brush, or vegetation adjacent to the active working face will be removed immediately and grass and weeds mowed so that forest, grass, or brush fires cannot spread to the landfill.
- Smoking is not allowed on the active working face, refueling area, and other fire sensitive areas of the landfill. Smoking will be allowed by the site manager in designated areas only.
- The site will be equipped with fire extinguishers in appropriate locations. 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. These inspections will be performed by a qualified service company, and all extinguishers will display a current inspection tag. Inspection and recharging will be performed following each use. At a minimum, the gatehouse, maintenance building, citizen disposal facility, and all landfill heavy equipment will be equipped with fire extinguishers.
- A common firefighting technique that can be quickly employed to fight a landfill fire is smothering with soil. The faster that soil can be placed over the fire, the more effective this method will be in controlling and extinguishing the fire. The stockpiled daily cover may be used for firefighting purposes.

- A stockpile of earthen material will be maintained so that it is available at all times to extinguish a fire. Two separate soil stockpiles will be provided. One stockpile will be provided adjacent to the active working face, and a second soil stockpile will be provided within 2,500 feet of the active working face. The landfill equipment conducting daily waste filling operations will be suitable for placement of additional soil from the earthen stockpile for fire control.

- The total volume of earthen material available from the two stockpiles will be sized to cover the working face with a minimum six-inch layer of earthen material. The earthen material stockpiles shall be provided consistent with the size of the active working face based on the following table:

Size of Working Face		Area of Working Face			Total Size of Stockpiles
		Sq Ft	Cu Ft	Cu Yd	
L	W	L x W	Sq Ft x 0.5	Cu Ft/27	Cu Yd x 1.15
100	100	10,000	5,000	185	213
100	150	15,000	7,500	278	319
100	200	20,000	10,000	370	426
110	200	22,000	11,000	407	468

- The landfill equipment identified in Table 4-1 is sufficient to cover the active working face with a minimum six-inch soil layer from the earthen material stockpiles, within one hour of detecting a fire.

- The soil stockpile adjacent to the active working face will be maintained to provide a minimum of ~~213~~ 468 cy of soil for an active working face size of 0.5 acres. ~~The dozer and compactor operating at the working face will each achieve a production rate of approximately 200 cy per hour for a total hourly production rate of approximately 400 cy.~~

- The dozer and compactor operating at the active working face will cover the active working face with 6-inches of soil in one hour. The achievable production rates for each are as follows:

  - Dozer Capacity (3.5 cy/load) x Production Rate (150 load/hr) = Material Rate (525 cy/hr)

  - Compactor Capacity (3.5 cy/hr) x Production Rate (150 load/hr) = Material Rate (525 cy/hr)

- A soil stockpile or soil borrow area will be provided within 2,500 feet of the active working face and will be maintained to provide a minimum of 468 cy of soil for an active working face size of 0.5 acres. ~~. The haul truck will achieve a production rate of approximately 20 cy per load with a required total round trip of five minutes. The total volume of soil to be provided by one haul truck is approximately 240 cy.~~

- The excavator, haul trucks, and/or scraper operating at the soil stockpile or soil borrow area will provide the required volume of soil to replenish the active working face soil stockpile in one hour. The required volume of soil to be delivered for a 0.5 acre active working face soil stockpile is 468 cy. The achievable production rates for each are as follows:

  - Excavator Capacity (3 cy/load) x Production Rate (240 load/hr) = Material Rate (720 cy/hr)

  - Haul Trucks Capacity (16 cy/load) x Production Rate (30 load/hr) = Material Rate (480 cy/hr)

  - Scraper Capacity (20 cy/load) x Production Rate (30 load/hr) = Material Rate (600cy/hr)

- ~~The active working face will be limited to the total capacity of the dozer and compactor capacity and the excavator and haul truck capacity unless larger equipment or additional capacity is provided.~~

- The active working face size will be limited to the material rate that the dozer and compactor is required to achieve to cover the active working face with 6-inches of soil in one hour. An active working face that exceeds 0.5 acres will require either larger equipment with a greater production rate or additional equipment.

- The active work face size will be limited to the material rate of the excavator, haul trucks and/or scraper operating at the soil stockpile or soil borrow area to provide the required volume of soil to replenish the active working face soil stockpile in one hour. An active work face that exceeds 0.5 acres will require either larger equipment with a greater production rate or additional equipment.

- A separate soil stockpile of at least 60 cy will be maintained adjacent to the RACM disposal area only on days when RACM is being accepted. This stockpile will cover the 50-foot by 50-foot maximum disposal area with 6-inches of soil in one hour.

- A separate soil stockpile of at least 468 cy of soil will be maintained adjacent to the non-inert reusable materials staging area. This stockpile will cover the 0.5-acre maximum non-inert materials stockpile area with 6-inches of soil in one hour.

- A separate soil stockpile of at least 275 cy of soil will be maintained adjacent to the wood waste processing area. This stockpile will cover the 125-feet by 100-feet wood waste processing area with 6-inches of soil in one hour.

- Dedicated fire extinguishers will be located at the citizen's convenience center.

7.2 Specific Firefighting Procedures

The following procedures will be followed in the event of a fire:

- 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. Fire extinguishers should be used to extinguish the fire if possible, without risk to the equipment operator.

- Incoming loads with burning waste will be prevented from being unloaded in the active working face of the landfill. The gate attendant and equipment operators will be alert for signs of these loads, such as smoke, steam, or heat being released from incoming waste loads. Should a load with burning waste be observed at the gate or active working face, the gate attendant or equipment operator will direct the driver to a designated area away from the active working face to unload. The load will be covered with soil to smother the fire.

- If a fire is in the working face, the burning area should be isolated or pushed away from the active working face before the fire can spread to other areas of the working face. If isolating or pushing the fire is not feasible or is unsafe, the working face should immediately be covered with earthen material from the stockpile to smother the fire.

- If a fire occurs at the citizen's ~~collection station/recycling facility~~convenience center, landfill personnel should use fire extinguishers to extinguish the fire, if possible. The general rules for fires will be implemented as included in Section 7.3 to protect landfill personnel or visitors.

- Firefighting methods include smothering with soil, separating burning material from other waste, and spraying with water from the water truck or water pumped from nearby ponds or streams. If detected soon enough, a small fire may be fought with a hand-held fire extinguisher. Fire extinguishers will be located at the gatehouse, maintenance building, citizen's ~~disposal facility~~convenience center, and all landfill heavy equipment. Under this circumstance, the fire area should also be watered or otherwise controlled to ensure that the fire is out.

7.3 General Rules for Fires

The following rules will be implemented in the event of a fire at 130 Environmental Park:

- Immediately contact the gatehouse and site manager. Equipment operators will be equipped with two-way radios or cell phones.
- Alert other facility personnel. Equipment operators will be equipped with two-way radios or cell phones.
- Assess extent of fire, possibilities for the fire to spread, and options for extinguishing the fire.
- If it appears that the fire can be safely fought with available fire-fighting devices, attempt to contain or extinguish the fire.
- If landfill personnel cannot extinguish the fire, contact the Fire Department by calling 911.
- Upon arrival of the 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 fire-fighting equipment available on site.

7.4 Fire Protection Training

Landfill personnel will be trained in the contents of Section 7 – Fire Protection Plan in accordance with Section 3.3 – Training. Landfill personnel will maintain a thorough understanding of this SOP and will be trained in fire prevention and fire control as defined in this section. The following topics will be addressed:

- Identification of burning waste, smoke, steam, or heat being released from incoming waste loads
- Procedures to prevent and contain fuel spills
- Fire prevention
- Fire safety
- Firefighting procedures with fire extinguishers, soil, and water as appropriate
- Notification procedures should a landfill fire be observed

In addition, information will be provided to the local fire department regarding waste disposal operations, fire sources, and firefighting techniques related to landfills.

