



January 20, 2026

Project No.: US0022880.8845

Texas Commission on Environmental Quality
MSW Permits Section, Waste Permits Division
P.O. Box 13087, MC-124
Austin, Texas 78711-3087

ATTN: Henok Tewelde, P.G.

**RESPONSE TO TCEQ NOTICE OF DEFICIENCY 2
INTERIM LEACHATE CONTAINMENT POND; PERMIT NO. MSW-692B
TEMPLE RECYCLING AND DISPOSAL FACILITY
BELL COUNTY, TEXAS
TRACKING NO. 32239041**

Dear Mr. Tewelde:

On behalf of the City of Temple, WSP USA Inc. (WSP) submits this response to the Texas Commission on Environmental Quality's (TCEQ's) Notice of Deficiency (NOD) regarding the above-referenced Municipal Solid Waste Modification (PM). TCEQ's NOD email was dated December 29, 2025.

The responses presented herein are cross-referenced to the NOD comments using the comment numbers in the NOD and quoting the original comments. We have also included an itemized list of the revised or new PM pages.

The proposed permit modification materials, which include this letter and Enclosures A-B, are being submitted digitally to TCEQ. In addition, one (1) original and one (1) copy of the revised Permit Modification materials and one (1) copy of the redline-strikeout revisions are included with this letter. The redline-strikeout revisions are organized per the order of the NOD comments. The permit modification package will be posted to a publicly accessible website as indicated in form TCEQ-20650, Application Form, Section 5 – Application URL.

We trust this response is sufficient to address the deficiencies identified by TCEQ. Upon review of this response, if you have questions, please contact the undersigned at 281-589-5900.

Sincerely,

WSP USA INC.

*Keshab Gyawali, PE
Lead Consultant, Civil Engineer*

*Chad E. Ireland, PE
Assistant Vice President, Geological Engineer
Waste Facility Engineering Team Leader
Civil, Ground Engineering & Material Service Line Leader*



cc: Don Bond - Public Works Director (City of Temple)
Charles Rivette- Director of Planning and Project Development (USA Waste)
Jayson Lang, PE – Texas Oklahoma Market Area Engineer (USA Waste)
Chad E. Ireland, PE – Waste Services Industry Group Leader (WSP)

LIST OF REVISED/NEW PAGES

Part	Revised/New Pages
Part I	■ Page 1 of the TCEQ form 20650
Part III	■ Part III, Attachment 3 <ul style="list-style-type: none">● Revised Appendix III-3 (revised cover page, table of contents revised text page III-3-24 – replace pages only).● Replace Figures III-1-2, III-3-10.1, III-3-10.2 and III-3-10.3
Part III	■ Part III, Attachment 7 <ul style="list-style-type: none">● Revised Attachment 7 (revised cover page, table of contents, and revised III-7-8 – replace pages only)
Part III	■ Part III, Attachment 9 <ul style="list-style-type: none">● Replace Appendix A Form 20721 Closure Cost Estimate● Added Appendix III-9F (Breakdown of Closure Cost Estimate Line Item 3.4)

Comment 1. Please provide the drawings for the subgrade plan view, the liner plan view, and the profile of the interim pond structures, in accordance with 30 TAC §330.63(d)(3).

Response 1. Drawings have been included in the original submittal dated 10/27/2025. The figures III-3-10.1, III-3-10.2, and III-3-10.3 have been again included with updated labels and notes to address comments #1, #2, and #3.

Comment 2. Please submit the design drawings for the new interim storage evaporation pond as required by 30 TAC §330.63(b)(2)(D). The permit modification referenced on page III-3-24 states that the construction and design details for the proposed interim leachate containment pond are located in Part II, Appendix IIF, and Part III, Attachment 3, specifically in Figures III-3-10.1 to III-3-10.4; however, these documents are not available in TCEQ records.

Response 2. Design drawings for the interim leachate pond have been included in the original submittal dated 10/27/2025. The correct figure numbers III-3-10.1 to III-3-10.3 have been referenced in report Part III, ATT 3, Section 6.2.1.6. The figure numbers III-3-10.1, III-3-10.2, and III-3-10.3 have been again included with updated labels and notes to address comments #1, #2, and #3.

Comment 3. Revise to include specification of the hydraulic permeability of the clay liner in the design drawings for the new interim pond. This must align with the quality control plan for the liner as outlined in 30 TAC §330.63(d)(3)(C).

Response 3. Notes have been added to Drawings III-3.10.1 through III-3.10.3 stating: "The hydraulic permeability of the clay liner shall be 1×10^{-7} cm/sec or less. Clay and geomembrane liner shall be constructed as per Liner Quality Control Plan Part III, Attachment 3, Appendix F".

Comment 4. The HYDREX drone survey confirms that the existing ponds have a berm crest or top width of 10 feet. Revise to mark the previous width of 8.5 feet with a strikeout and replace with the updated measurement of 10 feet in the ~~redline/strikeout~~ format.

Response 4. The width of the proposed Interim Leachate Pond is 10 feet, as shown on Drawings III-3-10.1, III-3-10.2, and III-3-10.3.

Comment 5. The cost estimate for the closure and post-closure care period currently only accounts for Pond A. Please revise this estimate to include quantities for all three ponds, including the interim pond.

Response 5. The closure cost estimate is revised to include closure of the existing Leachate Evaporation Pond (Pond B) and the Interim Leachate Ponds (Pond C and Pond D), because it is assumed Pond A would continue to be used to manage leachate during the Post Closure period. The closure of Pond A is already included in the post-closure cost, so the Post Closure Cost Estimate has not been updated at this time

Comment 6. In accordance with 30 TAC §330.459(c), revise to include that any contaminated soil identified during the inspection related to the removal or closure of the pond liner will be removed promptly and not delayed until the construction of the future tract 1C cell liner is completed.

Response 6. Part III, Attachment 7, Closure Plan, Section 6.0 has been modified to describe the closure of the leachate evaporation ponds, including inspections and removal of contaminated soil.

ENCLOSURE A

REDLINE – STRIKEOUT COPIES



Texas Commission on Environmental Quality

Application Form for Municipal Solid Waste Permit or Registration Modification or Temporary Authorization

Application Tracking Information

Facility Name: Temple Recycling and Disposal Facility

Permittee or Registrant Name: Waste Management of Texas Inc. / City of Temple

MSW Authorization Number: 692B

Initial Submission Date: October 27, 2025

Revision Date: December 11, 2025, January 20, 2026

Instructions for completing this form are provided in [form TCEQ-20650-instr](#)¹. If you have questions, contact the Municipal Solid Waste Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335.

Application Data

1. Submission Type
<input type="checkbox"/> Initial Submission <input checked="" type="checkbox"/> Notice of Deficiency (NOD) Response
2. Authorization Type
<input checked="" type="checkbox"/> Permit <input type="checkbox"/> Registration
3. Application Type
<input checked="" type="checkbox"/> Modification with Public Notice <input type="checkbox"/> Modification without Public Notice <input type="checkbox"/> Temporary Authorization (TA) <input type="checkbox"/> Modification for Name Change or Transfer
4. Application Fee
<p>Amount</p> <p>The application fee for a modification or temporary authorization is \$150.</p> <p>Payment Method</p> <input type="checkbox"/> Check <input checked="" type="checkbox"/> Online through ePay portal www3.tceq.texas.gov/epay/ If paid online, enter ePay Trace Number: <u>582EA000694684</u>

¹ www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20650-instr.pdf

PART III, ATTACHMENT 3

WASTE MANAGEMENT UNIT DESIGN

Temple Recycling & Disposal Facility

Temple, Bell County, Texas

TCEQ Permit MSW-692B

Owner/Site Operator/Permittee:



City of Temple
201 N. Main
Temple, Texas 76501

Operator:



Waste Management of Texas, Inc.
9708 Giles Lane
Austin, Texas 78781

Submitted By:

WSP USA Inc.
9655 Katy Freeway, Suite 200
Houston, TX 77024 USA
Professional Engineering Firm Registration Number F-2263

WSP USA INC.
Professional Engineering Firm
Registration Number F-2263

INTENDED FOR PERMITTING
PURPOSES ONLY

Submitted: June 2016
Revised: January 2017
Revised: April 2017
Revised: May 2017
Revised: October 2025
Revised: January 2026

Project No. US0022880.8845

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Submitted: June 2016
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Revised: January 2026

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Both existing leachate storage and evaporation ponds are constructed with geomembrane and compacted clay liners. Both ponds have open tops and one foot of freeboard will be maintained to prevent overtopping from a 25-year, 24-hour rainfall event.

A proposed Interim Leachate Containment Pond will be located within the boundary of Tract 1C, which is the last cell area to be constructed for waste placement per the sites development sequence of the landfill and will be constructed with a geomembrane and a compacted clay liner. The Interim Leachate Pond will be decommissioned and removed prior to construction of Tract 1C liner construction. This pond will have an open top and two feet of freeboard will be maintained to prevent overtopping from a 25-year, 24-hour rainfall event.

Leachate storage time in the existing ponds and the proposed pond will depend on evaporation and leachate recirculation volumes. The locations of the existing leachate ponds and the proposed interim leachate containment pond are shown on Part III, Attachment 1, Figure III-1-2. Construction and design details of the existing leachate storage and evaporation ponds and the proposed interim leachate containment pond are provided in Part II, Appendix IIF and Part III, Attachment 3, Figures III-3-10.1 – III-3-10.43, respectively.

Leachate from these ponds is either evaporated, recirculated or discharged to the City of Temple sanitary sewer system.

