

Texas Commission on Environmental Quality Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

Part B Application

The TCEQ is committed to accessibility. You may request an accessible version of these documents, by contacting the Industrial and Hazardous Waste permits section program at (512)-239-2335 or by email at <u>ihwper@tceq.texas.gov</u>.

Disclaimer:

This document is intended for use in the RCRA Part B application preparation and review process. It contains a screening sheet that will produce a customized Part B application outline that is based on a facility's specific operating characteristics. This screening sheet and application outline are <u>not</u> a substitute for required application materials. This document may omit requirements applicable to the facility and/or include requirements that are not applicable. Please use the knowledge about the facility's operational design and history to ensure that a complete application based on 40 Code of Federal Regulations Part 270 and 30 Texas Administrative Code (TAC) Chapter 305 and Chapter 335 is submitted. Please include any necessary information that may have been mistakenly screened out. If regulatory requirements change during the application process, the TCEQ may request additional information before a permit is issued.

Quick Start Instructions for Part B Application with Screening Tool

Go to screening sheet

Page 1 of 61

View Entire Application



Screening Sheet for Industrial and Hazardous Waste Permitted Facilities. Please provide a response to all items. Note: depending on certain selections you make, answers to some questions will automatically default to "No" but some questions will remain to be answered by the user as "Yes" or "No", and if the user does not provide a "Yes" or "No" answer, the application will be generated as if answered "Yes". It is critical that each response is accurate to ensure retrieval of all applicable application items. If you need to change any response after the initial answer, change the answer and the application will update the application. Print (electronic or physical) a copy of the application materials to create the physical appendix format of your application.

Please answer Questions 1 through 11 and <u>DO NOT</u> leave any questions) unanswered to ensure an complete application.

 Is this an application for a compliance plan only? Is this permit for post-closure care only?¹ Is this an application for a compliance plan and post-closure care on Is this an application for WMU(s) with a compliance plan?² Is this an application for WMU(s) with post-closure care? 	 O aly? O 	Yes Yes Yes	•	No No
 3. Is this an application for a compliance plan and post-closure care or 4. Is this an application for WMU(s) with a compliance plan?² 	\sim		~	No
 4. Is this an application for WMU(s) with a compliance plan?² 	uly?	Yes	-	
	\frown		\bullet	No
5 Is this an application for WMI(a) with post closure care?	\cup	Yes	۲	No
5. Is this an application for WMU(s) with post-closure care?	\bigcirc	Yes	$oldsymbol{O}$	No
6. Is this an application for WMU(s), with compliance plan and post-closure care?	0	Yes	۲	No
7. Is this an application for WMU(s) only?	\bigcirc	Yes	۲	No
Any Land Based Units?	۲	Yes	\bigcirc	No
Surface Impoundments	\bigcirc	Yes	\bullet	No
Waste Piles	0	Yes	$\textcircled{\bullet}$	No
Land Treatment Units	\bigcirc	Yes	$oldsymbol{O}$	No
Landfills ³	$igodoldsymbol{igo$	Yes	\bigcirc	No
Container Storage Areas	\bigcirc	Yes	$oldsymbol{O}$	No
Tank and Tank Systems	\bigcirc	Yes	lacksquare	No
Incinerators	\bigcirc	Yes	$oldsymbol{O}$	No
Boilers/Industrial Furnaces	\bigcirc	Yes	lacksquare	No
Drip Pads	\bigcirc	Yes	$oldsymbol{O}$	No
Containment Buildings	\bigcirc	Yes	lacksquare	No
Miscellaneous Units ⁴	\bigcirc	Yes	$oldsymbol{O}$	No
8. Is this a new commercial facility?	\bigcirc	Yes	$oldsymbol{eta}$	No
	\bigcirc	Yes	$oldsymbol{O}$	No
9. Is this a "One-Stop" application with air provisions?		Voo		No
9. Is this a "One-Stop" application with air provisions?10. Is this facility military, federal, or state owned?	\bigcirc	Yes		
	\bigcirc	Yes	\bullet	No

1 - If "Yes" is indicated for Post-Closure Care only, then all non-land-based units above will default to "No". Additionally if "Yes" is indicated for Post-Closure Care only, then at least one Land-Based Unit must be "Yes."

2 - If "Yes" is indicated for Active Permit Unit(s) with a Compliance Plan, then at least one unit must be "Yes."

3 - Select "Landfills- Yes" for any land-based unit that was closed as a landfill. (Example Surface Impoundment closed s a landfill.)

4 - For Miscellaneous Units, select "yes" and also select "Yes for the appropriate unit types (s) shown above. Address all applicable engineering requirements (e.g., landfill requirements from Section V.G) in Section V.K.

WMU- Waste Management Unit



Texas Commission on Environmental Quality Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

Customized Part B Application

Form Availability:

This form, as well as other Industrial and Hazardous Waste documents, Part B electronic checklist, and pertinent rules, is available on the Internet. The TCEQ Home Page is at: <u>https://www.tceq.texas.gov</u>. Once you have accessed the home page, select "Forms and Publications" and follow the system prompts. The number for this form is 00376. Questions may be e-mailed to <u>ihwper@tceq.texas.gov</u>.

Introduction:

This permit application is generally a reorganized summary of the Part B information requirements of 40 CFR Part 270 and 30 Texas Administrative Code (TAC) Chapter 305 Subchapters C and D and Chapter 335. The TCEQ may request additional information before a permit is issued, if regulatory requirements change.

The original application plus all copies for New, Renewals, Major Amendments and Class 3 Modifications should be submitted to:

Texas Commission on Environmental Quality Attention: Waste Permits Division, MC 126 P. O. Box 13087 Austin, Texas 78711-3087

The original application plus all copies for Class 1, Class 1¹, Class 2 Modifications and Minor Amendments should be submitted to:

Texas Commission on Environmental Quality Attention: Industrial and Hazardous Waste Permits Section, MC 130 Waste Permits Division P. O. Box 13087 Austin, Texas 78711-3087

Telephone Inquiries:

(512) 239 - 2335 (For RCRA permit application) - Industrial & Hazardous Waste Permits Section, Waste Permits Division

(512) 239 - 6412 (For industrial and hazardous waste classification) - Technical Analysis Team, Industrial & Hazardous Waste Permits Section, Waste Permits Division

(512) 239 - 6413 (For solid waste registration number, EPA identification number, and notice of registration) - Registration and Reporting Section, Permitting and Registration Support Division

(512) 239 - 0272 (For non-combustion units) - Chemical New Source Review Permits

TCEQ Part B ApplicationPage 3 of 61TCEQ-00376 (Revised 10-31-2019)Page 3 of 61

Section, Air Permits Division

(512) 239 - 1583 (For combustion units) - Energy/Combustion New Sources Review Permits Section, Air Permits Division

(512) 239 - 0600 (For legal) - Environmental Law Division

(512) 239 - 6150 (For financial assurance) - Financial Assurance Unit, Revenue Operations Section, Financial Administration Division