Documentation of training will be placed in the site operating record in accordance with Section 3.3.

7.5 TCEQ Notification

In the event of a fire that is not extinguished within 10 minutes of detection, the TCEQ region office will be contacted immediately after detection, but no later than four hours by phone and in writing within 14 days. The notification will include a description of the fire and resulting response.

8 OPERATIONAL PROCEDURES

30 TAC §§330.131-330.175

8.1 Access Control

Public access to the landfill will be controlled by a perimeter fence located along the facility boundary. Access to the landfill from US183 is limited to the entrance road through the gatehouse area. The gate attendant controls access and monitors all vehicles entering and exiting the site.

8.1.1 Site Security

Site security measures are designed to prevent unauthorized persons from entering the site, to protect the facility and its equipment from possible damage caused by trespassers, and to prevent disruption of facility operations caused by unauthorized site entry.

Unauthorized entry into the site is minimized by controlling access to the landfill site with the perimeter fence and entrance gate. A perimeter fence will be located along all sides of the facility boundary. Perimeter fencing consisting of barbed wire, woven wire, wooden fencing, plastic fencing, pipe fencing, or other suitable material will be provided. A gate constructed of suitable fencing materials will be located on the entrance road. The gate will be locked when the landfill is not accepting waste.

Entrance to the landfill is monitored by the gate attendant during waste acceptance hours. Outside operating hours, the gate to the site will be locked.

Entry to the active portion of the site will be restricted to designated personnel, approved waste haulers, and properly identified persons whose entry is authorized by site management. Visitors may be allowed on the active area only when accompanied by a site representative.

8.1.2 Traffic Control

Public access to the facility will be provided via the entrance road from US183. Signs will be located along the entrance road directing traffic to the gatehouse. The gate attendant will restrict site access to authorized vehicles and direct these vehicles appropriately. Waste hauling vehicles will be directed to appropriate fill areas by signs located along the landfill haul road and access road. These vehicles will deposit their loads and depart the site. Private, commercial, or public solid waste vehicles will not be allowed access to any areas other than the active portion of the landfill. Site personnel will provide traffic directions as necessary to facilitate safe movement of vehicles.

Within the site, signs will be placed along the landfill haul road and access road at a frequency adequate for users to be able to understand where disposal areas are and

which roads are to be used. Roads not being used for access to disposal areas will be blocked or otherwise marked for no entry.

8.1.3 Inspection and Maintenance

The perimeter fence and gates will be inspected weekly. Refer to Section 8.26 of this SOP for a site inspection and maintenance schedule. Maintenance will be performed as necessary. Should a breach be detected during inspection or at any other time, every effort will be made to make repairs within eight hours of detection. Notification is not required if permanent repair is made within eight hours. Should repair require more than eight hours, the TCEQ region office and any local pollution agency with jurisdiction that has requested to be notified will be notified of the breach within 24 hours of detection. Temporary repair will be performed within 24 hours of detection and permanently repaired within the time specified to the region office following notification.

8.2 Unloading of Waste

The landfill is authorized to receive municipal solid waste, special wastes allowable under §330.171, and industrial wastes allowable under §330.173. The categories of wastes that are prohibited at this site by state and federal regulations are discussed in Section 5 of this SOP. Special wastes will be handled at this landfill in accordance with TCEQ regulations and with Section 8.20 – Disposal of Special Wastes, Section 8.21 – Disposal of Industrial Waste, and Appendix IVB – Regulated Asbestos-Containing Material Plan of this SOP. Various unloading and processing areas are shown in Part III, Attachment B, Drawing B.2 and Drawing B.3.

Trained personnel will monitor the incoming waste on the trucks at the gatehouse, ~~and~~ at the ~~unloading area~~/active working face, and all other waste unloading areas. Trained personnel at the active working face will be on duty during waste acceptance hours to observe waste unloading. Trained personnel will be on duty at the RACM working face, large item storage area, reusable materials staging area, citizen's convenience center, used/scrap tire storage area, and wood waste processing area when waste is unloaded in these areas.

Trained personnel at the active working face will have the authority and responsibility to reject loads which contain prohibited wastes with approval of the site manager. These personnel will also have the authority to require the hauler or transporter to remove prohibited waste immediately upon discovery. Should suspected prohibited waste be identified, the working face personnel will immediately notify the site manager. The site manager may direct staff to remove or manage prohibited waste appropriately, should the responsible hauler or transporter not be identified.

Solid waste unloading will be controlled to prevent disposal in locations other than those specified by site management. Any waste deposited in an unauthorized area will be promptly removed and disposed of properly at the active working face. Control will also be used to confine the working face to a minimum width consistent with the rate of incoming waste while allowing for safe and efficient operation. The maximum size of the unloading area will be 0.5 acres with a maximum width of approximately 200 feet.

A maximum of three working faces may be used during any specific time period, but typically one working face will be used except during inclement weather. The three active working faces include two working faces for disposal of municipal solid waste and one for RACM. The size of the working faces will be limited by the availability and capacity of site equipment to place cover soil, and the location of soil stockpiles, including those adjacent to the working face.

On days when RACM is accepted, the RACM unloading and disposal area will be a width consistent with the rate of incoming RACM while allowing for safe and efficient operation. The RACM unloading and disposal area will not be larger than 50-feet by 50-feet. The RACM unloading area is further discussed in Appendix IVB – Regulated Asbestos-Containing Material Plan.

The large item storage area for large items and white goods may be provided near the active working face or may be provided near the citizen's convenience center. Control will be used to confine the large item storage area to an area consistent with the rate of incoming large items and white goods while allowing for safe and efficient operation. The large item storage area is further discussed in Section 8.9 and Section 8.25.1.

The citizen's convenience center for waste drop-off will be located within the site entrance facilities. The citizen's convenience area will include roll-off containers for waste and recycled goods and may include an area for large item storage. Control will be used to confine this area to a minimum area consistent with the rate of incoming waste while allowing for safe and efficient operation. The citizen convenience area is further discussed in Section 8.25.3

Any prohibited waste that is not discovered until after it is unloaded shall be returned to the vehicle that delivered the waste. The generator shall be responsible for the proper transportation and disposal of this rejected waste. In the event the unauthorized waste is not discovered until after the vehicle that delivered it has departed the site, the waste shall be segregated and controlled as necessary. An effort shall first be made to identify the entity that deposited the prohibited waste and have them return to the site and properly transport and dispose of the waste. A record of unauthorized waste removal will be maintained in the site operating record.

Signs with directional arrows and 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. Refer to Section 5 of this SOP for additional waste handling procedures.

8.3 Hours of Operation

130 Environmental Park is authorized to accept waste from public and private haulers from 3:00 a.m. to 5:00 p.m. (14 hours) on Monday through Friday and from 5:00 a.m. to 12:00 p.m. (7 hours) on Saturday. 130 Environmental Park will post the hours for waste acceptance from private and public waste haulers on the site entrance sign. 130 Environmental Park may be open other hours, as may be required to provide solid waste

disposal services for special events, inclement weather, emergencies and other circumstances. 130 Environmental Park will notify the TCEQ regional office and will record waste acceptance hours outside of posted hours in the site operating record.

130 Environmental Park is authorized for site operations 24 hours per day, seven days per week. Site operations include construction, earthmoving, monitoring, transportation of construction materials, heavy equipment operation, and other non-waste acceptance operations.