Construction of any leachate storage/evaporation pond not constructed at the time of permit issuance of MSW-692B will need to be authorized by a permit modification.

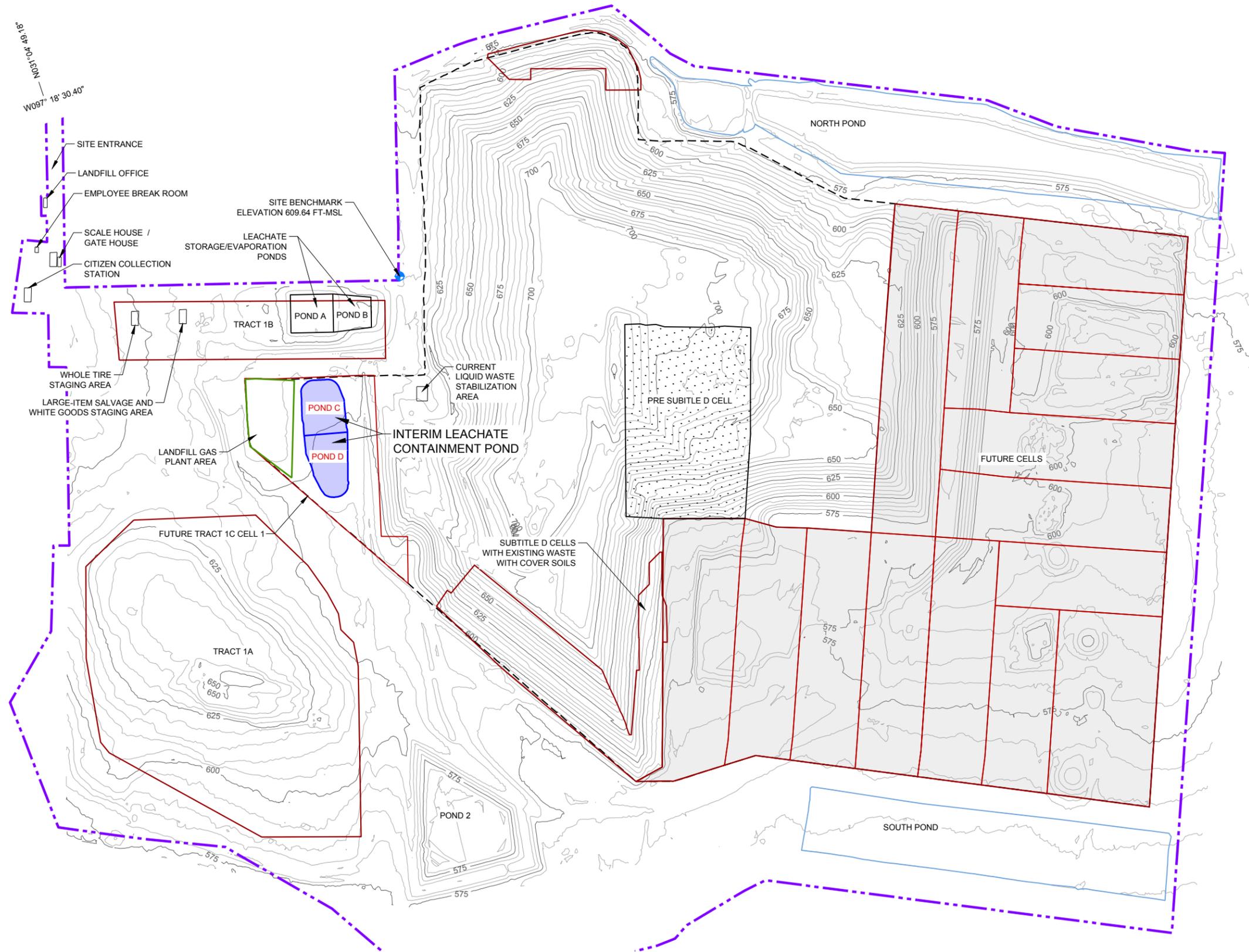
6.2.1.7 Leachate Treatment and Disposal

Leachate that is not recirculated will be managed as discussed in Sections 6.2.1.5 and 6.2.1.6 above. Disposal of leachate, as required, will be done at an appropriately authorized facility.

6.2.1.8 Leachate Recirculation

In disposal cells containing a standard Subtitle D liner system (i.e., a compacted clay/geomembrane composite) and leachate collection system, leachate and gas condensate may be recirculated back into the waste. Leachate recirculation may consist of spray application during dry conditions using a portable tank(s) at the active face, injecting leachate through a perforated pipe or well buried in the refuse, or discharging leachate in an area excavated into waste and backfilled with highly permeable material (e.g., gravel or tire chips). Leachate will not be recirculated to the active face during rainy or wet periods. The automated leachate pumps will prevent leachate depth greater than 30 cm from accumulating over the liner and will be in operation during leachate recirculation activities. The application of leachate will be in a manner so as to not cause leachate accumulation, ponding, or other operational problems. The Temple Recycling and

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LEGEND

- PERMIT BOUNDARY
- WASTE FOOTPRINT
- POND GRADE BREAK
- FUTURE CELL BOUNDARY
- INTERIM LEACHATE CONTAINMENT POND
- PRE-SUBTITLE D CELLS
- + SITE BENCHMARK

NOTE(S)

1. LANDFILL TOPOGRAPHY COMPILED BY DRONE SURVEY BY HYDREX DATED FEBRUARY 18, 2025.

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REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
2	2026-01-20	ISSUED FOR PERMITTING PURPOSES - NOD 2	KG	KG	CEI	CEI
1	2025-10-27	ISSUED FOR PERMITTING PURPOSES	KG	TNB	CEI	CEI



CLIENT

WM

CONSULTANT

wsp

WSP USA INC.
9655 KATY FREEWAY, SUITE 200
HOUSTON, TEXAS 77024
USA
281-589-5900
www.wsp.com

PROJECT

TEMPLE RECYCLING AND DISPOSAL FACILITY
LEACHATE POND PERMIT MODIFICATION MSW 692B
BELL COUNTY, TEXAS

TITLE

SCHEMATIC VIEW OF VARIOUS WASTE DISPOSAL,
PROCESSING, AND STORAGE AREAS

PROJECT NO. US022880.8845	PERMIT SECTION PART III, ATT. 1	REV. 0	1 of 5	FIGURE III-1-2
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1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

PART III, ATTACHMENT 7

CLOSURE PLAN

Temple Recycling & Disposal Facility

Temple, Bell County, Texas

TCEQ Permit MSW-692B

Owner/Site Operator/Permittee:



City of Temple
201 N. Main
Temple, Texas 76501

WSP USA INC.
Professional Engineering Firm
Registration Number F-2263

Operator:

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Waste Management of Texas
9708 Giles Lane
Austin, Texas 78781

Submitted By:

WSP USA Inc.
9655 Katy Freeway, Suite 200
Houston, TX 77024 USA
Professional Engineering Firm Registration Number F-2578

Submitted: June 2016
Revised: January 2017
Revised: April 2017
Revised: September 2024
Revised: October 2025
Revised: December 2025
Revised: January 2026

Project No. US0022880.8845

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Professional Engineering Firm
Registration Number F-2263

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 Appendix III-7D TCEQ Final Cover System Evaluation Report Approval Letters

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6.0 CLOSURE OF STORAGE AND PROCESSING UNITS

Closure for the storage and processing units at the site is addressed as follows:

- Liquid waste stabilization area: Upon closure, the waste remaining in the stabilization tank will be properly stabilized and disposed of in the landfill. The stabilization tank will be disposed of within the landfill.
- Tire staging area: At time of closure, tires in the staging area will be processed by grinding or other means to reduce size to quartered or split and disposed of in the landfill or another authorized facility.
- Large Item/White Goods Storage Area: Large items/white goods stored on-site at time of closure will be either transported offsite for recycling or disposed of at an authorized facility.
- Recyclable material staging area: Recyclable materials will transported off-site for to recyclable material end user locations.
- Leachate evaporation ponds: ~~The~~At least one leachate evaporation ponds will remain in use during the post-closure care period. At the time of closure of each of the ponds, whether during the life of the landfill, such as the interim leachate evaporation pond, or at the end of the post-closure care period, the leachate evaporation ponds will be closed as follows: empty the pond(s) by discharging the leachate to the sanitary sewer system via existing piping and pumping system; demuck the bottom of the pond(s) and dispose of the materials at an authorized facility; pressure wash the geomembrane liner and the metal parts of ~~Pond A the leachate evaporation pond(s)~~ and discharge the cleaning water to an authorized facility; remove the geomembrane liner and the metal parts of the leachate evaporation pond(s)~~Pond A~~ and dispose of the material at an authorized facility; inspect the subgrade below the geomembrane liner and promptly remove any contaminated soil identified and properly dispose of at an authorized facility; backfill the ponds with soils; and grade and seed the surface. Leachate management activities will only be stopped after demonstrating to the executive director that leachate no longer poses a threat to human health and environment.
- Citizen Collection Station: Upon closure, waste remaining at the Citizen Collection Station will be transported to the landfill disposal area for disposal. The Citizen Collection Station will either be dismantled or a "Notice of Intent to Operate a Citizen's Collection Station" will be submitted to TCEQ.



Texas Commission on Environmental Quality

Closure Cost Estimate Form for Municipal Solid Waste Type I Landfills

This form is for use by applicants or site operators to provide cost estimates for closure of MSW Type I landfills to meet the requirements in 30 Texas Administrative Code (TAC) Chapter 330, Section 330.63(j) and 30 TAC Chapter 330 Subchapter L. The costs to be provided herein are cost estimates for hiring a third party to close the largest waste fill area that could potentially be open in the year to follow and those areas that have not received final cover. If you need assistance in completing this form, please contact the MSW Permits Section in the Waste Permits Division at (512) 239-2335.