(512) 239 - 0300 (For payment of permit application fees) - Cashier's Office, Revenue Operations Section, Financial Administration Division

(512) 239 - 2201 (For compliance plan or corrective action) - Voluntary Cleanup Program/Corrective Action Section, Remediation Division

Application Review Prohibition:

The Texas Commission on Environmental Quality (TCEQ) shall not review an application for a new commercial hazardous waste facility, and the application shall be deemed not to have been received, until the emergency response information required by Section III.F. of the application has been reviewed and declared by TCEQ staff to be complete and satisfactory. [30 TAC 281.26, 30 TAC 305.50(a)(12)(C) and (D)]

Permit Issuance Prohibited [30 TAC 335.205]:

The TCEQ shall not issue a permit for:

- 1. a new hazardous waste management facility or an areal expansion of an existing facility if the facility or expansion does not meet the requirements of 30 TAC 335.204 (relating to Unsuitable Site Characteristics);
- 2. a new hazardous waste landfill or the areal expansion of an existing hazardous waste landfill if there is a practical, economic, and feasible alternative to such a landfill that is reasonably available to manage the types and classes of hazardous waste which might be disposed of at the landfill;
- 3. a new commercial hazardous waste management facility as defined in 30 TAC 335.202 (relating to Definitions) or the subsequent areal expansion of such a facility or unit of that facility if the owner/operator proposes to locate the boundary of the unit within 0.5 of a mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park;
- 4. a new commercial hazardous waste management facility that is proposed to be located at a distance greater than 0.5 mile (2,640 feet) from an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park unless the applicant demonstrates to the satisfaction of the commission that the facility will be operated so as to safeguard public health and welfare and protect physical property and the environment, at any distance beyond the facility's property boundaries;
- 5. a proposed hazardous waste management facility, or a capacity expansion of an existing hazardous waste management facility if a fault exists within 3,000 feet of the proposed hazardous waste management facility or of the capacity expansion of an existing hazardous waste management facility unless the applicant performs the demonstration found in 30 TAC 305.50(a)(4)(D) and 305.50(a)(10)(E) ; and

6. A proposed solid waste facility for the processing or disposal of municipal hazardous waste or industrial solid waste which is located within an area of a municipality or county in which the processing or disposal of municipal hazardous waste or industrial solid waste is prohibited by an ordinance or order. [Texas Health and Safety Code Section 363.112]

See 30 TAC 335 Subchapter G: Location Standards for Hazardous Waste Storage, Processing, or Disposal for additional details and information regarding items 1 through 5 above.

Completing The Application and Electronic Checklist:

Prior to submitting a new permit application, please contact the TCEQ Permitting and Registration Support Division to obtain a Solid Waste Registration Number and an EPA Identification Number for inclusion in Section I.A. of this application. The facility's Solid Waste Registration Number may be proposed in Section I.A. as the Permit Number

This permit application form has been designed to solicit specific information, with reports to be attached or inserted. A response must be made for each informational request in the application form. If an item is not applicable please state "not applicable" and explain. All information included in the application must be listed by the format of the application. For example, if an engineering report is attached to the application to fulfill the requirements of Section V, then each subsection of the engineering report must correlate with the corresponding subsection in the application form (e.g., Subsection V.A.3. of the report would be proposed construction schedules). If information is provided which does not correspond with the application form, the specific rule or regulation which requires submittal of the information must be cited. Each report should be attached behind the summary form or table for the report and submitted as one document with the pages sequentially numbered at the bottom. Maps, bluelines, and drawings that cannot be folded to 8-1/2" x 11" may be submitted as separate documents. Engineering plans and specifications submitted with an application must be approved and sealed by a licensed Professional Engineer, with current license and designating the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act. Geology reports, geologic maps, and geologic cross-sections submitted with an application must be approved and sealed by a licensed Professional Geologist, with current license required by the Texas Geoscience Practice Act. Complete the tables in this application rather than substituting.

Facilities which will receive industrial and hazardous wastes from off-site sources must also provide information on these wastes and associated waste management units in accordance with 30 TAC 335.2.

In addition, the electronic checklist has been designed to facilitate the application preparation and review process, and should be completed and submitted along with applicable applications (see "Submittal" below).

For those who pre-filed a Part A application, certain items may have been omitted. These omissions must be addressed at this time. Additionally, if hazardous waste management methods have changed since the filing of the Part A, please provide an updated Part A.

Pursuant to Section 361.067 of the Texas Health and Safety Code, the TCEQ is required to mail a copy of this application or a summary of its contents to other regulatory agencies. Section I may be considered a summary of the entire application provided that all questions are completely answered. Therefore, Section I responses must not rely solely on cross-references to other sections of the application.

Groundwater Contamination:

If groundwater monitoring has detected the presence of hazardous constituents in the facility groundwater, the owner or operator must submit a Compliance Plan Application that is included as Section XI of this application. For more detailed instructions concerning a Compliance Plan, please see Section XI.

Submittal:

The complete application should be prepared using PDF and word processing. The third copy in the submittal package should consist of paper copies or PDF files of all surveys, reports, plot plans, diagrams, P&IDs, maps, etc., and a Compact Disk (CD) of the completed application form document and tables included in this application attachments. Files may be compressed using PKZIP Ver. 2 or a 100% compatible program. For Renewal, Amendment, and Modification applications, the PDF files should include both a finalized version and, where available, a redline/strikeout version clearly identifying all proposed changes from the existing permit. For revised application sections and incorporated documents where redline/ strikeout versions are not available, submit a detailed listing of all proposed changes to the existing permit. In addition, the submitted electronic version of the application should be easily searchable during the review process by TCEQ staff.

For a new permit application or renewal, submit:

- 1. an original updated Part A permit application plus three (3) full copies;
- 2. the original Part B application plus three (3) full copies (including the electronic third copy);
- 3. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
- 4. Pre-printed mailing labels of the adjacent landowners or an electronic mailing list on Compact Disk (CD) in MS Word format; and
- 5. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For a new compliance plan or renewal of an existing compliance plan, please submit the following in addition to the above:

- 1. Sections I and XI.A. through XI.E., as applicable;
- 2. Tables XI.A.I., XI.E.1 through XI.E.III, and CP Tables I, II, V, VI through IX, are required; and CP Tables IIIA, IIIA, IV and IVA as applicable. The applicant should use the PDF formatted Tables provided in the Part B application to include site-specific information that will become part of the final draft permit; and
- 3. a Sampling and Analysis Plan (SAP) compliant with "Attachment A" requirements and evaluation of monitoring wells compliant with "Attachment B" well specification requirements.