130 Environmental Park will be closed to waste acceptance or waste disposal operations on Sunday.

8.4 Site Signs

A sign will be displayed at the gated entrance to the site. This sign will measure at least four feet by four feet, and have lettering of at least three inches in height. The sign will state the name of the site, type of site, hours and days of waste acceptance, hours and days of site operation, and the TCEQ permit number. An emergency 24-hour contact phone number and the local emergency fire department phone number will also be included. The emergency contact phone number will reach an individual with the authority to obligate the facility at all times the facility is closed. The site sign will be readable from the facility entrance.

8.5 Control of Windblown Solid Waste and Litter

The working face will be maintained and operated in a manner to control windblown solid waste. Windblown material and litter will be collected and properly managed to control unhealthy, unsafe, or unsightly conditions by the following methods:

- Waste transportation vehicles using this facility will be required to use adequate covers or other means of containment. The adequacy of covers or containment of incoming wastes will be checked at the gatehouse. A sign will be prominently displayed at the gatehouse stating that all loads shall be properly covered.

- The active working face will be limited to as small an area as practical for the safe operation of the incoming waste hauling vehicles, operation of compaction equipment, and delivery and placement of daily cover soils, and alternative daily cover.

- Daily cover or alternative daily cover will be applied to assist with the control of windblown waste.

- The facility will provide litter control fences, as necessary, at appropriate locations near the working face and elsewhere. The litter control fences will be constructed of wire or plastic mesh screens attached to portable or permanent frames or temporary fences. The litter control fence will be of sufficient height and will be located as close as practical to the active area to control windblown waste and litter.

- Windblown waste and litter along the entrance road, the gatehouse area, within the permit boundary, and that has accumulated along the permit boundary will be collected once a day during facility operations and delivered to the active working face.

- Windblown waste or litter may occasionally escape the facility control measures and cross the permit boundary onto adjacent property. The facility will contact the adjacent property owners to seek permission for litter pick-up.

- Screening barriers such as temporary berms, trees, and visual screening berms may also serve as additional wind breaks.

8.6 Easements and Buffer Zones

8.6.1 Easements

In accordance with §330.141(a) and §330.543(a), solid waste unloading, storage, disposal, or facility operations will not occur within any easement, buffer zone, or right-of-way that crosses the site. No solid waste disposal will occur within 25 feet of the centerline of any utility line or pipeline easement, unless otherwise authorized by the TCEQ. All easements will be clearly marked as specified in Section 8.7 of this SOP. Pipelines and utility easements will be marked with posts extending a minimum of six feet above ground surface at intervals that do not exceed 300 feet. Easements are shown in Part I, Appendix IA, Drawing IA.6; and Appendix IC, Drawing IC.1.

8.6.2 Buffer Zones

The buffer zone is defined as the area between the permit boundary and the limit of waste disposal activities and solid waste processing activities, unless otherwise authorized. In accordance with §330.543(a), no solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the facility, including the 125-foot buffer zone of the landfill. The buffer zones will provide for safe passage of fire-fighting and other emergency vehicles. Landfill buffer zones are a minimum distance of 125 feet for waste disposal operations. These buffer zones are shown on Part II, Appendix IIA, Drawing IIA.12 and Drawing IIA.14. Buffer zones for all solid waste processing activities will be a minimum of 125 feet. All buffer zones will be clearly marked as specified in Section 8.7 of this SOP.

8.7 Landfill Markers and Benchmark

Landfill markers will be installed to clearly mark significant features as described in §330.143(b). The markers will be posts (or other TCEQ approved material) and will extend at least six feet above the ground surface. The markers will not be obscured by vegetation and will be placed in sufficient numbers to clearly show the required boundaries. Markers that are removed or destroyed will be replaced within 15 days of their removal or destruction or 15 days following completion of construction activities within the affected area. Landfill markers will be inspected monthly and will be maintained and repaired or replaced within 15 days of discovering a marker does not

meet regulatory requirements. The landfill markers will be maintained so that they are visible. Refer to Section 8.26 of this SOP for the site inspection and maintenance schedule. Inspection records will be maintained in the site operating record. Markers will be repainted as needed to retain visibility.

The required landfill markers are:

Landfill Markers

Marker	Color	Descriptions
Site Boundary	Black	The boundary markers will be placed at each corner of the site and along each boundary line at intervals no greater than 300 feet. Fencing may be placed within these markers as required.
Buffer Zone	Yellow	The buffer zone markers will be placed along each buffer zone boundary at all corners and between corners at intervals of 300 feet.
Easements	Green	Easement and right-of-way markers will be placed along the centerline of an easement and along the boundary of a right-of-way at each corner within the site and at the intersection of the site boundary.
Grid System	White	The landfill grid system will encompass at least the area expected to be filled within the next three-year period. Markers will be spaced no greater than 100 feet apart measured along perpendicular lines. Intermediate markers will be installed if necessary to allow visibility from opposite boundaries.
SLER/GLER	Red	The SLER markers will be placed so that all areas for which a SLER has been submitted and approved by the Commission are readily determinable. These markers will be located so that they are not destroyed during operations or until operations extend into the next area and will provide site workers immediate knowledge of the extent of approved disposal areas. The location of the markers will be tied into the landfill grid system and reported on each SLER submitted.
Floodplain	Blue	Flood protection markers will be placed a maximum of 300 feet apart or closer if necessary to retain visual continuity. The markers will be installed for any area within a solid waste disposal facility that is subject to flooding prior to the construction of a flood protection levee.

A permanent benchmark is established within the permit boundary in an area that is readily accessible and will not be used for disposal. The benchmark is a United States Coast and Geodetic Survey benchmark consisting of a bronze survey marker stamped with the elevation and survey date and set in concrete. The location of the permanent benchmark is identified in Part III, Attachment B, Drawing B.2. The benchmark will be maintained so that it is visible during operating hours.

8.8 Materials Along the Route to the Site

Consistent with §330.145, 130 Environmental Park will take steps to encourage that vehicles hauling waste to the site are enclosed or provided with a tarpaulin, net, or other means to properly secure the load. These steps are necessary to prevent the escape of any part of the load by blowing or spilling. The landfill will post signs at the entrance gate and gatehouse notifying haulers of this requirement and will enforce this rule by applying surcharges or other similar measures. The site manager may report habitual offenders to local law enforcement officers. 130 Environmental Park will provide for the cleanup of waste materials spilled along and within the right-of-way of the regular delivery routes within two miles of the entrance on US183 when the facility is in operation. Cleanup of the spilled materials will be performed once per day for the following regular delivery routes:

- US183 and TX 130 – two miles north of the site entrance and two miles south of the site entrance
- FM1185 and Schuelke Road – between southbound and northbound US183

130 Environmental Park will consult with officials of TxDOT concerning the cleanup of state highways and right-of-ways consistent with §330.145.

Refer to Part II, Appendix IIA, Drawing IIA.1 for location of the roadway segments that cleanup of spilled materials will be performed once a day.

8.9 Disposal of Large Items

A storage area for large items and white goods may be provided, should these items be accepted. The large items and white goods include items such as ovens, dishwashers, freezers, air conditioners, and other large items. These items will be recycled to prevent a nuisance and to preclude discharge of fluids, but will not be stored in excess of 180 days.

Large items that are not recycled will be disposed of at the working face. Care will be taken during disposal of large items to ensure that: (1) large items are excluded from the initial five feet of waste placed above the protective cover of a liner; (2) large items are placed such that they do not interfere with continued waste filling; and (3) that smaller municipal solid waste is placed and compacted around the large items.