Facility Name: Temple Recycling and Disposal Facility

MSW Permit No.: 692B

Site Operator/Permittee Name and Mailing Address: City of Temple, 3210 East Ave. H Bldg. A, Temple, TX 76501

Total Closure Cost Estimate (2015 Dollar Amount): \$~~10,986,031~~11,037,110

I. Professional Engineer's Statement, Seal, and Signature

I am a licensed professional engineer in the State of Texas. To the best of my knowledge, this Closure Cost Estimate has been completed in substantial conformance with the facility Closure Plan and, in my professional opinion, is in compliance with Title 30 of the Texas Administrative Code, Chapter 330.

Name: Chad E. Ireland, PE Title: Geological Engineer

Date: ~~September 2024~~January 20, 2026

Company Name: WSP USA Inc. Firm Registration Number: F-2263

Professional Engineer's Seal

Professional Engineer's Signature

II. Annual Review of Permit Conditions, Cost Estimates, Inflation Factor, and Financial Assurance

The permittee/site operator acknowledges that he/she will:

1. Review the facility's permit conditions on an annual basis and verify that the current active and inactive waste fill areas of the landfill match the areas on which closure cost estimates are based.
2. Request in writing via a permit modification application for an increase in the closure cost estimate and the amount of financial assurance provided if changes to the closure plan or the landfill conditions increase the maximum cost of closure at any time during the remaining active life of the landfill.
3. Request in writing via a permit modification application for a reduction in the cost estimate and the amount of financial assurance provided if the cost estimate exceeds the maximum cost of closure at any time during the remaining active life of the landfill. The permit modification application will include a description of the situation and a detailed justification for the reduction of the closure cost estimate and the amount of financial assurance.
4. Establish financial assurance for closure of the unit in an amount no less than the current closure cost estimate in accordance with 30 TAC Chapter 37, Subchapter R.
5. Adjust the current cost estimate for inflation within 60 days prior to the anniversary date of the first establishment of the financial assurance mechanism.
6. Provide annual inflation adjustments to the closure costs and financial assurance during the active life of the facility, until the facility is officially placed under the post closure care period and all requirements of the final closure plan have been approved in writing by the TCEQ executive director. The adjustment will be made using an inflation factor derived from the most recent annual Implicit Price Deflator for Gross National Product published by the United States Department of Commerce in its Survey of Current Business, as specified in paragraphs (1) and (2) of 30 TAC §37.131. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.
7. Provide continuous financial assurance coverage for closure until the facility is officially placed under the post-closure care period.

III. Description of the Closure Cost Estimates Worksheet

The following descriptions of the items on the closure cost estimates worksheet provide guidance for identifying the minimum work or cost elements and estimating the unit or lump sum cost of each item as applicable. Enter additional detail for each item in the field following the item as necessary and as site-specific condition warrants. The cost items are grouped under closure costs for engineering, construction, and storage and processing units. Include attachments to detail any additional work and associated costs necessary to close the site that is not already included as a line item on the worksheet. Reference the attachments and list the work or cost items in the fields under "Additional Engineering Cost Items Not Listed on the Worksheet," "Additional Construction Cost Items Not Listed on the Worksheet," or "Additional Storage and Processing Units Items Not Listed on the Worksheet" as applicable. Provide the total cost of the additional work or cost items in each cost category on the worksheet line that precedes the cost subtotal for each cost group.

1. Engineering Costs

The engineering tasks have been subdivided into seven items and are described below. Other related costs may be added as site-specific issues warrant.

1.1. Topographic Survey

A topographic survey will be required to verify the existing elevation and slopes of the landfill to ensure conformance with the final cover system, drainage system, and final grading designs.

Enter additional topographic survey work or cost element details as site-specific conditions warrant: N/A

1.2. Boundary Survey

The metes and bounds description is required for filing of the affidavit of closure and deed recording of any area of the site which has received waste. Other activities to be included here are publication of the public notice of closing activities.

Enter additional boundary survey work or cost element details as site-specific conditions warrant: N/A

1.3. Site Evaluation

The evaluation includes a site inspection to identify waste disposal areas, analyze drainage and erosion protection needs, and to determine other site operational features that are not in compliance with the permit. The site evaluation also includes verifying the need for new or relocation of existing groundwater monitoring wells and landfill gas monitoring probes, analysis of groundwater samples, and review of site operating record. The third party consultant who performed the site evaluation will prepare and submit an engineering report to the executive director to document the status of the

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site. The report will identify all areas of work and the associated implementation costs necessary to safely close the landfill operations with recommendations on how to fulfill these needs.

Enter additional site evaluation work or cost element details as site-specific conditions warrant: N/A

1.4. Development of Plans

The final closure plan, the final cover system design and specifications, grading and drainage plans, specification for revegetation, design of any other improvements to bring the site into compliance with the permit, the closure schedule, and coordination with the TCEQ and provision of closure notice to the public.

Enter additional development of plans work or cost element details as site-specific conditions warrant: N/A

1.5. Contract Administration (bidding and award)

The third-party consultant will advertise the project, receive the bids, evaluate the bids, award the closure construction contract and administer the contract during construction.

Enter additional contract administration work or cost element details as site-specific conditions warrant: N/A

1.6. Closure Inspection and Testing

The professional of record will observe closure construction, perform cover thickness and permeability verification, and prepare an evaluation report upon completion of closure.

Enter additional closure inspection or testing work or cost element details as site-specific conditions warrant: N/A

1.7. TPDES and other Permits

The third-party consultant will prepare plans, specifications, and other documents necessary for compliance with applicable federal and state laws and requirements, including the Clean Water Act, for the proper closure of the site.

Enter additional TPES or other permits work or cost element details as site-specific conditions warrant: N/A

1.8. Additional Engineering Cost Items Not Listed on the Worksheet

List the Attachment(s) detailing any additional engineering cost items necessary to close the site that is not already included as a line item on the worksheet: Part III, Attachment 9, Appendix III-9B Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional engineering cost items in the "Cost" column.

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1.9. Engineering Costs Subtotal

1.9.1. Enter the sum of engineering costs in Items 1.1 through 1.8.

2. Construction Costs

Closure construction costs include those for construction of the final cover system, site grading, and drainage improvements. Other costs may be added as site-specific issues warrant.

2.1. Mobilization

2.1.1. Mobilization of Personnel and Equipment

The cost of mobilizing personnel and construction heavy equipment must be included as part of the construction costs.

Enter additional work or cost element details for mobilization of personnel and equipment as site-specific conditions warrant: N/A

2.2. Final Cover System

The owner or operator must install a final cover system that is designed to minimize infiltration and erosion. The final cover system is subdivided into the sideslope cover and cap cover with their associated components to facilitate cost calculations. If an alternative final cover is proposed, the closure cost estimate will still be based on a design that utilizes the conventional composite cover system.

Enter additional final cover system work or cost element details as site-specific conditions warrant: N/A

2.2.1. Side Slope Cover

Enter information for Items 2.2.1a through 2.2.1h.

2.2.2. Top Slope Cover

Enter information for Items 2.2.2a through 2.2.2h.

2.2.3. Cells for Class 1 Nonhazardous Industrial Waste

2.3. Site Grading

Site grading includes the final grading of the site, including the landfill cap and sideslopes.

Enter additional site grading work or cost element details as site-specific conditions warrant: N/A

2.4. Site Fencing and Security

Site fencing and security must be included for the area which has received waste and have no existing approved fencing.

Enter additional site fencing and security work or cost element details as site-specific conditions warrant: N/A

2.5. Landfill Gas Monitoring and Control Systems

Enter information for Items 2.5.1 through 2.5.6.

Final installation of the landfill gas monitoring and control systems must include the installation costs of pipes and appurtenances. In the event of a forced closure, the systems may not have been completed, thus, the estimated costs to complete the landfill gas monitoring and control system must be provided.

Enter additional landfill gas monitoring and control systems work or cost element details as site-specific conditions warrant: N/A

2.6. Groundwater Monitoring System

2.6.1. Monitor Well Installation

Upon closure of the site, it may be necessary to relocate the compliance boundary. This requires the installation of new monitor wells.

Enter additional groundwater monitoring system work or cost element details as site-specific conditions warrant: N/A

2.6.2. Piezometer and Monitor Well Plugging and Abandonment

Piezometer or monitor well abandonment is the cost of abandoning (plugging) piezometers or monitor wells that are no longer needed. Determine the number of piezometers or monitor wells to be abandoned and include the total cost.

Enter additional plugging and abandonment work or cost element details as site-specific conditions warrant: N/A

2.7. Leachate Management

2.7.1. Completion of Existing Leachate Collection System

In the event of a forced closure, there may be circumstances where the leachate collection system has not been completed. In this event, the leachate collection system must be closed with a permanent outfalls and permanent cleanouts installed.

Enter additional leachate management work or cost element details as site-specific conditions warrant: N/A

2.8. Stormwater Management

2.8.1. Stormwater Drainage Management System

To reduce the potential long-term impacts of the landfill on surface water quality, drainage features must be incorporated into the final cover design to direct runoff, minimize erosion, control sediments, and avoid ponding of stormwater. The drainage system construction costs must be included.