For a post-closure care permit submit:

- 1. an original updated Part A permit application plus three (3) full copies;
- 2. the original Part B application (excluding Sections III B and F; IV A, C and D; VII A and B; VIII.B and C; and X) plus three (3) full copies;
- 3. a check for payment of permit application fees transmitted directly to the

TCEQ

Financial Administration Division;

- 4. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on Compact Disk (CD) in MS Word format; and
- 5. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For major amendments to an issued hazardous waste permit, submit:

- 1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
- 2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the amendment;
- 3. an explanation of why the major amendment is needed;
- 4. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
- 5. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on Compact Disk (CD) in MS Word format; and
- 6. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For minor amendments to an issued hazardous waste permit, submit:

- 1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
- 2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I-Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the amendment;
- 3. an explanation of why the minor amendment is needed;
- 4. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division; and
- 5. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on diskette on Compact Disk (CD) in MS Word format.

For Class 3 modifications (including adding or revising a Compliance Plan) to an issued hazardous waste permit, submit:

- 1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
- 2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the modification;
- 3. a description of the exact changes to be made to the permit conditions and supporting documents referenced by the permit;
- 4. an explanation of why the Class 3 modification is needed;

Not Applicable

Interim Status Land Disposal Unit(s) Certification

For all land disposal units managing wastes which are newly listed or identified as hazardous wastes, the following certification must be executed by or on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous. If the operator fails to certify compliance with these requirements, the operator shall lose authority to operate under interim status. [40 CFR 270.73(d)]

Τ		
T	,	
	1	

(operator)

(title)

certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete.

I further certify that in accordance with Section 3005(e)(3) of the Resource Conservation and Recovery Act, as amended, the subject land disposal unit(s) are in compliance with all applicable groundwater monitoring and financial responsibility requirements of 30 TAC Sections 335.112, 335.116, and 335.117. I am aware there are significant penalties for submitting false information, including the possibility of civil penalty, criminal fines, and imprisonment.

Signature:

_____ Date: ____

5. evidence of the public notice mailing and publication (after the public meeting, please submit a statement that the public meeting was held within the required timeframes);

a. Evidence of public notice mailing to Adjacent Landowners requires submittal of copies of mail.

- 6. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division;
- 7. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on Compact Disk (CD) in MS Word format; and
- 8. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive.

For Class 2 modifications to an issued hazardous waste permit, submit:

- 1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
- 2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the modification;
- 3. a description of the exact changes to be made to the permit conditions and supporting documents referenced by the permit;
- 4. an explanation of why the Class 2 modification is needed;
- 5. evidence of the public notice mailing and publication (after the public meeting, please submit a statement that the public meeting was held within the required timeframes);
- 6. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division; and
- 7. pre-printed mailing labels of the adjacent landowners or an electronic mailing list on diskette on Compact Disk (CD) in MS Word format.

For Class 1¹ modifications to an issued hazardous waste permit, submit:

- 1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
- 2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I Table I of the Part B plus replacement pages for the changed portions of the application that change as a result of the modification;
- 3. a description of the exact changes to be made to the permit conditions and supporting documents referenced by the permit;
- 4. an explanation of why the Class 1^1 modification is needed;
- 5. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division; and
- 6. Completed RCRA Part B Administrative and Technical Evaluation Electronic Checklist (Form #00136) on CD, DVD, or USB drive, for applications involving the partial transfer of some permitted waste management units.

For Class 1 modifications to an issued hazardous waste permit, submit:

- 1. (if appropriate) an original updated Part A permit application plus three (3) full copies;
- 2. an original Part B application plus three (3) full copies, consisting of, at a minimum, Section I Table I of the Part B plus replacement pages for the changed

portions of the application that change as a result of the modification;

- 3. a description of the exact changes to be made to the permit conditions and supporting documents referenced by the permit;
- 4. an explanation of why the Class 1 modification is needed; and
- 5. a check for payment of permit application fees transmitted directly to the TCEQ Financial Administration Division.

If several modifications are submitted as one application, the application review will proceed at rate of the amendment or modification which has the longest timeframe.

Application Revisions:

Please submit any application revisions with a revised date and page numbers at the bottom of the page(s).

Waivers:

Any request for waiver of any of the applicable requirements of this permit application must be fully documented.

Designation of Material as Confidential:

The designation of material as confidential is frequently carried to excess. The Commission has a responsibility to provide a copy of each application to other review agencies and to interested persons upon request and to safeguard confidential material from becoming public knowledge. Thus, the Commission requests that the applicant (1) be prudent in the designation of material as confidential and (2) submit such material only when it might be essential to the staff in their development of a recommendation.

The Commission suggests that the applicant not submit confidential information as part of the permit application. However, if this cannot be avoided, the confidential information should be described in non-confidential terms throughout the application, cross-referenced to Section XIII: Confidential Material, and submitted as a separate Section XIII document or binder, and conspicuously marked "CONFIDENTIAL."

Reasons of confidentiality include the concept of trade secrecy and other related legal concepts which give a business the right to preserve confidentiality of business information to obtain or retain advantages from its right in the information. This includes authorizations under, 18 U.S.C. 1905 and special rules cited in 40 CFR Chapter I, Part 2, Subpart B. Section 361.037 of the Texas Health and Safety Code does not allow an applicant for an industrial solid waste permit to claim as confidential any record pertaining to the characteristics of the industrial solid waste.

The applicant may elect to withdraw any confidential material submitted with the application. However, the permit cannot be issued, amended, or modified if the application is incomplete.

Exposure Assessment:

In accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j), any Part B application submitted for a facility that stores, processes, or disposes of hazardous waste in a surface impoundment or a landfill (including post-closure) must be accompanied by exposure information of the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. This exposure information is considered separate from the permit application, as stated in 40 CFR 270.10(c).

Pre-Application Meeting/Public Participation Activities [30 TAC 335.391 and 30 TAC 39.503]:

a. Applicant-held pre-application public meeting

In accordance with 30 TAC 335.503(b) and 40 CFR Part 124.31(b)-(d), an applicant-held pre-application public meeting is required for the following application types prior to submitting the application to allow the applicant and the public to identify potential issues:

- New applications;
- Renewal applications with Class 3 Permit Modifications or Major Amendments; and
- Major Amendment applications.

The pre-application public meeting is not required for an application submitted for the sole purpose of conducting post-closure activities or post-closure activities and corrective action at a facility unless:

- The application is also for an initial permit for hazardous waste management unit(s); or
- The application is also for renewal of the permit, where the renewal application is proposing a significant change (Class 3 Permit Modification or Major Amendment) in facility operations (Note: per preamble to the related federal rule, the facility operations referenced herein exclude post-closure and corrective action activities).
- b. Pre-application meeting with TCEQ

Applicants are strongly encouraged to request a pre-application meeting with TCEQ Permits Section staff and to notify the Industrial and Hazardous Waste Permits Section, Waste Permits Division of intent to file new, renewal, Class 3 permit modification, major amendment, and other complex permit applications.

c. Pre-application local review

In accordance with 30 TAC 335.391, for a new hazardous waste management facility, if a local review committee has been established to facilitate communication between the applicant and the local host community, the applicant should summarize the activities of the committee and submit this summary with the application. Any report completed by a review committee must be submitted.