Refrigerators, freezers, air conditioning units, or other items containing chlorinated fluorocarbon (CFC) refrigerant will be handled in accordance with 40 Code of Federal Regulations (CFR) §82.156(f), as amended. Refrigerators, freezers, air conditioning units, or other items containing CFC will not be accepted unless the CFC contained in the item has been captured and sent to an approved CFC disposal site or recycling facility and the generator or transporter provides written certification that the CFC has been evacuated from the unit. The generator, transporter, or customer may also contract with the landfill to have the CFC removed prior to disposal.

8.10 Odor Management Plan

130 Environmental Park will manage odors associated with waste acceptance and disposal operations consistent with this Odor Management Plan. This plan addresses sources of odors and includes general instructions to control odors or sources of odors.

Measures to control odors and sources of odors may include, but are not limited to, the following items:

- Sources of odors may include ponded water, decomposition of wastes, leachate, contaminated water, and landfill gas (LFG).
- Wastes that are considered to generate significant odors are usually classified as special wastes. Refer to Section 8.20 – Disposal of Special Wastes for waste disposal procedures for odorous wastes.
- Unloading of these wastes at the active working face will be consistent with procedures established in Section 8.2 – Unloading of Waste, which limits the active working face to a minimum width, allowing prompt placement of daily cover or alternative daily cover over wastes that may produce odors.
- Spills of these odor producing wastes will be managed by collecting and transporting these wastes to the active working face for prompt disposal.
- Daily cover consisting of a minimum of six inches of soil or approved alternative daily cover will be placed over these wastes at the end of the working day consistent with procedures established in Section 8.18 – Landfill Cover.
- Waste that is determined to require additional procedures will be isolated within the active working face and immediately covered with a minimum of three feet of other solid waste or a minimum of one foot of earthen material upon receipt. Additional daily cover soil will be placed if needed.
- Ponded water at the site will be controlled as detailed in Section 8.19 of this SOP. Odors will be controlled through regrading of areas consistent with Section 8.18 – Landfill Cover.
- Leachate and contaminated water will be managed in accordance with Part III, Attachment D6 – Leachate and Contaminated Water Management Plan. Leachate will be transferred from the leachate collection system either directly to an enclosed liquid transfer vehicle or an on-site enclosed leachate storage tank(s).
- Odor reduction may be achieved by adjustments to the existing gas extraction system or by the installation of additional gas extraction wells.

8.11 Disease Vector Control

The need for vector control (control of rodents, flies, mosquitoes, etc.) will be minimized through daily site operations. Activities designed to control on-site populations of disease vectors include minimization of the size of the active working face; placement of daily, intermediate, and final cover; adherence to the ponded water plan; and following the detailed procedures described in this SOP. 130 Environmental Park will conduct inspections of the daily cover as required by Section 8.26 – Site Inspection and Maintenance Schedule to observe waste disposal operations and to remediate areas that may be conducive to insects and rodents. These areas will be promptly addressed in accordance with procedures established in this SOP. Should daily operations not control vectors, a licensed professional will apply pesticides to ensure that proper chemicals are used and that they are properly applied.

8.12 Site Access Roads

The entrance road provides access from US183 to the gatehouse and other entrance facilities for waste hauling vehicles, operating personnel, and visitors. The entrance road will transition to an all-weather, crushed stone, gravel, concrete rubble, masonry rubble, wood chips, or other similar materials surface beyond the gatehouse and entrance facility area. Other internal landfill roads will be constructed with crushed stone, gravel, concrete rubble, masonry rubble, wood chips, or other similar materials. The all-weather surface entrance, access, and internal roads will provide mud control for the waste hauling vehicles prior to exiting the site and returning to public access roads. During wet weather conditions the site manager will routinely inspect the site and implement measures to further minimize mud tracking onto public access roads, as necessary. Speed bumps along the main access roads between the fill areas and the gatehouse will help jar mud from vehicles. Should mud or other associated debris be tracked onto US183, the material will be removed daily.

A truck wheel wash station may be used to further minimize tracking onto public roads, as necessary. Water from the wheel wash will be collected and stored in a concrete settlement basin for reuse in the wheel wash. Periodically, the settlement basin will be drained and the sediment will be removed from the basin, or the sediments within the settlement basin will be solidified in place and then removed from the basin. The periodic removal of mud and contaminated water will provide odor control. The wash water will be hauled to an authorized off-site facility for treatment and disposal. The sediment, following solidification and passing the paint filter test, will be disposed of in the landfill.

Dust on the landfill haul roads and access roads will be controlled by periodic spraying from a water truck. During dry weather conditions the site manager will routinely inspect the site and establish a frequency, if necessary, to spray the access roads with water to prevent nuisance conditions from developing. Grading equipment will be used weekly to control or remove mud accumulations on internal roads, including the entrance road, as needed. Stockpiles of crushed stone, concrete rubble, masonry demolition debris, or other similar material will be available for use in maintaining passable internal access roads, including regrading to minimize depressions, ruts, and potholes. Refer to Section

8.26 of this SOP for the site inspection and maintenance schedule. The site entrance road, landfill haul road, and access roads will be maintained in a clean and safe condition. Litter and debris will be picked up daily and returned to the active working face.

8.13 Salvaging and Scavenging

Salvaging will not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances. Salvaged materials will be considered as potential recycled materials. Salvaged items will be removed from the site on an as-needed basis, but will not be stored in excess of 180 days, to prevent the items from becoming a nuisance, to preclude the discharge of pollutants from the area, and to prevent an excessive accumulation of the material at the site. Special wastes received at the site will not be salvaged. Pesticide, fungicide, rodenticide, or herbicide containers will not be salvaged unless they are salvaged through a state-supported recycling program. Scavenging will be prohibited at all times and not allowed.

8.14 Endangered Species Protection

Development of the landfill shall be conducted to avoid and minimize potential impacts to endangered or threatened species. 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.

A detailed threatened and endangered species survey and assessment was conducted by a qualified biologist at Halff Associates. The survey, assessment, and coordination with the United States Fish and Wildlife Service (USFWS) and the Texas Parks and Wildlife Department (TPWD) regarding endangered and threatened species is provided in Part II, Appendix IIE – Endangered or Threatened Species Documentation.

A species protection plan is included as Appendix IVC and shall be followed during facility development and operation. No adverse impacts to threatened or endangered species are anticipated as a result of construction or operation of 130 Environmental Park.

8.15 Landfill Gas Control

The control and monitoring of landfill gas for 130 Environmental Park will be in accordance with the Landfill Gas Management Plan (LFGMP) included in Part III, Attachment G. The LFGMP was developed in accordance with §330.371. The LFGMP provides for inclusion of applicable documentation, including monitoring records for landfill gas monitoring probes, in the site operating record, and for submittal to the executive director. Gas monitoring records will be maintained in the site operating record.

8.16 Oil, Gas, and Water Wells

There are no known wells within the waste footprint or within the permit boundary. Should any unknown abandoned water, crude oil, or natural gas wells, or other well associated with mineral recovery, be discovered, 130 Environmental Park will provide written notification to the TCEQ executive director as described below. Plugging and abandonment of any well within the waste footprint will be completed as depicted in the plugged well completion detail provided in Part III, Attachment D3 – Construction Design Details, Drawing D3.2 – Liner Details.

8.16.1 Water Wells

A copy of the well plugging report for any water well found during facility development will be submitted to the appropriate state agency and to the executive director within 30 days after the well is discovered. A permit modification will be submitted to the executive director if revisions to the liner installation plan are required as the result of well abandonment.

8.16.2 Oil and Gas Wells

There are no known existing or abandoned crude oil or natural gas wells (see Part II, Appendix IIA, Drawing IIA.5) within the 130 Environmental Park permit boundary.