Enter additional stormwater drainage management work or cost element details as site-specific conditions warrant: Add-on Berms and Downchutes

2.9. Additional Construction Cost Items Not Listed on Worksheet

List the Attachments detailing any additional construction cost items necessary to close the site that is not already included as a line item on the worksheet: Part III, Attachment 9, Appendix III-9B Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional construction cost items in the "Cost" column.

2.10. Construction Costs Subtotal

2.10.1. Enter the sum of construction costs in Items 2.1 through 2.9.

3. Storage and Processing Unit Closure Costs

For landfills that incorporate storage and/or processing operations that are not separately authorized, all waste and processed and unprocessed materials associated with storage and/or processing units must be removed during the closure process.

3.1. Waste Disposal

The cost of disposal of waste at an authorized facility. *Enter additional waste disposal work or cost element information as necessary.*

N/A

3.2. Material Removal and Disinfection

The cost of removal, including transportation, of any remaining processed and unprocessed materials to an authorized off-site location. *Enter additional material removal and disinfection work or cost element information as necessary.*

N/A

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3.3. Demolition and Disposal

The cost of dismantling and/or disinfection of storage and/or processing units and disposal, as applicable. *Enter additional demolition and disposal work or cost element information as necessary.*

N/A

3.4. Additional Storage and Processing Unit Closure Cost Items Not Listed in Worksheet

List the Attachments detailing any additional storage and processing unit closure cost items necessary to close the site that is not already included as a line item on the worksheet. N/A Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional storage and processing unit closure cost items in the "Cost" column.

4. Sum of Cost Subtotals

4.1. Enter the sum of engineering, construction, and storage and processing unit closure cost subtotals from lines 1.9.1, 2.10.1, and 3.5.1.

5. Contingency

5.1. Add an amount equal to at least 10 percent of the sum of cost subtotals to cover unanticipated events during implementation of closure activities.

6. Contract Performance Bond

6.1. Add an amount equal to at least 2 percent of the sum of cost subtotals for purchase of a surety bond to guarantee satisfactory completion of the closure activities.

7. Third Party Administration and Project Management Costs

7.1. Add an amount equal to at least 2.5 percent of the sum of cost subtotals to cover the cost for a third party hired by TCEQ to administer the closure activities.

8. Total Closure Cost

8.1. Enter the sum of the amounts on lines 4.1, 5.1, 6.1, and 7.1.

IV. Closure Cost Estimates Worksheet

A. Landfill Data

Total Permitted Waste Disposal Area: 239 acres

Largest Area Requiring Final Cover in the year to follow: 145 acres

Total Filled Area with Constructed Final Cover: 87 acres

Total Area Certified Closed: 87 acres

Number of Monitor Wells to be Installed for Closure: 4

Number of Gas Probes to be Installed for Closure: 3

Total Acreage Needing LFG Collection and Control System: 145 acres

The unit or lump sum cost for each item is based on the work items and cost elements described in Section III of this Closure Cost Estimate document:

Yes No Partially

(if "No" or "Partially" is checked, please include attachments describing the additional work items and detailing the unit, quantities, and costs for the additional items)

B. Facility Drawings and Financial Assurance Documentation

- Facility drawings
 - Attach facility drawings showing the closure areas to which the closure cost estimates apply.
- Financial assurance documentation
 - For an existing facility, attach a copy of the documentation required to demonstrate financial assurance as specified in 30 TAC Chapter 37, Subchapter R.
 - For a new facility, a copy of the required documentation shall be submitted 60 days prior to the initial receipt of waste.

C. Attachments

- Additional Engineering, Construction, and Storage and Processing Units Cost Items Details
- Attachment 9, Appendix III-9B Table 9.1 Additional Cost Items Not Listed on Worksheet

D. Closure Cost Estimates Worksheet

If any item listed in this worksheet is not applicable to the subject facility, enter "NA" (Not Applicable) in the affected field.

Table 1. Closure Cost Estimates Worksheet.

Item No.	Item Description	Units	Quantity	Unit Cost	Cost	Source of Unit Cost Estimate
1. Engineering Costs						
1.1	Topographic Survey	Lump Sum	1	\$ 10,000	\$ 10,000	Based on experience with similar projects
1.2	Boundary Survey	Lump Sum	1	\$ 9,000	\$ 9,000	Based on experience with similar projects
1.3	Site Evaluation	Lump Sum	1	\$ 10,000	\$ 10,000	Based on estimate of man hours required and supported by experience with similar projects
1.4	Development of Plans	Lump Sum	1	\$ 25,000	\$ 25,000	Based on experience with similar projects
1.5	Contract Administration (bidding and award)	Lump Sum	1	\$ 5,000	\$ 5,000	Based on experience with similar projects

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1.6	Closure Inspection and Testing	acres	145	\$ 5,000	\$ 725,000	Based on recent experience in Texas
1.7	TPDES and other Permits	Lump Sum	NA	NA	\$ -	Existing
1.8	Additional Engineering Cost Items (describe in attachments)	identify attachments	NA	NA	NA	NA
1.9 Engineering Costs Subtotal						
1.9.1	Engineering Costs Subtotal	NA	NA	NA	\$ 599,000 <u>784,000</u>	NA
2. Construction Costs						
2.1 Mobilization						
2.1.1	Mobilization of Personnel and Equipment	Lump Sum	1	\$ 10,000	\$ 10,000	Based on recent experience in Texas
2.2 Final Cover System						
2.2.1 Side Slope Cover						
2.2.1a	Infiltration Layer – Compacted Clay	Cubic Yards	146,208	\$ 5	\$ 731,040	Based on recent experience in Texas
2.2.1b	Infiltration Layer – Geosynthetic Clay Liner	Square Feet	NA	NA	NA	NA
2.2.1c	Flexible Membrane Cover – HDPE	Square Feet	NA	NA	NA	NA
2.2.1d	Flexible Membrane Cover – LLDPE	Square Feet	2,631,750	\$ 0.36	\$ 947,430	Based on recent experience in Texas (textured geomembrane)
2.2.1e	Drainage Layer – Aggregate	Tons	2800	\$ 30	\$ 84,000	Based on experience with similar projects
2.2.1f	Drainage Layer – Drainage Geocomposite Material	Square Feet	2,631,750	\$ 0.35	\$ 921,113	Based on recent experience in Texas

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2.2.1g	Erosion Layer	Cubic Yards	146,208	\$ 2.50	\$ 365,520	Based on recent experience in Texas
2.2.1h	Vegetation	Acres	60	\$ 1,164	\$ 69,840	Based on recent experience in Texas
<i>2.2.2 Top Slope Cover</i>						
2.2.2a	Infiltration Layer – Compacted Clay	Cubic Yards	204,691	\$ 5	\$ 1,023,455	Based on recent experience in Texas
2.2.2b	Infiltration Layer – Geosynthetic Clay Liner	Square Feet	NA	NA	NA	NA
2.2.2c	Flexible Membrane Cover – HDPE	Square Feet	NA	NA	NA	NA
2.2.2d	Flexible Membrane Cover – LLDPE	Square Feet	3,684,450	\$ 0.36	\$ 1,326,402	Based on recent experience in Texas (smooth geomembrane)
2.2.2e	Drainage Layer – Aggregate	Tons	NA	NA	NA	NA
2.2.2f	Drainage Layer – Drainage Geocomposite Material	Square Feet	3,684,450	\$ 0.35	\$ 1,289,558	Based on recent experience in Texas
2.2.2g	Erosion Layer	Cubic Yards	204,691	\$ 0.35	\$ 71,642	Based on recent experience in Texas
2.2.2h	Vegetation	Acres	84	\$ 0.35	\$ 29	Based on recent experience in Texas
<i>2.2.3 Cells for Class 1 Nonhazardous Industrial Waste</i>						
2.2.3a	Dike Construction	specify	NA	NA	NA	NA
<i>2.3 Site Grading</i>						
2.3.1	Site Grading	Acres	145	\$ 1,000	\$ 145,000	Based on recent experience in Texas

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2.4 Site Fencing and Security						
2.4.1	Site Fencing and Security	specify	NA	NA	NA	Existing
2.5 Landfill Gas Monitoring and Control System						
2.5.1	Gas Control Wells	Acres	145	\$ 9,500	\$ 1,377,500	Based on recent experience in Texas
2.5.2	Gas Header Piping	specify	cost included in 2.5.1	NA	NA	NA
2.5.3	Gas Lateral Piping	specify	cost included in 2.5.1	NA	NA	NA
2.5.4	Flare Station	Lump Sum	specify	NA	NA	Existing
2.5.5	Condensate Sumps	specify	cost included in 2.5.1	NA	NA	NA
2.5.6	Completion of LFG Monitoring System	Each	3	\$ 5,000	\$ 15,000	Existing
2.6 Groundwater Monitoring System						
2.6.1	Groundwater Monitoring Well Installation	Each	4	\$ 5,000	\$ 20,000	Existing
2.6.2	Piezometer and Monitor Well Plugging and Abandonment	Each	NA	NA	NA	NA
2.7 Leachate Management						
2.7.1	Completion of Leachate Management System	Lump Sum	1	\$100,000	\$ 100,000	Based on recent experience in Texas
2.8 Stormwater Management						
2.8.1	Stormwater Drainage Management System	Linear Feet	2610	\$ 10	\$ 26,100	Based on recent experience in Texas
2.9 Other Cost Items						
2.9.1	Add-on Berms (See Att B)	Linear Feet	7,841	\$ 5	\$ 39,204	Based on recent experience in Texas