New industrial or hazardous waste facility that would accept municipal solid waste:

a. If an applicant proposes a new industrial or hazardous waste facility that would accept municipal solid waste, the applicant shall hold a public meeting in the county in which the facility is proposed to be located. This meeting must be held before the 45th day after the date the application is filed. In addition, the applicant shall publish notice of the public meeting in accordance with 30 TAC 39.503(e)(5).

Bilingual Notice Instructions:

For certain permit applications, public notice in an alternate language is required. If an elementary school or middle school nearest to the facility offers a bilingual program, notice may be required to be published in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, requires a bilingual education program for an entire school district should the requisite alternative language speaking student population exist. However, there may not be any bilingual-speaking students at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notice in an alternative language is triggered if the nearest elementary or middle school, as part of a larger school district, is required to make a bilingual education program on-site, or has students who attend such a program at another location to satisfy the school's obligation to provide such a program.

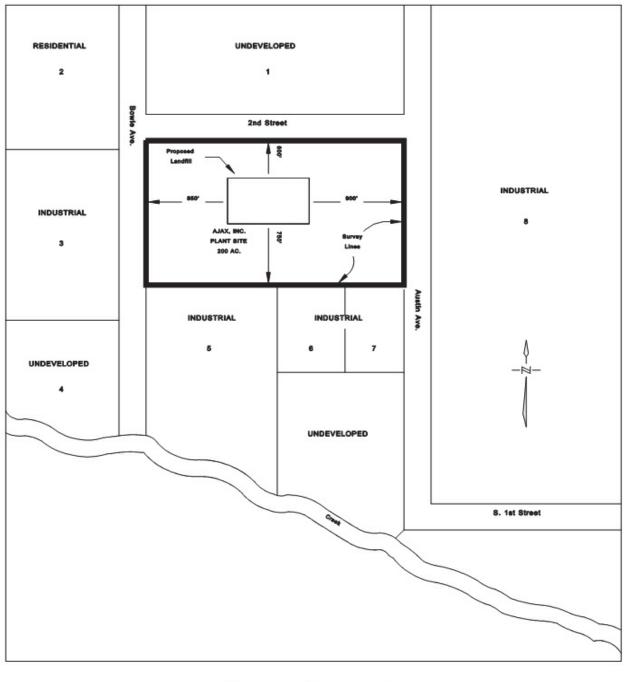
If it is determined that a bilingual notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language. Electronic versions of the Spanish template examples are available from the TCEQ to help the applicant complete the publication in the alternative language.

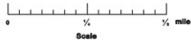
Complete and submit the <u>Bilingual notice confirmation</u> for this application. The Bilingual notice confirmation can be downloaded from the <u>Navigation Pane.</u>

Landowners Cross-Referenced To Application Map

SAMPLE APPLICATION MAP

ALL ADJACENT LANDOWNERS SHALL BE IDENTIFIED





TCEQ Part B Application
TCEQ-00376 (Revised 10-31-2019)Page 12 of 61

The persons identified below would be considered as affected persons.

- 1. MR & MRS SAMUEL L TEXANS 11901 STARTLE BLVD ATOWN TX 78759
- 2. MR & MRS EDWARD CITIZENS 1405 LINEAR ROAD LITTLE TOWN TX 76710
- 3. TEXAS LINKED CORP 8411 NNW HWY BIG PLACE TX 77590
- 4. MR & MRS TED GOLDEN MUSTARD 3210 AVENUE BLVD FISHINSPOT TX 76724

- 5. GENERIC BREWING CO 4240 KNIGHTS BRIDGE OUTBACK TX 77640
- 6. PLAIN COMPANY 6647 CRAIGMOUT LANE BIG PLACE TX 77590
- 7. ABC CHEMICALS INC 1212 ZIP STREET BROADBANKS TX 77640
- 8. BIG LOCAL BOTTLE CO 10024 LOCAL BLVD URSINUS TX 79402

Adjacent Landowners List

Submit a map indicating the boundaries of all adjacent parcels of land, and a list (see samples in the instructions) of the names and mailing addresses of all adjacent landowners and other nearby landowners who might consider themselves affected by the activities described by this application. Cross-reference this list to the map through the use of appropriate keying techniques. The map should be a USGS map, a city or county plat, or another map, sketch, or drawing with a scale adequate enough to show the cross-referenced affected landowners. The list should be updated prior to any required public notice. It is the applicant's responsibility to ensure that the list is up-to-date for any required public notice. For all applications (with the exception of Class 1 and Class 1^1 modifications) this mailing list should be submitted on:

- 1. a Compact Disk (CD) using software compatible with MS Word [30 TAC 39.5(b)]; or
- 2. four sets of printed labels.

If the adjacent landowners list is submitted on a compact disk (CD), please label the disk with the applicant's name and permit number. Within the file stored on the disk, type the permit number and applicant's name on the top line before typing the addresses. Names and addresses must be typed in the format indicated below. This is the format required by the U.S. Postal Service for machine readability. Each letter in the name and address must be capitalized, contain no punctuation, and the appropriate two-character abbreviation must be used for the state. Each entity listed must be blocked and spaced consecutively as shown below. The list is to be 30 names, addresses, etc. (10 per column) per page (MS WORD Avery Standard 5160 - ADDRESS template).

Example:

Industrial Hazardous Waste Permit No. 50000, Texas Chemical Plant

HEAVY METALS LP PO BOX 85624 PUMPKIN PARK TX 79998-5624

MR AND MRS W R NEIGHBOURLY 1405 ACROSSTHE WAY GREATER METRO CITY TX 79199

A list submitted on compact disk (CD) should be the only item on that disk. Please do not submit a list on a disk that includes maps or other materials submitted with your application.

If you wish to provide the list on printed labels, please use sheets of labels that have 30 labels to a page (10 labels per column) (for example: Avery[®] Easy Peel[®] White Address Labels for Laser Printers 5160). Please provide four complete sets of labels of the adjacent landowners list.

Note: The table of contents will update and be based on the questions answered at the beginning of the form.