If any abandoned crude oil or natural gas wells or other wells associated with mineral recovery are located during site development, the operator will provide the executive director of the TCEQ with written notification of the well's location within 30 days after its discovery. Within 30 days after plugging of any such well, the facility operator shall provide the executive director 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. A copy of the well plugging report to be submitted to the appropriate state agency will also be submitted to the executive director of the TCEQ within 30 days after the well has been plugged. Any producing crude oil or natural gas well that does not affect or hamper landfill operations may be operated within the site if identified in the permit for the landfill or in a written notification to the executive director.

8.17 Compaction

Compaction of incoming waste provides more efficient use of available space and reduces the amount of settling after the fill is complete. Compaction of the waste will be accomplished by a landfill compactor weighing in excess of 40,000 pounds. The site dozer will be used to compact waste should the compactor be temporarily out of service for repairs. Adequate compaction will be accomplished to minimize future consolidation and settlement, and provide for the proper application of intermediate and final cover. The incoming waste will be spread in layers and thoroughly compacted by repeated passages of compaction equipment.

The site manager or designee will be present during the placement of the first five feet of waste over the liner system. The site manager or designee will verify and document that the initial five feet of waste does not contain large bulky items that could damage the liner system or that cannot be adequately compacted.

8.18 Landfill Cover

8.18.1 Soil Management

Management of soil for use in and around the landfill area will be an ongoing process at 130 Environmental Park. In general, soil for use as daily cover, intermediate cover, final cover, and other uses will be available from areas within the permit boundary. Soil will be obtained from excavation that is ongoing as part of the development of future landfill cells or from other suitable sources. This material may be available near the working face (the exact distance varying daily, weekly, etc., depending on the exact stage of development).

In addition to the available material located within the site, stockpiles of material will be kept available on site. Stockpiles will consist of soil that has not previously come in contact with waste, and will be of sufficient volume to provide at least one day's application of six inches of daily cover over the working face. As this stockpile is used, it will be replenished. The soil may also be used in emergency situations for fire control, as discussed in Section 7.

8.18.2 Daily Cover

Daily cover of waste controls disease vectors, windblown waste, odors, fires, scavenging, and promotes runoff from the covered fill area. At least six inches of well-compacted soil cover material that has not been previously mixed with garbage, rubbish, or other solid waste will be placed over all solid waste at the end of each operating day, if alternative daily cover is not used. Refer to Section 8.18.4 for authorized alternative daily cover materials and placement procedures.

To ensure that the daily cover soil will be adequate (i.e., minimize vectors, contaminated stormwater runoff, odors, etc.) the following procedures will be followed:

- The daily cover will be sloped to drain.
- The daily cover will be well compacted with the dozer tracks to minimize infiltration of stormwater, graded to drain, and will not have any waste visibly protruding through it.
- The site manager or his designee will document where daily cover has been placed and visually inspect during placement that a minimum of six inches (compacted thickness) of daily cover soil has been placed and that no waste is exposed through it. The site manager or his designee shall document, on a daily basis, the daily cover placement area and indicate that he has visually verified the thickness and condition in the Cover Inspection Record, as discussed in Section 8.18.8.

- Runoff from areas that have intact daily cover is not considered to have come into contact with the working face or leachate and is considered uncontaminated stormwater runoff.

- After each rainfall event, the site manager or his designee will inspect all daily cover areas for erosion, exposed waste, or other damage and repair as necessary. Runoff from damaged or eroded areas will be handled as contaminated water until repairs are completed.

Areas with six inches of daily cover must be inspected daily for erosion, ponded water, seeps, protruding waste, or other detrimental conditions. Once the area becomes active again, the daily cover may be stripped off prior to additional waste placement and used as daily cover in other areas.

8.18.3 Intermediate Cover

All areas that receive waste and then become inactive for longer than 180 days will be covered with well-compacted earthen material, for a total cover thickness of at least 12 inches. The intermediate cover will be graded to prevent erosion and ponding of water. Six inches of earthen material will be capable of sustaining native plant growth and will be seeded or sodded following its application for erosion control. Plant growth and other erosion control features placed as part of the intermediate cover will be maintained. Runoff from areas that have received intermediate cover is not considered to have come into contact with the active working face or leachate, and is considered uncontaminated stormwater runoff.

8.18.4 Alternative Daily Cover

130 Environmental Park plans to use alternate daily cover material (ADC) in the future. There are no ADC materials included in the application; the operator may propose ADC in the future. Before a specific ADC is used at the site, the operator will seek authorization from the TCEQ. The ADC, if authorized, will be limited to a 24-hour period after which either waste or daily cover as defined in §330.165(a), and applied as described in Section 8.18.2 of this SOP, must be placed.

8.18.5 Temporary Waiver

130 Environmental Park does not anticipate requesting a waiver from the cover requirements of §330.165(a), (c), and (d) due to extreme climatic conditions. Should the landfill decide to request a temporary waiver due to extreme seasonal climatic conditions, the landfill will request a temporary waiver in accordance with §330.165(e).

8.18.6 Final Cover

Final cover placement over individual areas will be in accordance with Part III, Attachment H – Closure Plan and will permit ongoing landfilling operations to continue until the time of final closure. Surface water will be managed throughout the active life of the site to minimize infiltration into the filled areas and to minimize contact with solid waste. Erosion of final cover will be repaired promptly by restoring the cover material, grading,

compacting, and seeding it as necessary. Such periodic inspections and restorations are required during the entire operational life and for the postclosure maintenance period. Refer to Section 8.26 for a site inspection and maintenance schedule.

In general, final cover placement over completed portions of the site will consist of the following steps:

- Survey controls will be implemented to control the filling of solid waste to the bottom level of the final cover layer elevation.
- The final cover system layers will be constructed. Testing of the various components of the final cover system will be performed in accordance with Part III, Attachment D8 – Final Cover Quality Control Plan.
- A final cover certification report complete with an as-built survey will be prepared by an independent registered professional engineer and submitted to the TCEQ for approval.
- The TCEQ-approved final cover certification report will be maintained in the site operating record, and the cover inspection record, as described in Section 8.18.8, will be updated to reflect the area where final cover has been placed. The TCEQ region office will also be notified that final cover placement has occurred at the site.

8.18.7 Erosion of Cover

Intermediate cover will be inspected on a weekly basis. The final cover system, including the erosion control structures, will be maintained during and after construction. During the active life of the site, the final cover system will be inspected on a weekly basis. Erosion gullies or washed out areas of the intermediate or final cover, which are deep enough to jeopardize the intermediate or final cover, will be repaired within five days of detection. Repair of final cover includes restoring cover, grading, compacting, and seeding as required. An eroded area is considered to be deep enough to jeopardize the intermediate or final cover if it exceeds four inches in depth as measured perpendicular from the slope face or surface. Should additional time be required for repairs due to weather related delays, the landfill will notify the TCEQ region office of an alternate schedule. Documentation of weather delays for the repairs will be included in the cover inspection record. Weekly inspections and restorations are required for the active life of the landfill. Refer to Section 8.26 for the site inspection and maintenance schedule. Documentation of inspections, detection of erosion, and completion of repairs are required in accordance with Section 8.18.8 – Cover Inspection Record.

Postclosure care inspection and repair procedures of the final cover are outlined in Part III, Attachment I – Postclosure Plan.