	Downchutes (See Att B)		1,250	\$ 40	\$ 50,000	Based on recent experience in Texas
2.10 Construction Costs Subtotal						
2.10.1	Construction Costs Subtotal	NA	NA	NA	\$6,503,298 \$8,612,833	NA
3. Storage and Processing Unit Closure Costs						
3.1	Waste Disposal	Tons	13,169	\$ 3.10	\$ 40,824	Based on recent experience in Texas
3.2	Material Removal and Disinfection	Tons	NA	NA	NA	NA
3.3	Demolition and Disposal Units	Lump Sum	1	\$ 3,340	\$ 3,340	Based on recent experience in Texas
3.4	Additional Storage and Processing Unit Closure Cost Items (describe in attachments)	identify attachments Appendix III-9F	NA ¹	NA \$198,400	NA \$198,400	<u>Based on recent experience in Texas</u> NA
3.5 Storage and Processing Unit Closure Costs Subtotal						
3.5.1	Storage and Processing Unit Closure Costs Subtotal	NA	NA	NA	\$ 44,164,242,564	NA
4. Sum of Engineering, Construction, and Storage and Processing Unit Closure Costs						
4.1	Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals	NA	NA	NA	\$ 7,146,462 <u>9,639,397</u>	NA
5. Contingency						
5.1	Contingency (10% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	\$ 714,646 <u>963,940</u>	NA

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6. Contract Performance Bond						
6.1	Contract Performance Bond (2% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	\$ 142,929 <u>192,788</u>	NA
7. Third Party Administration and Project Management Costs						
7.1	Third Party Administration and Project Management Costs (2.5% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	\$ 178,662 <u>240,985</u>	NA
8. Total Closure Costs						
8.1	Total Closure Costs (sum of amounts in Sections 4, 5, 6, and 7)	NA	NA	NA	\$10,986,031 <u>11,037,110</u>	NA

APPENDIX III-9F
TCEQ-CLOSURE COST
BREAKDOWN OF CLOSURE COST FOR LINE ITEM 3.4
 TEMPLE RECYCLING AND DISPOSAL FACILITY
 BELL COUNTY, TEXAS

Item No	Item Description	Units	Quantity	Unit Cost	Cost	Source of Unit Cost
3.4	Emptying Pond B and Interim Leachate Pond C and Pond D	Gal	3,581,530	\$0.005	17,908.0	Based on recent experience in Texas
	Demucking Pond B and Interim leachate Pond C and Pond D (Assume 6-inch silt at bottom)	Cu.Yd	910	\$9.0	8,190.0	
	Remove the Geomembrane liner and metal parts of Pond B and Interim Leachate Pond C and Pond D, dispose the materials at the appropriate facility, and inspect the subgrade below the geomembrane liner	LS	1	\$20,000	20,000.0	
	Backfilling of Pond B and Interim Leachate Pond C and Pond D	Cu.Yd	24,717	\$6	148,302.0	
	Grassing and seeding	LS	1	\$4,000	4,000.0	
	Total					

ENCLOSURE B

CLEAN COPIES



Texas Commission on Environmental Quality

Application Form for Municipal Solid Waste Permit or Registration Modification or Temporary Authorization

Application Tracking Information

Facility Name: Temple Recycling and Disposal Facility

Permittee or Registrant Name: Waste Management of Texas Inc. / City of Temple

MSW Authorization Number: 692B

Initial Submission Date: October 27, 2025

Revision Date: December 11, 2025, January 20, 2026

Instructions for completing this form are provided in [form TCEQ-20650-instr](#)¹. If you have questions, contact the Municipal Solid Waste Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335.

Application Data

1. Submission Type
<input type="checkbox"/> Initial Submission <input checked="" type="checkbox"/> Notice of Deficiency (NOD) Response
2. Authorization Type
<input checked="" type="checkbox"/> Permit <input type="checkbox"/> Registration
3. Application Type
<input checked="" type="checkbox"/> Modification with Public Notice <input type="checkbox"/> Modification without Public Notice <input type="checkbox"/> Temporary Authorization (TA) <input type="checkbox"/> Modification for Name Change or Transfer
4. Application Fee
<p>Amount</p> <p>The application fee for a modification or temporary authorization is \$150.</p> <p>Payment Method</p> <input type="checkbox"/> Check <input checked="" type="checkbox"/> Online through ePay portal www3.tceq.texas.gov/epay/ If paid online, enter ePay Trace Number: <u>582EA000694684</u>

¹ www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20650-instr.pdf

PART III, ATTACHMENT 3

WASTE MANAGEMENT UNIT DESIGN

Temple Recycling & Disposal Facility

Temple, Bell County, Texas

TCEQ Permit MSW-692B

Owner/Site Operator/Permittee:



City of Temple
201 N. Main
Temple, Texas 76501

Operator:



Waste Management of Texas, Inc.
9708 Giles Lane
Austin, Texas 78781

Submitted By:

WSP USA Inc.
9655 Katy Freeway, Suite 200
Houston, TX 77024 USA
Professional Engineering Firm Registration Number F-2263



WSP USA INC.
Professional Engineering Firm
Registration Number F-2263

INTENDED FOR PERMITTING
PURPOSES ONLY

Submitted: June 2016
Revised: January 2017
Revised: April 2017
Revised: May 2017
Revised: October 2025
Revised: January 2026

Project No. US0022880.8845

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WSP USA INC.
Professional Engineering Firm
Registration Number F-2263

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[https://wsponlinenam.sharepoint.com/sites/us-wastemanagementtexas/shared documents/temple rdt/us0022880.8845-wm tem - leachate pond design/04 technical work/report/permit mod/response to 2nd nod/iii-3_rev0-20260112.docx](https://wsponlinenam.sharepoint.com/sites/us-wastemanagementtexas/shared%20documents/temple%20rdt/us0022880.8845-wm%20tem%20-%20leachate%20pond%20design/04%20technical%20work/report/permit%20mod/response%20to%202nd%20nod/iii-3_rev0-20260112.docx)

Submitted: June 2016
 Revised: January 2017
 Revised: April 2017
 Revised: October 2025
 Revised: January 2026

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Both existing leachate storage and evaporation ponds are constructed with geomembrane and compacted clay liners. Both ponds have open tops and one foot of freeboard will be maintained to prevent overtopping from a 25-year, 24-hour rainfall event.

A proposed Interim Leachate Containment Pond will be located within the boundary of Tract 1C, which is the last cell area to be constructed for waste placement per the sites development sequence of the landfill and will be constructed with a geomembrane and a compacted clay liner. The Interim Leachate Pond will be decommissioned and removed prior to construction of Tract 1C liner construction. This pond will have an open top and two feet of freeboard will be maintained to prevent overtopping from a 25-year, 24-hour rainfall event.

Leachate storage time in the existing ponds and the proposed pond will depend on evaporation and leachate recirculation volumes. The locations of the existing leachate ponds and the proposed interim leachate containment pond are shown on Part III, Attachment 1, Figure III-1-2. Construction and design details of the existing leachate storage and evaporation ponds and the proposed interim leachate containment pond are provided in Part II, Appendix IIF and Part III, Attachment 3, Figures III-3-10.1 – III-3-10.3, respectively.

Leachate from these ponds is either evaporated, recirculated or discharged to the City of Temple sanitary sewer system.

Construction of any leachate storage/evaporation pond not constructed at the time of permit issuance of MSW-692B will need to be authorized by a permit modification.