Table of Contents

Texas Commission on Environmental Quality Permit Application for Industrial and Hazardous Waste Storage/Processing/Disposal Facility with Compliance Plan

	Part B		3
	Form A	Availability	3
	Applic	ation Revisions	9
	Waiver	'S	9
	Design	ation of Material as Confidential	9
	Exposi	are Assessment	9
		plication Meeting/Public Participation Activities C 335.391 and 30 TAC 39.503]:	9
	Bilingu	al Notice Instructions	10
	Lando	wners Cross-Referenced To Application Map	12
I.	Genera	al Information	20
	А.	General Information-Table I	20
	В.	TCEQ Core Data Form (Form 10400)	20
	C.	Signature Page	20
	D.	Interim Status Land Disposal Unit(s) Certification	20
	Е.	List and Map of Adjacent Landowners	20
II.	Facility	y Siting Criteria	21
	А.	Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills.	21
	В.	Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]	RESERVED
	C.	Additional Requirements for Waste Piles [30 TAC 335.204(c)]	RESERVED
	D.	Additional Requirements for Storage Surface Impoundments [30 TAC 335.204(d)]	RESERVED
	E.	Additional Requirements for Landfills (and Surface Impoundments Closed as Landfills with wastes in place)	22
	F.	Flooding	22
	G.	Additional Information Requirements	23
III.	Facility	y Management	25
	А.	Compliance History and Applicant Experience	25
	В.	Personnel Training Plan	RESERVED
	C.	Security	25
	D.	Inspection Schedule	26
	E.	Contingency Plan (Not Applicable to Permits for Post- Closure Care Only)	RESERVED
	F.	Emergency Response Plan	RESERVED

IV.	Waste	s and Waste Analysis	27
	А.	Waste Management Information	RESERVED
	В.	Waste Managed In Permitted Units	27
	C.	Sampling and Analytical Methods	RESERVED
	D.	Waste Analysis Plan	RESERVED
V.	Engine	eering Reports	28
	А.	General Engineering Reports	29
	B.	Container Storage Areas	RESERVED
	C.	Tanks and Tank Systems	RESERVED
	D.	Surface Impoundments	RESERVED
	E.	Waste Piles	RESERVED
	F.	Land Treatment Units	RESERVED
	G.	Landfills	30
	H.	Incinerators	RESERVED
	I.	Boilers and Industrial Furnaces	RESERVED
	J.	Drip Pads	RESERVED
	К.	Miscellaneous Units	RESERVED
	L.	Containment Buildings	RESERVED
VI.	Geolog	gy Report	35
	А.	Geology and Topography	35
	B.	Facility Groundwater	39
	C.	Exemption from Groundwater Monitoring for an Entire Facility	42
	D.	Unsaturated Zone Monitoring	RESERVED
VII.	Closur	e and Post-Closure Plans	44
	А.	Closure	RESERVED
	В.	Closure Cost Estimate (including contingent closure) [30	
		TAC 335.178, 40 CFR 264.142]	RESERVED
	C.	Post-closure	44
	D.	Post-closure Cost Estimate [40 CFR 264.144]	45
	E.	Closure and Post-Closure Cost Summary	46
VIII.	Financ	tial Assurance	47
	А.	Financial Assurance Information Requirements for all Applicants (30 TAC Chapter 37, Subchapter P, 305.50(a)(4)(A-E), 335.152(a)(6) and 335.179)	47
	В.	Applicant Financial Disclosure Statements for a new permit, permit amendment, or permit modification, or permit renewal (30 TAC 305.50(a)(4))	47
	Inform	nation for Applicants Subject to Financial Capability Requirements	47
IX.	Releas	es from Solid Waste Units and Corrective Action	52
	1101040		52
		Application Revised 10-31-2019) Page 16 of 61	

	A. Preliminary Review Checklists	54
	Instructions for Preliminary Review Facility Checklist	54
	Preliminary Review Facility Checklist	55
	Preliminary Review Unit Checklist	55
	Appendices to Preliminary Review (PR)	55
	Preliminary Review Submittal Format	55
X.	Air Emission Standards	RESERVED
	A. Process Vents	RESERVED
	B. Equipment Leak	RESERVED
	C. Tanks, Surface Impoundments, and Containers	RESERVED
	D. "One-Stop" Permits	RESERVED
XI.	Compliance Plan	RESERVED
	Figure 1 - Overview of Required Submittals and Revisions Associated with TCEQ Groundwater Compliance Plan Application	RESERVED
	Figure 2 - Summary of Groundwater Monitoring and Compliance Plan Application Requirements for Regulated Waste Management Units (30 TAC 335 Subchapter F)	RESERVED
	Figure 3 - Summary of Compliance Plan Applications Requirements for Solid Waste Management Units (SMMUs) (30 TAC 335.167)	RESERVED
	A. Site Specific Information	RESERVED
	B. Hazardous Constituents In Groundwater and Groundwater Protection Standards (GWPSs)	RESERVED
	C. Compliance Monitoring Program	RESERVED
	D. Corrective Action Program	RESERVED
	E. Cost Estimates for Financial Assurance	RESERVED
	CP Attachment A - Maps	RESERVED
	CP Attachment B - Well Design and Construction Specifications	RESERVED
	Attachment C- Sampling and Analysis Plan	RESERVED
XII.	Hazardous Waste Permit Application Fee	58
XIII.	Confidential Material	RESERVED

Instructions:

Open the File Attachments List in the Navigation Page to view all tables and attachments. (Or, <u>click here</u> to open List of Attachments Navigation Pane). Word versions of the tables are included in the Attachment Tab. Links below will only open the PDF versions of the tables. Select the applicable tables for your application and complete.

TCEQ Core Data Form (TCEQ-10400) [External weblink to download form]

Signature Page for Application

Table I - General Information

Table I.1 - Description of Proposed Application Changes

Adjacent Landowners List and Map (Go to instructions on page 11)

Table II - Facility Siting Criteria Information

Table III.D - Inspection Schedule

Table IV.B. – Wastes Managed In Permitted Units

<u>Table IV.D. – Waste Analysis Plan</u>

<u> Table V.A. - Facility Waste Management Handling Units</u>

Table V.G.1. - Landfills

Table V.G.3. - Landfills Liner System

Table V.G.4. - Landfills Leachate Collection System

Table V.G.5. - Landfill Material and Construction Specifications

Table VI.A.1. - Major Geologic Formations

Table VI.A.4. - Waste Management Area Subsurface Conditions

Table VII.E.2. - Permitted Unit Post-Closure Cost Summary

Table VIII.B. - Estimated Capital Costs

Table XII.A. – Hazardous Waste Units (For Application Fee Calculations)

Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

<u>Appendices List</u> - NOTE: Provide all Part B responsive information, (e.g. engineering reports, attachments, drawings, tables, maps, etc.) in an Appendix for each section of the application. When preparing the physical format review the <u>Format of Hazardous Waste</u> permit Application and Instructions.

Appendix I - General Information

Appendix II - Facility Siting Information

Appendix III - Facility Management

Appendix III.A. - Compliance History and Applicant Experience

Appendix III.C - Facility Security

Appendix III.D. - Inspection Schedule

Appendix IV - Waste and Waste Analysis

Appendix V - Engineering Reports

Appendix V.A. - General Engineering Report

Appendix V.G. - Landfills Engineering Report

Appendix VII.C. - Post-Closure Plan

Appendix VII.D. - Post-Closure Cost Estimate

Appendix VII.E. - Closure and Post-Closure Cost Summary Tables

Appendix VIII - Financial Assurance Infomation

Appendix IX - Releases from Solid Waste Units and Corrective Action Appendix XII - Hazardous Waste Permit Application Fee Tables

Texas Commission on Environmental Quality Industrial & Hazardous Waste Part B Permit Application

I. General Information

Provide all Part B responsive information in Appendix I. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

Provide responsive information in Appendix I.