8.18.8 Cover Inspection Record

Throughout the landfill operation, a cover inspection record will be maintained and be readily available for inspection in accordance with §330.165(h). For daily cover,

intermediate cover, and alternative daily cover, the record will specify the date cover was accomplished (no exposed waste), area covered (by use of the grid system), how it was placed, and when it was completed. For final cover, the record will show the final cover area completed, date cover was applied, and thickness of final cover. The final cover certification report for each area will be referenced in the record. Each entry in the record will be certified by the signature of the site manager or designee that the work was accomplished as stated in the record. The cover inspection record will document inspections required under Section 8.18.7 – Erosion of Cover, §330.165(g) including findings, and corrective action taken.

8.19 Ponded Water

130 Environmental Park will prevent ponding of water over areas that have received waste through site operations including grading and maintenance. The Ponded Water Plan provides direction to the landfill operations for the prevention and elimination of ponded water. The Ponded Water Plan follows:

- Daily cover, intermediate cover, and final cover will be placed in accordance with requirements established in Section 8.18 – Landfill Cover.
- The surface of areas that have received waste and landfill cover will be inspected consistent with Section 8.18 – Landfill Cover and Section 8.26 – Site Inspection and Maintenance Schedule.
- Site grading and maintenance as required by Section 8.18 will minimize the ponding of water over areas containing waste.
- Should ponding of water occur, the depressions will be filled in and regraded within seven days of the occurrence, weather permitting. Landfill cover will be repaired consistent with procedures specified in Section 8.18.
- Diversion berms and containment berms are constructed and maintained at the active working face to minimize contaminated water within the active working face in accordance with Part III, Attachment D6 – Leachate and Contaminated Water Plan.
- If the ponded water has come into contact with waste, or waste contaminated soils, it will be treated as contaminated water and handled in accordance with Part III, Attachment D6 – Leachate and Contaminated Water Management Plan.

8.20 Disposal of Special Wastes

Special wastes, as defined in §330.3, may be accepted for disposal at the facility in accordance with §330.171(b) and (c).

As specified in §330.171(b)(2), requests for approval to accept special wastes must be submitted by the generator to the TCEQ executive director or 130 Environmental Park. The request must include the following:

- A complete description of the chemical and physical characteristics of each waste and the quantity and rate at which each waste is produced and/or the expected frequency of disposal, including a statement if waste is or is not a Class I industrial waste as defined in §330.3.

- An operational plan containing the proposed procedures for handling each waste and listing required protective equipment for operating personnel and onsite emergency equipment.

- A contingency plan outlining responsibility for containment and cleanup of any accidental spills occurring during the delivery and/or disposal operation.

The approval for acceptance and disposal of special wastes at 130 Environmental Park will be waste-specific consistent with §330.171(b)(1). The executive director may authorize the receipt of special waste. The landfill is not required to accept the waste.

130 Environmental Park will not accept the following special wastes: untreated medical waste, dead animals, slaughterhouse waste, municipal hazardous waste from a conditionally exempt small quantity generator, sewage sludge, grease trap waste, grit trap waste, or liquid wastes from municipal sources. The facility will not accept contaminated soil that exceeds 1,500 parts per million (ppm) or a constituent of concern exceeding levels in §335.521(a)(1), Table 1.

The following special wastes may be accepted at the facility without prior written authorization in accordance with §330.171(c).

8.20.1 Empty Containers

Empty containers, which have been used for pesticides, herbicides, fungicides, or rodenticides, will be accepted and disposed of in accordance with 30 TAC §330.171(c)(5). Empty containers will be disposed if they have been triple rinsed prior to receipt, rendered unusable prior to receipt, and covered by the end of the same working day with solid waste or daily cover.

8.20.2 Nonregulated Asbestos-Containing Materials

Non-regulated asbestos-containing materials (non-RACM) may be accepted for disposal provided the wastes are placed on the active working face and covered in accordance with §330.171(c)(4) and Section 8.18 of this SOP. Under no circumstances shall any material containing non-RACM be placed on any surface or roadway which is subject to vehicular traffic or disposed of by any other means by which the material could be crumbled into a friable state.

8.20.3 Regulated Asbestos-Containing Materials

Regulated Asbestos Containing Material (RACM) may be accepted for disposal in accordance with §330.171(c)(3) and will be handled in accordance with the procedures in Appendix IVB – Regulated Asbestos-Containing Material Plan.

8.21 Disposal of Industrial Waste

Industrial waste is defined by §330.3 as solid waste resulting from or incidental to any process of industry or manufacturing, or mining or agricultural operations. Class 2 and Class 3 industrial solid wastes may be accepted at the facility, provided disposal of these wastes does not interfere with proper operation of the facility.

Class 1 industrial solid waste requiring executive director approval pursuant to §330.173 will not be accepted, except RACM that has been designated Class 1 industrial solid waste due to its asbestos content, which will be accepted in accordance with the procedures in Section 8.20.3. Refer to Section 5 – Detection and Prevention of Disposal of Prohibited Wastes and Section 8.2 – Unloading of Waste for waste screening procedures. Refer to Appendix IVB – Regulated Asbestos-Containing Material Plan for handling practices of RACM during disposal operations.

8.22 Visual Screening of Deposited Waste

Existing topography and vegetation provide natural screening of deposited waste. Visual screening of deposited waste is provided as part of normal waste disposal and cover placement operations and sequence of development. Final cover will be placed as the landfill reaches final contours. As the site is developed, the visual effect of the disposal activities will be minimized through the use of screening provided by fencing, constructed berms, planted vegetation, and natural vegetation located within the buffer zone.

8.23 Leachate and Gas Condensate Recirculation

130 Environmental Park will not recirculate leachate and landfill gas condensate. Refer to Part III, Attachment D6 – Leachate and Contaminated Water Management Plan.

8.24 Contaminated Water Discharge

130 Environmental Park will not discharge contaminated water from the facility without the specific written authorization from TCEQ. All water coming in contact with waste or contaminated soils will be treated as contaminated water and managed following the procedures set forth in Part III, Attachment D6 – Leachate and Contaminated Water Management Plan. The landfill will be operated consistent with §330.15(h)(1)-(4) regarding discharge of solid wastes or pollutants.

8.25 Storage and Transfer Unit Operations

8.25.1 Large Item Storage Area

A storage area for large items and white goods may be provided within the waste disposal footprint or may be provided near the citizen's convenience center. Large items and white goods include ovens, dishwashers, freezers, air conditioners, and other large items. The large item storage area will receive approximately one ton of large items and white goods per day and have a maximum amount of 180 tons of material stored at one

time. These items may be recycled to prevent a nuisance and to preclude discharge, but will not be stored in excess of 180 days. Large items that are not recycled will be disposed of at the working face. The procedures for the acceptance, storage, processing, and disposal of large items are addressed in Section 8.9.

The large item storage area, when located within the waste disposal footprint, will be placed only over areas that have received intermediate cover. The intermediate cover will be maintained as required by Section 8.18.3 – Intermediate Cover, and Section 8.18.7 – Erosion of Cover. Surface water runoff will be diverted around the large item storage area by placement of earth diversion berms. Surface water runoff from the large item storage area will be contained by placement of earth containment berms to preclude discharge from this area. Containment and diversion berms will be placed, and runoff from the area managed, consistent with Part III, Attachment D6 – Leachate and Contaminated Water Plan.

A storage area for large items and white goods may be provided near the citizen's convenience area. The large items and white goods are transferred into steel roll-off containers for storing until transport to an off-site recycler or disposed of. The containers will be covered with tarps during a rainfall event to prevent contaminated water from being generated.