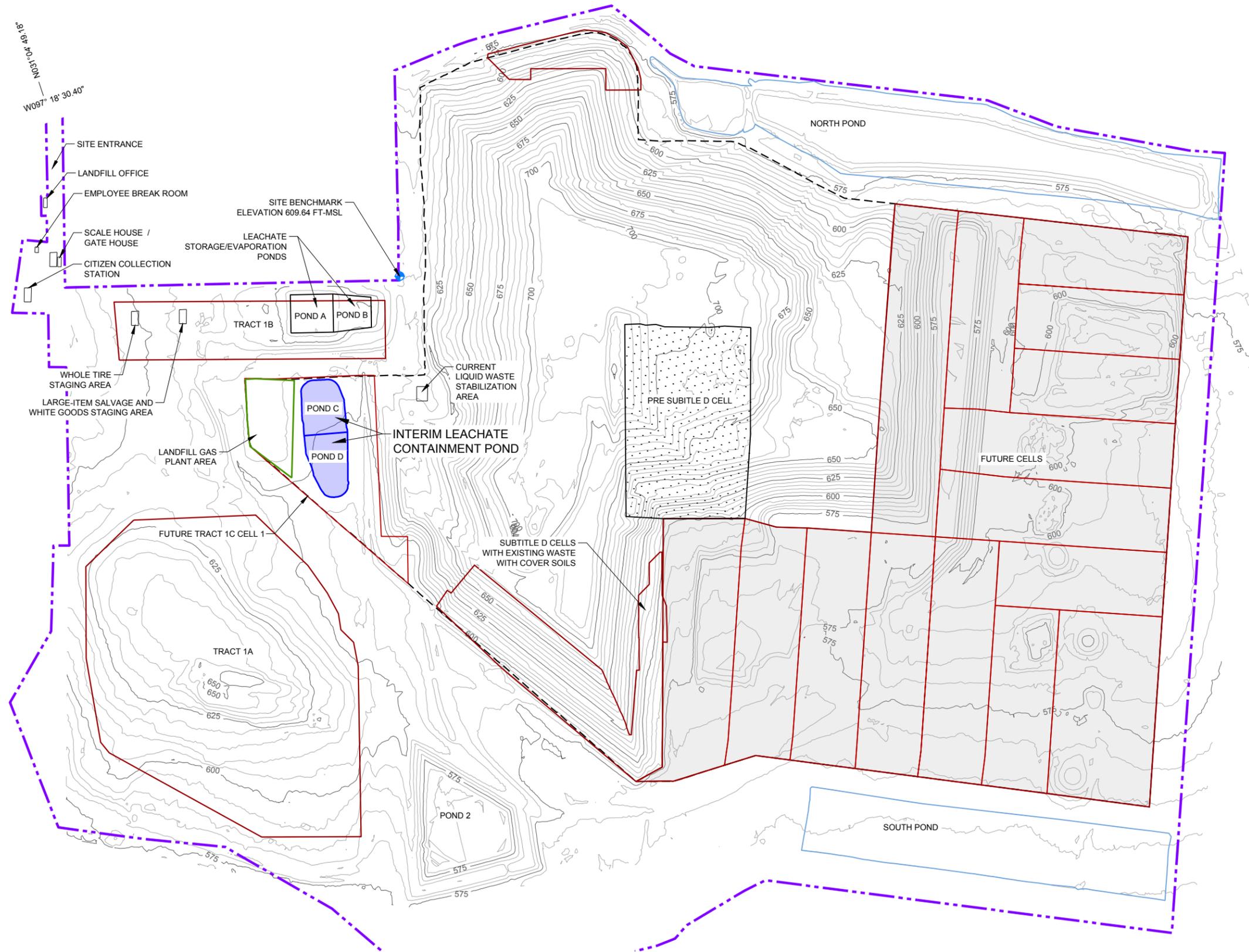
6.2.1.7 Leachate Treatment and Disposal

Leachate that is not recirculated will be managed as discussed in Sections 6.2.1.5 and 6.2.1.6 above. Disposal of leachate, as required, will be done at an appropriately authorized facility.

6.2.1.8 Leachate Recirculation

In disposal cells containing a standard Subtitle D liner system (i.e., a compacted clay/geomembrane composite) and leachate collection system, leachate and gas condensate may be recirculated back into the waste. Leachate recirculation may consist of spray application during dry conditions using a portable tank(s) at the active face, injecting leachate through a perforated pipe or well buried in the refuse, or discharging leachate in an area excavated into waste and backfilled with highly permeable material (e.g., gravel or tire chips). Leachate will not be recirculated to the active face during rainy or wet periods. The automated leachate pumps will prevent leachate depth greater than 30 cm from accumulating over the liner and will be in operation during leachate recirculation activities. The application of leachate will be in a manner so as to not cause leachate accumulation, ponding, or other operational problems. The Temple Recycling and

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LEGEND

- PERMIT BOUNDARY
- WASTE FOOTPRINT
- POND GRADE BREAK
- FUTURE CELL BOUNDARY
- INTERIM LEACHATE CONTAINMENT POND
- PRE-SUBTITLE D CELLS
- + SITE BENCHMARK

NOTE(S)

- LANDFILL TOPOGRAPHY COMPILED BY DRONE SURVEY BY HYDREX DATED FEBRUARY 18, 2025.

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REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
2	2026-01-20	ISSUED FOR PERMITTING PURPOSES - NOD 2	KG	KG	CEI	CEI
1	2025-10-27	ISSUED FOR PERMITTING PURPOSES	KG	TNB	CEI	CEI

SEAL

WSP USA INC.
TEXAS REGISTRATION F-2263

CLIENT

CONSULTANT

WSP USA INC.
9655 KATY FREEWAY, SUITE 200
HOUSTON, TEXAS 77024
USA
281-589-5900
www.wsp.com

PROJECT
TEMPLE RECYCLING AND DISPOSAL FACILITY
LEACHATE POND PERMIT MODIFICATION MSW 692B
BELL COUNTY, TEXAS

TITLE
**SCHEMATIC VIEW OF VARIOUS WASTE DISPOSAL,
PROCESSING, AND STORAGE AREAS**

PROJECT NO. US022880.8845	PERMIT SECTION PART III, ATT. 1	REV. 0	1 of 5 FIGURE III-1-2
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1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

PART III, ATTACHMENT 7

CLOSURE PLAN

Temple Recycling & Disposal Facility

Temple, Bell County, Texas

TCEQ Permit MSW-692B

Owner/Site Operator/Permittee:



City of Temple
201 N. Main
Temple, Texas 76501

Operator:



Waste Management of Texas
9708 Giles Lane
Austin, Texas 78781

Submitted By:

WSP USA Inc.
9655 Katy Freeway, Suite 200
Houston, TX 77024 USA
Professional Engineering Firm Registration Number F-2578



WSP USA INC.
Professional Engineering Firm
Registration Number F-2263

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Submitted: June 2016
Revised: January 2017
Revised: April 2017
Revised: September 2024
Revised: October 2025
Revised: December 2025
Revised: January 2026

Project No. US0022880.8845

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6.0 CLOSURE OF STORAGE AND PROCESSING UNITS

Closure for the storage and processing units at the site is addressed as follows:

- Liquid waste stabilization area: Upon closure, the waste remaining in the stabilization tank will be properly stabilized and disposed of in the landfill. The stabilization tank will be disposed of within the landfill.
- Tire staging area: At time of closure, tires in the staging area will be processed by grinding or other means to reduce size to quartered or split and disposed of in the landfill or another authorized facility.
- Large Item/White Goods Storage Area: Large items/white goods stored on-site at time of closure will be either transported offsite for recycling or disposed of at an authorized facility.
- Recyclable material staging area: Recyclable materials will transported off-site for to recyclable material end user locations.
- Leachate evaporation ponds: At least one leachate evaporation pond will remain in use during the post-closure care period. At the time of closure of each of the ponds, whether during the life of the landfill, such as the interim leachate evaporation pond, or at the end of the post-closure care period, the leachate evaporation ponds will be closed as follows: empty the pond(s) by discharging the leachate to the sanitary sewer system via existing piping and pumping system; demuck the bottom of the pond(s) and dispose of the materials at an authorized facility; pressure wash the geomembrane liner and the metal parts of the leachate evaporation pond(s) and discharge the cleaning water to an authorized facility; remove the geomembrane liner and the metal parts of the leachate evaporation pond(s) and dispose of the material at an authorized facility; inspect the subgrade below the geomembrane liner and promptly remove any contaminated soil identified and properly dispose of at an authorized facility; backfill the ponds with soils; and grade and seed the surface. Leachate management activities will only be stopped after demonstrating to the executive director that leachate no longer poses a threat to human health and environment.
- Citizen Collection Station: Upon closure, waste remaining at the Citizen Collection Station will be transported to the landfill disposal area for disposal. The Citizen Collection Station will either be dismantled or a "Notice of Intent to Operate a Citizen's Collection Station" will be submitted to TCEQ.



Texas Commission on Environmental Quality

Closure Cost Estimate Form for Municipal Solid Waste Type I Landfills

This form is for use by applicants or site operators to provide cost estimates for closure of MSW Type I landfills to meet the requirements in 30 Texas Administrative Code (TAC) Chapter 330, Section 330.63(j) and 30 TAC Chapter 330 Subchapter L. The costs to be provided herein are cost estimates for hiring a third party to close the largest waste fill area that could potentially be open in the year to follow and those areas that have not received final cover. If you need assistance in completing this form, please contact the MSW Permits Section in the Waste Permits Division at (512) 239-2335.

Facility Name: Temple Recycling and Disposal Facility

MSW Permit No.: 692B

Site Operator/Permittee Name and Mailing Address: City of Temple, 3210 East Ave. H Bldg. A, Temple, TX 76501

Total Closure Cost Estimate (2015 Dollar Amount): \$11,037,110

I. Professional Engineer's Statement, Seal, and Signature

I am a licensed professional engineer in the State of Texas. To the best of my knowledge, this Closure Cost Estimate has been completed in substantial conformance with the facility Closure Plan and, in my professional opinion, is in compliance with Title 30 of the Texas Administrative Code, Chapter 330.

Name: Chad E. Ireland, PE Title: Geological Engineer

Date: January 20, 2026

Company Name: WSP USA Inc. Firm Registration Number: F-2263

Professional Engineer's Seal



Professional Engineer's Signature

II. Annual Review of Permit Conditions, Cost Estimates, Inflation Factor, and Financial Assurance
--

The permittee/site operator acknowledges that he/she will:

1. Review the facility's permit conditions on an annual basis and verify that the current active and inactive waste fill areas of the landfill match the areas on which closure cost estimates are based.
2. Request in writing via a permit modification application for an increase in the closure cost estimate and the amount of financial assurance provided if changes to the closure plan or the landfill conditions increase the maximum cost of closure at any time during the remaining active life of the landfill.
3. Request in writing via a permit modification application for a reduction in the cost estimate and the amount of financial assurance provided if the cost estimate exceeds the maximum cost of closure at any time during the remaining active life of the landfill. The permit modification application will include a description of the situation and a detailed justification for the reduction of the closure cost estimate and the amount of financial assurance.
4. Establish financial assurance for closure of the unit in an amount no less than the current closure cost estimate in accordance with 30 TAC Chapter 37, Subchapter R.
5. Adjust the current cost estimate for inflation within 60 days prior to the anniversary date of the first establishment of the financial assurance mechanism.
6. Provide annual inflation adjustments to the closure costs and financial assurance during the active life of the facility, until the facility is officially placed under the post closure care period and all requirements of the final closure plan have been approved in writing by the TCEQ executive director. The adjustment will be made using an inflation factor derived from the most recent annual Implicit Price Deflator for Gross National Product published by the United States Department of Commerce in its Survey of Current Business, as specified in paragraphs (1) and (2) of 30 TAC §37.131. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.
7. Provide continuous financial assurance coverage for closure until the facility is officially placed under the post-closure care period.