- a. Complete Table I General Information
- b. For all incoming New, Renewal, Class 3 Permit Modification, and Major Amendment applications, the TCEQ requires that a Core Data Form (CDF) be submitted whether or not a change has occurred in the previously submitted form.

For Minor Amendment, Class 1, Class 1¹, and Class 2 Permit Modification applications, the TCEQ requires that the CDF be only submitted if a change in any information in the previously submitted form has occurred at the time of the application submittal. For more information regarding the Core Data Form, call (512) 239 1575 or go to the TCEQ Web site at https://www.tceq.texas.gov/permitting/central_registry/ guidance.html

c. Signature on Application

It is the duty of the operator to submit an application for a permit. The person who signs the application form will often be the operator himself; when another person signs on behalf of the applicant, his title or relationship to the applicant will be shown. In all cases, the person signing the form must be authorized to do so by the applicant. An application submitted by a corporation must be signed by a responsible corporate officer such as a president, secretary, treasurer, vice president, or by his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the activity described in the form originates. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor, respectively. In the case of a municipal, state, federal, or other public facility, the application must be signed by a principal executive officer, a ranking elected official, or another duly authorized employee. A person signing an application on behalf of an applicant must provide notarized proof of authorization.

- d. Complete Interim Status Land Disposal Unit(s) Certification, as applicable
- e. Submit List and Map of Adjacent Landowners List, as applicable.

A. Applicant: Facility Operator (or Facility Owner & Operator, if same)

Name ¹	Dal-Tile Corporation
Address	7834 C.F. Hawn Freeway
City, State	Dallas, Texas
Zip Code	75217
Telephone Number	(214) 309-4891 (not at site)
Alternate Telephone Number	
Fax:	
TCEQ Solid Waste Registration No.	52013
EPA I.D. No.	TXD988032751
Permit No.	50377
County	Dallas
Regulated Entity Name	Dal-Tile Elam LF
Regulated Entity Reference Number (RN)	RN103858163
Customer Name	Dal-Tile Corporation
Customer Reference Number:	CN600128797
Charter Number ²	10360206
Previous or Former Names of the Facility (if applicable)	Dal-Tile Elam Landfill

B. Facility Owner: Identify the Facility Owner if different than the

Facility Operator³

Same as Facility Operator?

Name
Address
City, State
Zip Code
Telephone Number
Alternate Telephone Number
Fax:

Dallas Aggregate Dirt Sand Recycling
Inc.
8815 CF Hawn Freeway
Dallas, Texas
75217
(214) 379-8842

Permittee: Dal-Tile Corporation

C. Facility Contact

1. Persons or firms who will act as primary contact:

Name, Title:	Mr. David Baran, Senior VP, Manufacturing
Address	7834 C.F. Hawn Freeway
City, State:	Dallas, Texas
Zip Code	75217
Telephone Number	(214) 309-4448
Alternate Telephone Number	
E-mail	david.baran@daltile.com
Fax:	
Persons or firms who will act as primary contact	(if more than one):
Name, Title:	Mr. Bob Hurt, Director Environmental, Health, and Sustainability
Address	7834 C.F. Hawn Freeway

City, State: Zip Code Telephone Number Alternate Telephone Number E-mail Fax:

Dallas, Texas

(214) 309-4891

75217

bob.hurt@daltile.com

2. Agent in Service or Agent of Service (if you are an out-of-state company)⁴:

Name, Title:	Not applicable
Address	
City, State:	
Zip Code	

3. Individual responsible for causing notice to be published:

Name:	Mr. Bob Hurt
Address	7834 C.F. Hawn Freeway
City, State:	Dallas, Texas
Zip Code	75217
Telephone Number	(214) 309-4891
Alternate Telephone Number	
E-mail	
Fax:	

4. Public place in county where application will be made available⁵:

TCEQ Part B Application TCEQ-00376

Due to COVID-19 restrictions, no Revision No. 0

Revision Date 11/30/2020

Permit No. 50377 Permittee: Dal-Tile Corporation Page 3 of 6 public repository has been Name identified. Address City, State Zip Code **D.** Application Type and Facility Status 1. Application Type 🛛 Permit ☐ Amendment ☐ Modification □ New Class 3 ☐ Major ☐ Interim status 🖂 Minor \Box Class 2 🔀 Renewal \boxtimes Class 1¹ RD&D \Box Class 1 Compliance Plan 2. Part of a Consolidated Permit Processing request? [30 TAC Chapter 33] 3. Does the application contain confidential material?⁶ No 4. Facility Status. Check all that apply Proposed Existing 🖂 On-Site □ Off-Site Commercial Recycle ⊠ Land Disposal Areal or capacity expansion Compliance plan 5. Is the facility within the Coastal Management Program boundary? No 6. Description of Application Changes Complete Table I.1 - Description of Proposed Application Changes. Note: List all changes requested in Table I.1. Unlisted requests risk remaining unaddressed or possibly denied if brought to the permit application reviewer's attention at a later time.

- 7. Total acreage of the facility being permitted:
- 8. Identify the name of the drainage basin and segment where the facility is located

9

River Segment Upper Trinity River, Segment 0805

TCEQ Part B Application TCEQ-00376

Revision No. 0 Revision Date 11/30/2020 Permittee: Dal-Tile Corporation

River Basin Trinity River

E. Facility Siting Summary:

Is the facility located or proposed to be located:

- 1. Within a 100-year floodplain?
- 2. in wetlands?
- 3. In the critical habitat of an endangered species of plant or animal?
- 4. On the recharge zone of a sole-source aquifer?
- 5. In an area overlying a regional aquifer?
- 6. Within 0.5 mile (2,640 feet) of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park?⁷ [30 TAC 335.202]

If Yes: the TCEQ shall not issue a permit for this facility.

 In an area in which the governing body of the county or municipality has prohibited the processing or disposal of municipal hazardous waste or industrial solid waste?
 If Yes: provide a copy of the ordinance or order.