8.25.2 Reusable Materials Staging Area

Inert materials such as brick, concrete, etc., and non-inert materials such as asphalt may be received and staged at the facility for use as roadbase materials for facility access roads and staging areas or erosion control in drainage structures. Asphalt pavement will not be used for erosion control in drainage structures. The size of the stockpiles may vary depending on the amount of inert materials received at any given time. Since the brick and concrete materials are inert, runon and runoff from rainfall will not be controlled in a special manner for these materials. Since asphalt pavement or asphaltic concrete is not an inert material, it will be managed in a manner that will prevent runoff of contaminated water, discharge of waste, or creation of nuisance conditions. These inert and non-inert materials will continuously be reused for site operations, and there is no time limit on the storage of these materials. The reusable materials staging area will receive approximately 250 tons of inert materials per day and have a maximum amount of 2,000 tons of material stored at one time. The reusable materials staging area will receive approximately 50 tons of non-inert material per day and have a maximum of 500 tons of material stored at one time.

A recyclable materials storage and staging area is provided for source-separated recyclable materials, including asphalt and other materials.

8.25.3 Citizen's Convenience Center

A citizen's convenience center for waste drop-off will be located within the site entrance facilities. The unloading area will include a minimum of two (2) 30 to 40-cubic yard roll-off containers for collection of solid waste. The citizen's convenience center will receive approximately 20 tons of municipal solid waste per day and have a maximum amount of 20 tons of municipal solid waste stored at one time. 130 Environmental Park will

transport full containers to the active working face for disposal. Waste in the containers will be disposed of by the end of each working day. The containers will be covered with tarps during a rainfall event to prevent contaminated water from being generated.

The roll-off containers will be steel containers that are leak-proof, durable, and designed for safe handling and easy cleaning. The containers will be reusable and maintained in a clean condition so they will not constitute a nuisance and will retard the harborage, feeding, and propagation of vectors. The containers will be mechanically handled and will be designed to prevent spillage or leakage during storage handling, or transport.

The citizen's convenience center will have a sign posted at the entrance to the center stating the rules governing the use of the citizen's convenience center including authorized users and types of waste accepted.

An area for citizen recyclables drop-off boxes may be provided outside the citizen disposal facility for drop-off of source-separated recyclable materials. Recyclable materials will be collected and stored in closed containers. The storage of source-separated recyclable materials will be in accordance with §330.209.

8.25.4 Used/Scrap Tire Storage Area

130 Environmental Park will not intentionally or knowingly accept whole used or scrap tires for disposal unless processed prior to disposal in a manner acceptable to the executive director. Scrap tires will be accepted from the public or from community clean-up efforts and stored in containers or trailers prior to shipment. 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. Tires will not be stored in excess of 90 days. Tire containers will be kept within the facility boundary, near the active working face, or citizen's convenience center. Manifests will be used for shipment of scrap tires offsite.

8.25.5 Wood Waste Processing Area

Source separated yard trimmings, clean wood materials, and vegetative material will be directed to the wood waste processing area. The wood waste processing area will receive approximately three tons of material per day for processing and have a maximum amount of approximately 100 tons of material stored for processing at one time. The wood waste processing area will be located over existing lined areas and will process all incoming yard trimmings, clean wood materials and vegetative materials, which will include trees and brush, into mulch after visual inspection. The resulting wood chips and mulch will only be used on-site and will be stored in the processing area for a maximum time of 60 days after being processed. The resulting wood chips and mulch will be stored in small piles within the processing area so as not to result in litter and will be managed to prevent fire, safety, or health hazards in accordance with 30 TAC §330.209(a). The wood waste processing area will not be larger than approximately 50 feet by 100 feet.

8.25.6 Leachate Storage Facility

Leachate and landfill gas condensate will be pumped from the leachate sumps directly to transport trucks or to an existing on-site leachate storage facility through a leachate forcemain. 130 Environmental Park will continually evaluate the leachate production rate to determine if and when the existing leachate storage tank will be used.

The leachate storage facility will be located near the landfill footprint. The storage facility consists of two 250,000-gallon steel storage tanks, which will be installed individually as needed based on leachate generation. The calculations in Part III, Attachment D6, Appendix D6-D demonstrate that the secondary containment area, consisting of reinforced concrete slab and walls, provides containment volume for 110 percent of the volume of one leachate storage tank and precipitation from the 25-year, 24-hour storm event with 12 inches of freeboard.

8.25.7 Truck Wheel Wash

The truck wheel wash station is a drive through structure that may be used to further minimize tracking onto public roads, as necessary. Water from the wheel wash will be collected and stored in a concrete settlement basin for reuse in the wheel wash. Periodically, the settlement basin will be drained and the sediment will be removed from the basin, or the sediments within the settlement basin will be solidified in place and then removed from the basin. The wash water may be hauled to an authorized off-site facility for treatment and disposal if not solidified in place. The sediment, following solidification and passing the paint filter test, will be disposed of in the landfill. The sediment will have no free liquids as confirmed by the paint filter liquids test. The truck wheel wash is located in the entrance facility area.

8.26 Site Inspection and Maintenance Schedule

Item	Task	Schedule	Inspector	Type of Inspection
Fence/Gate	Inspect perimeter fence and gate for damage, gaps, intrusions, and the like. Make repairs if necessary.	Weekly	Site manager or Designee	Document in the Site Operating Record
Windblown Waste	Police working face area, wind fences, access roads, entrance area, and perimeter fence for loose trash. Clean up as necessary.	Daily	Site manager or Designee	Document in the Site Operating Record
Waste Spilled on Route to the Site	Police entrance area and all roads for at least 2 miles in either direction of site entrance for loose trash. Clean up as necessary.	Daily when site is in operation	Site manager or Designee	Document in the Site Operating Record
Landfill Markers	Inspect all landfill markers for damage, color coding and general location. Correct or replace damaged markers within 15 days of discovery.	Monthly	Site manager or Designee	Document in the Site Operating Record
Site Access Road	Inspect site access road for damage from vehicle traffic, erosion, or excessive mud accumulation. Maintain as needed with crushed rock or stone. Grading equipment will be used at least once per week to control or remove mud accumulations on roads as well as minimize depressions, ruts, and potholes.	Weekly – more often during wet weather or extended dry weather periods.	Site manager or Designee	Document in the Site Operating Record
Daily Cover	Inspect for proper placement, thickness, and compaction. Correct problems as needed.	Daily at the active face. All daily cover areas will be inspected daily and after each rainfall event.	Site manager or Designee	Document in the Site Operating Record
Intermediate Cover	Inspect for proper placement, thickness, erosion, compaction, and for presence of waste or other contamination. Correct problems as needed.	Weekly and within 24 hours of a rainfall event of 0.5 inch or more. Repair erosion within five days of detection.	Site manager or Designee	Document in the Site Operating Record

8.26 Site Inspection and Maintenance Schedule

Item	Task	Schedule	Inspector	Type of Inspection
Fence/Gate	Inspect perimeter fence and gate for damage, gaps, intrusions, and the like. Make repairs if necessary.	Weekly	Site manager or Designee	Document in the Site Operating Record
Windblown Waste	Police working face area, wind fences, access roads, entrance area, and perimeter fence for loose trash. Clean up as necessary.	Daily	Site manager or Designee	Document in the Site Operating Record
Waste Spilled on Route to the Site	Police entrance area and all roads for at least 2 miles in either direction of site entrance for loose trash. Clean up as necessary.	Daily when site is in operation	Site manager or Designee	Document in the Site Operating Record
Landfill Markers	Inspect all landfill markers for damage, color coding and general location. Correct or replace damaged markers within 15 days of discovery.	Monthly	Site manager or Designee	Document in the Site Operating Record
Site Access Road	Inspect site access road for damage from vehicle traffic, erosion, or excessive mud accumulation. Maintain as needed with crushed rock or stone. Grading equipment will be used at least once per week to control or remove mud accumulations on roads as well as minimize depressions, ruts, and potholes.	Weekly – more often during wet weather or extended dry weather periods.	Site manager or Designee	Document in the Site Operating Record
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8.27 Ventilation and Air Pollution Control – Storage and Processing Facilities

This section provides for ventilation and air pollution control as required by §330.245 for the large item storage area, reusable materials staging area, citizen's convenience center, used/scrap tire storage area, and the wood waste processing area.