III. Description of the Closure Cost Estimates Worksheet

The following descriptions of the items on the closure cost estimates worksheet provide guidance for identifying the minimum work or cost elements and estimating the unit or lump sum cost of each item as applicable. Enter additional detail for each item in the field following the item as necessary and as site-specific condition warrants. The cost items are grouped under closure costs for engineering, construction, and storage and processing units. Include attachments to detail any additional work and associated costs necessary to close the site that is not already included as a line item on the worksheet. Reference the attachments and list the work or cost items in the fields under "Additional Engineering Cost Items Not Listed on the Worksheet," "Additional Construction Cost Items Not Listed on the Worksheet," or "Additional Storage and Processing Units Items Not Listed on the Worksheet" as applicable. Provide the total cost of the additional work or cost items in each cost category on the worksheet line that precedes the cost subtotal for each cost group.

1. Engineering Costs

The engineering tasks have been subdivided into seven items and are described below. Other related costs may be added as site-specific issues warrant.

1.1. Topographic Survey

A topographic survey will be required to verify the existing elevation and slopes of the landfill to ensure conformance with the final cover system, drainage system, and final grading designs.

Enter additional topographic survey work or cost element details as site-specific conditions warrant: N/A

1.2. Boundary Survey

The metes and bounds description is required for filing of the affidavit of closure and deed recording of any area of the site which has received waste. Other activities to be included here are publication of the public notice of closing activities.

Enter additional boundary survey work or cost element details as site-specific conditions warrant: N/A

1.3. Site Evaluation

The evaluation includes a site inspection to identify waste disposal areas, analyze drainage and erosion protection needs, and to determine other site operational features that are not in compliance with the permit. The site evaluation also includes verifying the need for new or relocation of existing groundwater monitoring wells and landfill gas monitoring probes, analysis of groundwater samples, and review of site operating record. The third party consultant who performed the site evaluation will prepare and submit an engineering report to the executive director to document the status of the

site. The report will identify all areas of work and the associated implementation costs necessary to safely close the landfill operations with recommendations on how to fulfill these needs.

Enter additional site evaluation work or cost element details as site-specific conditions warrant: N/A

1.4. Development of Plans

The final closure plan, the final cover system design and specifications, grading and drainage plans, specification for revegetation, design of any other improvements to bring the site into compliance with the permit, the closure schedule, and coordination with the TCEQ and provision of closure notice to the public.

Enter additional development of plans work or cost element details as site-specific conditions warrant: N/A

1.5. Contract Administration (bidding and award)

The third-party consultant will advertise the project, receive the bids, evaluate the bids, award the closure construction contract and administer the contract during construction.

Enter additional contract administration work or cost element details as site-specific conditions warrant: N/A

1.6. Closure Inspection and Testing

The professional of record will observe closure construction, perform cover thickness and permeability verification, and prepare an evaluation report upon completion of closure.

Enter additional closure inspection or testing work or cost element details as site-specific conditions warrant: N/A

1.7. TPDES and other Permits

The third-party consultant will prepare plans, specifications, and other documents necessary for compliance with applicable federal and state laws and requirements, including the Clean Water Act, for the proper closure of the site.

Enter additional TPES or other permits work or cost element details as site-specific conditions warrant: N/A

1.8. Additional Engineering Cost Items Not Listed on the Worksheet

List the Attachment(s) detailing any additional engineering cost items necessary to close the site that is not already included as a line item on the worksheet: Part III, Attachment 9, Appendix III-9B Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional engineering cost items in the "Cost" column.

1.9. Engineering Costs Subtotal

1.9.1. Enter the sum of engineering costs in Items 1.1 through 1.8.

2. Construction Costs

Closure construction costs include those for construction of the final cover system, site grading, and drainage improvements. Other costs may be added as site-specific issues warrant.

2.1. Mobilization

2.1.1. Mobilization of Personnel and Equipment

The cost of mobilizing personnel and construction heavy equipment must be included as part of the construction costs.

Enter additional work or cost element details for mobilization of personnel and equipment as site-specific conditions warrant: N/A

2.2. Final Cover System

The owner or operator must install a final cover system that is designed to minimize infiltration and erosion. The final cover system is subdivided into the sideslope cover and cap cover with their associated components to facilitate cost calculations. If an alternative final cover is proposed, the closure cost estimate will still be based on a design that utilizes the conventional composite cover system.

Enter additional final cover system work or cost element details as site-specific conditions warrant: N/A

2.2.1. Side Slope Cover

Enter information for Items 2.2.1a through 2.2.1h.

2.2.2. Top Slope Cover

Enter information for Items 2.2.2a through 2.2.2h.

2.2.3. Cells for Class 1 Nonhazardous Industrial Waste

2.3. Site Grading

Site grading includes the final grading of the site, including the landfill cap and sideslopes.

Enter additional site grading work or cost element details as site-specific conditions warrant: N/A

2.4. Site Fencing and Security

Site fencing and security must be included for the area which has received waste and have no existing approved fencing.

Enter additional site fencing and security work or cost element details as site-specific conditions warrant: N/A

2.5. Landfill Gas Monitoring and Control Systems

Enter information for Items 2.5.1 through 2.5.6.

Final installation of the landfill gas monitoring and control systems must include the installation costs of pipes and appurtenances. In the event of a forced closure, the systems may not have been completed, thus, the estimated costs to complete the landfill gas monitoring and control system must be provided.

Enter additional landfill gas monitoring and control systems work or cost element details as site-specific conditions warrant: N/A

2.6. Groundwater Monitoring System

2.6.1. Monitor Well Installation

Upon closure of the site, it may be necessary to relocate the compliance boundary. This requires the installation of new monitor wells.

Enter additional groundwater monitoring system work or cost element details as site-specific conditions warrant: N/A

2.6.2. Piezometer and Monitor Well Plugging and Abandonment

Piezometer or monitor well abandonment is the cost of abandoning (plugging) piezometers or monitor wells that are no longer needed. Determine the number of piezometers or monitor wells to be abandoned and include the total cost.

Enter additional plugging and abandonment work or cost element details as site-specific conditions warrant: N/A

2.7. Leachate Management

2.7.1. Completion of Existing Leachate Collection System

In the event of a forced closure, there may be circumstances where the leachate collection system has not been completed. In this event, the leachate collection system must be closed with a permanent outfalls and permanent cleanouts installed.

Enter additional leachate management work or cost element details as site-specific conditions warrant: N/A

2.8. Stormwater Management

2.8.1. Stormwater Drainage Management System

To reduce the potential long-term impacts of the landfill on surface water quality, drainage features must be incorporated into the final cover design to direct runoff, minimize erosion, control sediments, and avoid ponding of stormwater. The drainage system construction costs must be included.

Enter additional stormwater drainage management work or cost element details as site-specific conditions warrant: Add-on Berms and Downchutes

2.9. Additional Construction Cost Items Not Listed on Worksheet

List the Attachments detailing any additional construction cost items necessary to close the site that is not already included as a line item on the worksheet: Part III, Attachment 9, Appendix III-9B Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional construction cost items in the "Cost" column.

2.10. Construction Costs Subtotal

2.10.1. Enter the sum of construction costs in Items 2.1 through 2.9.

3. Storage and Processing Unit Closure Costs

For landfills that incorporate storage and/or processing operations that are not separately authorized, all waste and processed and unprocessed materials associated with storage and/or processing units must be removed during the closure process.

3.1. Waste Disposal

The cost of disposal of waste at an authorized facility. *Enter additional waste disposal work or cost element information as necessary.*

N/A

3.2. Material Removal and Disinfection

The cost of removal, including transportation, of any remaining processed and unprocessed materials to an authorized off-site location. *Enter additional material removal and disinfection work or cost element information as necessary.*

N/A

3.3. Demolition and Disposal

The cost of dismantling and/or disinfection of storage and/or processing units and disposal, as applicable. *Enter additional demolition and disposal work or cost element information as necessary.*

N/A

3.4. Additional Storage and Processing Unit Closure Cost Items Not Listed in Worksheet

List the Attachments detailing any additional storage and processing unit closure cost items necessary to close the site that is not already included as a line item on the worksheet. N/A Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional storage and processing unit closure cost items in the "Cost" column.

4. Sum of Cost Subtotals

4.1. Enter the sum of engineering, construction, and storage and processing unit closure cost subtotals from lines 1.9.1, 2.10.1, and 3.5.1.

5. Contingency

5.1. Add an amount equal to at least 10 percent of the sum of cost subtotals to cover unanticipated events during implementation of closure activities.

6. Contract Performance Bond

6.1. Add an amount equal to at least 2 percent of the sum of cost subtotals for purchase of a surety bond to guarantee satisfactory completion of the closure activities.

7. Third Party Administration and Project Management Costs

7.1. Add an amount equal to at least 2.5 percent of the sum of cost subtotals to cover the cost for a third party hired by TCEQ to administer the closure activities.