F. Wastewater and Stormwater Disposition

1. Is the disposal of any waste to be accomplished by a waste disposal well at this facility?

If Yes: List WDW Permit No(s):		Not applicable			
2. Will any point source dischar result of the proposed activ	ll runoff occur as a No				
3. If Yes, is this discharge regulated by a TPDES or	🗌 Yes				
TCEQ permit?	TCEQ Permit No.				
	TPDES Permit No.				
	🗌 No				
	Date TCEQ discharge application filed	permit			
	Date TPDES discharge permit application file				
G. Information Required to Provide Notice					

State Officials List [30 TAC 39]

Senate District 23

TCEQ Part B Application TCEQ-00376

Revision No. 0 Revision Date 11/30/2020

No	 	
No	 	
No		
No		
No		
No		

No

e]]

Permit No. 50377		
Permittee: Dal-Tile Corporation		Page 5 of 6
State Senator	Senator Bob Hall Capitol Office: CAP Capitol Phone: (512 District Address:	
	Alliance Building #2 6537 Horizon Road Rockwall, Texas 750	, Suite B-1
	House District 110 Representative Ton Capitol Office: EXT Capitol Phone: (512	E2.420
State Representative	District Address: 3155 S. Lancaster R Dallas TX 75216 Phone: (214) 371-33	
Local Officials List [30 TAC 39]		
Mayor	Mayor Eric Johnson Dallas City Hall 1500 Marilla Street, Room 5EN Dallas, TX 75201 Main Phone: (214) 670-3301 Fax: (214) 670-0646	
Local Health Authority	City of Dallas Department of Environmental Health Services 300 N. Ewing Dallas, TX 75203 Phone: (214) 670-7482 Fax: (214) 670-6897	
County Judge	Dallas County Judge The Honorable Clay Jenkins 411 Elm Street, Suite 200 Dallas, Texas 77999-0000	
County Health Authority	Dr. Philip Huang, Director Dallas County Health & Human Services 2377 North Stemmons Freeway Dallas, Texas 75207 Phone: (214) 819-2000	
Based on the questions in the Bilingual Notice Instructions required to make alternate (Bilingual) notice for this applie		ou Yes
Bilingual Language(s):	English, Spanish	
TCEQ Core Data Form Submitted?(see Section I Instruction	s, Item b.)	Yes
TCEQ Part B Application TCEQ-00376	Revision No. 0	·]

Revision Date 11/30/2020

Permit No. 50377

Permittee: Dal-Tile Corporation

	Page	6	of	6
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No

Yes

Has any information changed on the TCEQ Core Data Form since the last submittal?

Signature on Application Submitted? (see Section I Instructions, Item c)

- 1. Individual, Corporation, or Other Legal Entity Name must match the Secretary of State's database records for the Facility)
- 2. If the application is submitted on behalf of a corporation, please identify the Charter Number as recorded with the Office of the Secretary of State for Texas.
- 3. The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on Part A of this application [Section 361.087, Texas Health and Safety Code].
- 4. If the application is submitted by a corporation or by a person residing out of state, the applicant must register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide a complete mailing address for the agent. The agent must be a Texas resident.
- 5. For applications for new permits, renewals, major amendments and Class 3 modifications a copy of the administratively complete application must be made available at a public place in the county where the facility is, or will be, located for review and copying by the public. Identify the public place in the county (e.g., public library, county court house, city hall), including the address, where the application will be made available for review and copying by the public.
- 6. For confidential information cross-reference the confidential material throughout the application to Section XIII: Confidential Material, and submit as a separate Section XIII document or binder conspicuously marked "CONFIDENTIAL".
- 7. Use only for a new commercial hazardous waste management facility or areal expansion of an existing commercial hazardous waste management facility or unit of that facility as defined in 30 TAC 335.202

Signature Page

I,_____

(Operator)

(Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

____, ___

Signature:_____ Date:_____

To be completed by the Operator if the application is signed by an Authorized **Representative for the Operator**

I,_____

_____, hereby designate _____ [Print or Type Name]

[Print or Type Name]

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said

On this ______ day of ______, ____

My commission expires on the _____ day of _____, ____

Notary Public in and for ______County, Texas [Note: Application Must Bear Signature & Seal of Notary Public]

Interim Status Land Disposal Unit(s) Certification

For all land disposal units managing wastes which are newly listed or identified as hazardous wastes, the following certification must be executed by or on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous. If the operator fails to certify compliance with these requirements, the operator shall lose authority to operate under interim status. [40 CFR 270.73(d)]

Ι,_

(operator)

(title)

certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete.

I further certify that in accordance with Section 3005(e)(3) of the Resource Conservation and Recovery Act, as amended, the subject land disposal unit(s) are in compliance with all applicable groundwater monitoring and financial responsibility requirements of 30 TAC Sections 335.112, 335.116, and 335.117. I am aware there are significant penalties for submitting false information, including the possibility of civil penalty, criminal fines, and imprisonment.

Signature:____

_____ Date: ____

Appendix I.D.6

Description of Requested Changes

Permittee: Dal-Tile Corporation

Table I.1-Description of Proposed Application Changes

Permit/Compliance Plan Application Appendix/Section	Brief Description of Proposed Change	Modification or Amendment Type	Supporting Regulatory Citation
Part A PartB	Permit Renewal	Minor Amendment	30 TAC 335, Section 335.43

Appendix I.G

Adjacent Landowners List and Map

Permittee: Dal-Tile Corporation

Table I.1-Description of Proposed Application Changes

Permit/Compliance Plan Application Appendix/Section	Brief Description of Proposed Change	Modification or Amendment Type	Supporting Regulatory Citation
Part A PartB	Permit Renewal	Minor Amendment	30 TAC 335, Section 335.43
	di .	Remove Last Row	Add Row

State and Local Officials Notification List

State Officials List

Texas State Senator

Senate District 2-Senator Bob Hall Capitol Office: EXT E1.706 Capitol Phone: (512) 463-0102

District Address: Alliance Building #2 6537 Horizon Road, Suite B-1 Rockwall, Texas 75032

Texas State Representative

House District 110--Representative Toni Rose Capitol Office: EXT E2.420 Capitol Phone: (512) 463-0664

District Address: 3155 S. Lancaster Rd. Suite 220 Dallas TX 75216 Phone: (214) 371-3300

Local Officials List

Mayor Eric Johnson Dallas City Hall 1500 Marilla Street, Room 5EN Dallas, TX 75201 Main Phone: (214) 670-3301 Fax: (214) 670-0646

The Honorable Clay Jenkins Judge Dallas County 411 Elm Street, Ste 200 Dallas, Texas 77999-0000