These storage and processing facilities are not enclosed structures and will be operated to provide adequate ventilation for odor control and employee safety. Ventilation is not an issue; however, dust control will be in accordance with current TCEQ MSW Air Permitting rules and regulations applicable to municipal solid waste facilities.

The facility manager will ensure that the municipal solid waste processing facilities do not violate any applicable requirement of the approved State Implementation Plan developed under the Federal Clean Air Act §110, as amended.

The facility, including the storage and processing facilities, will obtain authorization under Chapter 116 or Chapter 330, Subchapter U, as applicable, prior to commencing construction of the facility, as required by §330.245(b).

Reporting of emissions events will be made in accordance with §101.201 (relating to Emissions Event Reporting and Recordkeeping Requirements) and reporting of scheduled maintenance will be made in accordance with §101.211 (relating to Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements), as required by §330.245(f).

No significant air pollution emissions are expected as a result from the operation of these facilities. If air pollution emission capture and abatement equipment is utilized, it will be properly maintained and operated consistent with §330.245(e).

8.27.1 Odor Management Plan

The facility is located in Caldwell County outside the extraterritorial jurisdiction of the City of Lockhart.

The storage and processing facilities will manage odors associated with waste acceptance and processing operations consistent with this Odor Management Plan. This plan addresses sources of odors and includes general instructions to control odors and/or sources of odors associated with operation of the storage and processing facilities.

Measures to control odors and sources of odors will include, but are not limited to, the following items:

- Sources of odors may include ponded water, decomposition of wastes, leachate and contaminated water.
- Wastes that are considered to generate significant odors are typically classified as special wastes, including medical waste, sewage, dead animals, and/or

slaughterhouse wastes, sludge, grease trap waste, grit trap waste, and liquid waste from municipal sources. As noted in Section 8.20, the facility will not accept these wastes.

- The citizen's convenience center will accept municipal solid waste from residences only. Municipal solid waste is considered a potential odor producing waste.
- Municipal solid waste received at the citizen's convenience center will be placed promptly in roll-off containers. Full containers will be transported to the landfill working face and waste remaining in containers will be transported at the end of each working day for disposal.
- Spills of wastes at the citizen's convenience center will be promptly picked up and loaded into the roll-off containers.
- Refer to Section 8.25 for additional operation requirements for the storage and processing facilities related to preventing nuisance conditions.
- Refer to Part III, Attachment B, Section 2 for additional facility design requirements and Section 3 for additional requirements related to cleaning of the storage and processing facilities to manage contaminated water.
- Recyclable materials will be placed in roll-off boxes for transport to appropriate end-use markets.
- The facility incorporates on-site buffers for odor control. The minimum buffer distance from the storage and processing facilities to the facility boundary is 267 feet.

8.27.2 Ponded Water

Any ponded water at the storage and processing facilities will be controlled to avoid its becoming a nuisance. In the event that objectionable odors do occur, appropriate measures will be taken to alleviate the condition. Site grading and maintenance will minimize the ponding of water over the operational areas.

8.28 Health and Safety

Facility personnel will be trained in the appropriate sections of the facility health and safety plan in accordance with Section 3 – Personnel and Training.

8.29 Employee Sanitation Facilities

Potable water and sanitary facilities will be provided for all employees and visitors at/near the scale house and/or maintenance building. Bottled water will be provided for potable water. Sanitary facilities, consisting of portable sanitary facilities and/or constructed restrooms, will be provided. A private contractor will remove and properly dispose of all wastewater from sanitary facilities not managed in a properly permitted on-site sewage facility; wastewater from sanitary facilities will not be placed in the facility's contaminated water storage tank.

130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383

PERMIT APPLICATION

PART IV – SITE OPERATING PLAN

APPENDIX IVB
REGULATED ASBESTOS-CONTAINING MATERIAL PLAN

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014

Revised June 2014

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6/29/14

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3 LANDFILL DISPOSAL

A. Notification and Recordkeeping

(1) When a load of RACM arrives at the gatehouse, the gate attendant shall notify the site manager, or his designated representative, who will oversee the disposal operations.

(2) The gate attendant shall check the accompanying manifest (required for RACM) to ensure that necessary information is properly recorded.

(3) If the manifest is properly completed, the gate attendant will direct the driver to the proper disposal location.

(4) A disposal log will be maintained on site documenting the location, depth, and volume of disposal of all RACM.

B. Initial Inspection

(1) When the load of RACM arrives at the disposal area it will be inspected prior to unloading. The visual inspection by landfill personnel will be to determine if the waste was properly wetted and double-bagged or otherwise packaged as required. RACM may only be accepted at the facility in tightly closed and unruptured containers or bags, or must be wrapped with at least six-mil polyethylene. If not, it will be rejected for disposal at this time. TCEQ will be notified by the following working day of any such rejections.

(2) In an effort to minimize the potential hazard posed to the public that sending an improperly wetted and bagged load back onto public roadways presents, the rejected load will be held in a discreet area on site. The generator must then make arrangements to have the waste properly bagged within 24 hours. After that time, the landfill will make arrangements to have the load rewetted and bagged at the sole expense of the generator.

C. Place of Unloading

(1) The entire permitted waste disposal footprint of the facility will be considered a potential RACM disposal area. The site maintains a record of each load of RACM accepted as to its location, depth, or elevation, and volume of material. This information is maintained at the facility. The boundary locations of these fillable areas will be marked in the field.

(2) 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). Depressions or cuts will not be made if there is potential to cut into previously placed asbestos.

(3) Below natural grade fill areas for placement of RACM is preferred. A minimum separation of three feet of other solid waste is required between the bottom and/or sidewall liner and RACM. However, should this below natural grade disposal not be possible or practical, the following precautions will be taken for above natural grade fill areas to ensure the waste is not subject to future exposure through erosion or weathering of the intermediate and/or final cover. RACM disposal in above natural grade fill areas will be at least 20 feet interior of any design finished side slope of the unit. In addition, RACM disposal will be at least 10 feet below the design finished top final surface elevations of the unit.

D. Methods of Unloading

Transporter shall use either Method 1 or Method 2, as described below to unload RACM at the landfill.

(1) Bags or containers holding RACM must be carefully unloaded and placed in their disposal location rather than thrown to the ground. Employees of the generator or transporter will perform the task of unloading the material.

(2) Unloading of roll-off containers is permitted when performed in accordance with the following procedures:

a. The truck and roll-off box are positioned to unload in a location prepared in advance for disposal of the waste.

b. 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 load slowly slides out of the roll-off box and into the excavation. Bags that do not land in the excavation shall be hand placed by the transporter personnel.

E. Covering the Asbestos Waste

Asbestos waste will not be compacted directly. After unloading, the asbestos waste should be covered with a minimum of 3 feet of other solid waste or 1 foot of earthen material. Care should be exercised in the application of the cover to ensure that the bags or containers will not be ruptured.

F. Grid System Control

A grid system will be utilized to identify where the waste will be disposed of. The site grid system (i.e., 100-foot markers) and a temporary elevation benchmark will be used in identifying the disposal locations in a log book or spreadsheet. The date of disposal, the approximate depth or elevation and grid coordinates, and the volume of waste will be recorded.