8. Total Closure Cost

8.1. Enter the sum of the amounts on lines 4.1, 5.1, 6.1, and 7.1.

IV. Closure Cost Estimates Worksheet

A. Landfill Data

Total Permitted Waste Disposal Area: 239 acres

Largest Area Requiring Final Cover in the year to follow: 145 acres

Total Filled Area with Constructed Final Cover: 87 acres

Total Area Certified Closed: 87 acres

Number of Monitor Wells to be Installed for Closure: 4

Number of Gas Probes to be Installed for Closure: 3

Total Acreage Needing LFG Collection and Control System: 145 acres

The unit or lump sum cost for each item is based on the work items and cost elements described in Section III of this Closure Cost Estimate document:

Yes No Partially

(if "No" or "Partially" is checked, please include attachments describing the additional work items and detailing the unit, quantities, and costs for the additional items)

B. Facility Drawings and Financial Assurance Documentation

- Facility drawings
 - Attach facility drawings showing the closure areas to which the closure cost estimates apply.
- Financial assurance documentation
 - For an existing facility, attach a copy of the documentation required to demonstrate financial assurance as specified in 30 TAC Chapter 37, Subchapter R.
 - For a new facility, a copy of the required documentation shall be submitted 60 days prior to the initial receipt of waste.

C. Attachments

- Additional Engineering, Construction, and Storage and Processing Units Cost Items Details
- Attachment 9, Appendix III-9B Table 9.1 Additional Cost Items Not Listed on Worksheet

D. Closure Cost Estimates Worksheet

If any item listed in this worksheet is not applicable to the subject facility, enter "NA" (Not Applicable) in the affected field.

Table 1. Closure Cost Estimates Worksheet.

Item No.	Item Description	Units	Quantity	Unit Cost	Cost	Source of Unit Cost Estimate
1. Engineering Costs						
1.1	Topographic Survey	Lump Sum	1	\$ 10,000	\$ 10,000	Based on experience with similar projects
1.2	Boundary Survey	Lump Sum	1	\$ 9,000	\$ 9,000	Based on experience with similar projects
1.3	Site Evaluation	Lump Sum	1	\$ 10,000	\$ 10,000	Based on estimate of man hours required and supported by experience with similar projects
1.4	Development of Plans	Lump Sum	1	\$ 25,000	\$ 25,000	Based on experience with similar projects
1.5	Contract Administration (bidding and award)	Lump Sum	1	\$ 5,000	\$ 5,000	Based on experience with similar projects

1.6	Closure Inspection and Testing	acres	145	\$ 5,000	\$ 725,000	Based on recent experience in Texas
1.7	TPDES and other Permits	Lump Sum	NA	NA	\$ -	Existing
1.8	Additional Engineering Cost Items (describe in attachments)	identify attachments	NA	NA	NA	NA
1.9 Engineering Costs Subtotal						
1.9.1	Engineering Costs Subtotal	NA	NA	NA	\$ 784,000	NA
2. Construction Costs						
2.1 Mobilization						
2.1.1	Mobilization of Personnel and Equipment	Lump Sum	1	\$ 10,000	\$ 10,000	Based on recent experience in Texas
2.2 Final Cover System						
2.2.1 Side Slope Cover						
2.2.1a	Infiltration Layer – Compacted Clay	Cubic Yards	146,208	\$ 5	\$ 731,040	Based on recent experience in Texas
2.2.1b	Infiltration Layer – Geosynthetic Clay Liner	Square Feet	NA	NA	NA	NA
2.2.1c	Flexible Membrane Cover – HDPE	Square Feet	NA	NA	NA	NA
2.2.1d	Flexible Membrane Cover – LLDPE	Square Feet	2,631,750	\$ 0.36	\$ 947,430	Based on recent experience in Texas (textured geomembrane)
2.2.1e	Drainage Layer – Aggregate	Tons	2800	\$ 30	\$ 84,000	Based on experience with similar projects
2.2.1f	Drainage Layer – Drainage Geocomposite Material	Square Feet	2,631,750	\$ 0.35	\$ 921,113	Based on recent experience in Texas

2.2.1g	Erosion Layer	Cubic Yards	146,208	\$ 2.50	\$ 365,520	Based on recent experience in Texas
2.2.1h	Vegetation	Acres	60	\$ 1,164	\$ 69,840	Based on recent experience in Texas
<i>2.2.2 Top Slope Cover</i>						
2.2.2a	Infiltration Layer – Compacted Clay	Cubic Yards	204,691	\$ 5	\$ 1,023,455	Based on recent experience in Texas
2.2.2b	Infiltration Layer – Geosynthetic Clay Liner	Square Feet	NA	NA	NA	NA
2.2.2c	Flexible Membrane Cover – HDPE	Square Feet	NA	NA	NA	NA
2.2.2d	Flexible Membrane Cover – LLDPE	Square Feet	3,684,450	\$ 0.36	\$ 1,326,402	Based on recent experience in Texas (smooth geomembrane)
2.2.2e	Drainage Layer – Aggregate	Tons	NA	NA	NA	NA
2.2.2f	Drainage Layer – Drainage Geocomposite Material	Square Feet	3,684,450	\$ 0.35	\$ 1,289,558	Based on recent experience in Texas
2.2.2g	Erosion Layer	Cubic Yards	204,691	\$ 0.35	\$ 71,642	Based on recent experience in Texas
2.2.2h	Vegetation	Acres	84	\$ 0.35	\$ 29	Based on recent experience in Texas
<i>2.2.3 Cells for Class 1 Nonhazardous Industrial Waste</i>						
2.2.3a	Dike Construction	specify	NA	NA	NA	NA
<i>2.3 Site Grading</i>						
2.3.1	Site Grading	Acres	145	\$ 1,000	\$ 145,000	Based on recent experience in Texas

2.4 Site Fencing and Security						
2.4.1	Site Fencing and Security	specify	NA	NA	NA	Existing
2.5 Landfill Gas Monitoring and Control System						
2.5.1	Gas Control Wells	Acres	145	\$ 9,500	\$ 1,377,500	Based on recent experience in Texas
2.5.2	Gas Header Piping	specify	cost included in 2.5.1	NA	NA	NA
2.5.3	Gas Lateral Piping	specify	cost included in 2.5.1	NA	NA	NA
2.5.4	Flare Station	Lump Sum	specify	NA	NA	Existing
2.5.5	Condensate Sumps	specify	cost included in 2.5.1	NA	NA	NA
2.5.6	Completion of LFG Monitoring System	Each	3	\$ 5,000	\$ 15,000	Existing
2.6 Groundwater Monitoring System						
2.6.1	Groundwater Monitoring Well Installation	Each	4	\$ 5,000	\$ 20,000	Existing
2.6.2	Piezometer and Monitor Well Plugging and Abandonment	Each	NA	NA	NA	NA
2.7 Leachate Management						
2.7.1	Completion of Leachate Management System	Lump Sum	1	\$100,000	\$ 100,000	Based on recent experience in Texas
2.8 Stormwater Management						
2.8.1	Stormwater Drainage Management System	Linear Feet	2610	\$ 10	\$ 26,100	Based on recent experience in Texas
2.9 Other Cost Items						
2.9.1	Add-on Berms (See Att B)	Linear Feet	7,841	\$ 5	\$ 39,204	Based on recent experience in Texas

	Downchutes (See Att B)		1,250	\$ 40	\$ 50,000	Based on recent experience in Texas
2.10 Construction Costs Subtotal						
2.10.1	Construction Costs Subtotal	NA	NA	NA	\$8,612,833	NA
3. Storage and Processing Unit Closure Costs						
3.1	Waste Disposal	Tons	13,169	\$ 3.10	\$ 40,824	Based on recent experience in Texas
3.2	Material Removal and Disinfection	Tons	NA	NA	NA	NA
3.3	Demolition and Disposal Units	Lump Sum	1	\$ 3,340	\$ 3,340	Based on recent experience in Texas
3.4	Additional Storage and Processing Unit Closure Cost Items (describe in attachments)	Appendix III-9F	1	\$ 198,400	NA \$ 198,400	Based on recent experience in Texas
3.5 Storage and Processing Unit Closure Costs Subtotal						
3.5.1	Storage and Processing Unit Closure Costs Subtotal	NA	NA	NA	\$ 4242,564	NA
4. Sum of Engineering, Construction, and Storage and Processing Unit Closure Costs						
4.1	Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals	NA	NA	NA	\$ 9,639,397	NA
5. Contingency						
5.1	Contingency (10% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	\$ 963,940	NA

6. Contract Performance Bond						
6.1	Contract Performance Bond (2% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	\$ 192,788	NA
7. Third Party Administration and Project Management Costs						
7.1	Third Party Administration and Project Management Costs (2.5% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	\$ 240,985	NA
8. Total Closure Costs						
8.1	Total Closure Costs (sum of amounts in Sections 4, 5, 6, and 7)	NA	NA	NA	\$11,037,110	NA

APPENDIX III-9F
TCEQ-CLOSURE COST
BREAKDOWN OF CLOSURE COST FOR LINE ITEM 3.4
 TEMPLE RECYCLING AND DISPOSAL FACILITY
 BELL COUNTY, TEXAS

Item No	Item Description	Units	Quantity	Unit Cost	Cost	Source of Unit Cost
3.4	Emptying Pond B and Interim Leachate Pond C and Pond D	Gal	3,581,530	\$0.005	17,908.0	Based on recent experience in Texas
	Demucking Pond B and Interim leachate Pond C and Pond D (Assume 6-inch silt at bottom)	Cu.Yd	910	\$9.0	8,190.0	
	Remove the Geomembrane liner and metal parts of Pond B and Interim Leachate Pond C and Pond D, dispose the materials at the appropriate facility, and inspect the subgrade below the geomembrane liner	LS	1	\$20,000	20,000.0	
	Backfilling of Pond B and Interim Leachate Pond C and Pond D	Cu.Yd	24,717	\$6	148,302.0	
	Grassing and seeding	LS	1	\$4,000	4,000.0	
	Total					