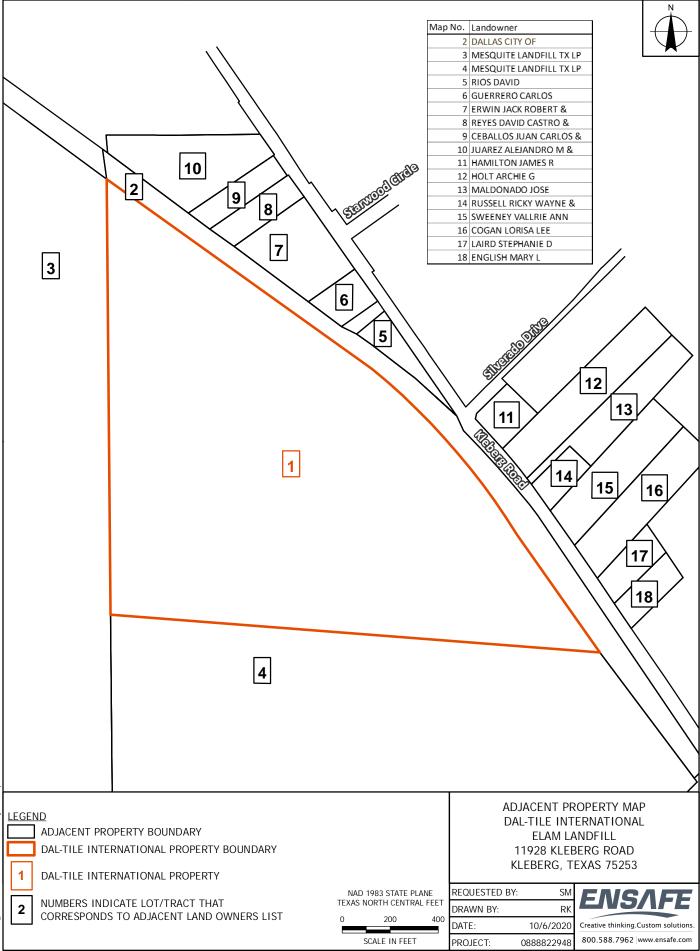
Dr. Philip Huang Director Dallas County Health & Human Services 2377 North Stemmons Freeway Dallas, Texas 75207 Phone: (214) 819-2000 Dallas City Department of Environmental Health Services 300 N. Ewing Dallas, TX 75203 Phone: 214-670-7482 Fax: 214-670-6897

Dal-Tile Corporation Elam Landfill, Hazardous Waste Permit No. 50377 Adjacent Landowners Notification List, Revised 11/20/09

MESQUITE LANDFILL TX LP ARCHIE G HOLT PO BOX 29246 11923 KLEBERG ROAD PHOENIX AZ 85038246 DALLAS TX 752532740 **DAVID RIOS RICKY WAYNE AND AUDRY JO RUSSELL** 9310 LAKE JUNE RD 927 CALLE REAL DALLAS TX 752532735 MESQUITE TX 751495217 **GUERRERO CARLOS** VALLRIE ANN SWEENEY 11718 KLEBERG RD 12025 KLEBERG ROAD DALLAS TX 752532735 DALLAS TX 752532742 JUAN CARLOS AND ADELAIDA LORISA LEE COGAN **REYES CEBALLOS** 12031 KLEBERG ROAD 11634 KLEBERG ROAD DALLAS TX 752532742 DALLAS TX 752532735 JACK ROBERT AND RHONDA A STEPHANIE D LAIRD **ERWIN** 12037 KLEBERG ROAD 11648 KLEBERG ROAD DALLAS TX 752532742 DALLAS TX 752532733 DAVIS REYES CASTRO AND MARY L ENGLISH MARIBEL RANGEL JUAREZ 12109 KLEBERG ROAD DALLAS TX 752532744 11638 KLEBERG ROAD DALLAS TX 752532733 JAMES HAMILTON CITY OF DALLAS **1500 MARILLA STREET** 825 MALLARD TRAIL MURPHY TX 750943877 **DALLAS TEXAS 752016318**

ALEJANDRO M JUAREZ 4913 TERRY STREET DALLAS TX 752232136

JOSE MALDONADO 11929 KLEBERG ROAD DALLAS TX 752532733



Source: Dallas Central Appraisal District Parcel data.

ile_International\Elam Landfill\ElamAdjacentPropertie

Dal

Appendix I.H

Core Data Form



TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If	f other is checked please	e describ	be in space	provide	ed.)				
New Permit, Registration	New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)								
Renewal (Core Data Form should be submitted with the renewal form)									
2. Customer Reference Num	ber <i>(if issued)</i>		this link to se		3. Regulated Entity Reference Number (if issued)				
CN 600128797 for CN or RN numbers in Central Registry** RN 103858163									
SECTION II: Custom	er Information								
4. General Customer Informa	tion 5. Effective	Date fo	r Custome	r Infor	mation	Update	es (mm/dd/yyyy)	10/29/	2020
New Customer		•	o Customer of State or			oller of		Regulated E	ntity Ownership
The Customer Name sul							,	rrent and	active with the
Texas Secretary of State	•	•			•				
6. Customer Legal Name (If al	n individual, print last nam	e first: eg	: Doe, John)		<u>lf r</u>	new Cu	stomer, enter previ	ous Custome	er below:
Dal-Tile Corporation									
7. TX SOS/CPA Filing Numbe	er 8. TX State	Tax ID (11 digits)		9.	Federa	I Tax ID (9 digits)	10. DUNS	S Number (if applicable)
10360206	1160577			16	60577	'180	612757		
11. Type of Customer: Corporation Individual Partnership: General Limited									
] Federal 🗌 State 🗌 Other	r	Sole F	Propriet	torship		Other:		
12. Number of Employees							endently Owned	and Opera	ted?
	01-250 251-500		i01 and hig			Yes	∐ No		
14. Customer Role (Proposed of		-				m. Pleas	se check one of the	following	
Owner [Operator Responsible Party]	⊠ Owner & ☐ Volunta	•		olicant	Other:		
		L		y olou		Shount			
15. Mailing	Hawn Freeway								
Address:									
City Dallas State					ZIP	7521	17	ZIP + 4	
16. Country Mailing Informati	16. Country Mailing Information (if outside USA) 17. E-Mail Address (if applicable)								
bob.hurt@daltile.com									
18. Telephone Number	18. Telephone Number 19. Extension or Code 20. Fax Number (if applicable)								
(214) 309-4891	(214) 309-4891 () -								

SECTION III: Regulated Entity Information

 21. General Regulated Entity Information (If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)

 New Regulated Entity
 Update to Regulated Entity Name

 Update to Regulated Entity
 Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)

Dal-Tile Corporation - Elam Landfill

23. Street Address of	11928 k	Kleberg Road	d						
the Regulated Entity:	gulated Entity:								
(No PO Boxes)	City	Dallas	State	TX	ZIP	752	253	ZIP + 4	
24. County	Dallas								
	E	Inter Physical L	ocation Descripti	ion if no st	reet add	ress is pr	ovided.		
25. Description to Physical Location: The landfill consists of 9.153 acres located within an approximately 50-acre tract located approximately 0.5 miles southeast of the intersection of Interstate 20 and Highway 175									
26. Nearest City						State)	Nea	rest ZIP Code
27. Latitude (N) In Deci	mal:			28. L	ongitud	e (W) In [Decimal:		
Degrees	Minutes		Seconds	Degre	es		Minutes		Seconds
29. Primary SIC Code (4	4 digits) 30.	Secondary SIC	Code (4 digits)	31. Prima (5 or 6 digit		S Code	32. Se (5 or 6	econdary NA digits)	ICS Code
33. What is the Primary	Business o	of this entity?	(Do not repeat the SIC	or NAICS des	scription.)				
				7834 C.F.	. Hawn F	reeway			
34. Mailing									
Address:	City	Dallas	State	ТХ	ZIP		75217	ZIP + 4	
35. E-Mail Address									
	one Number	r	37. Extensio	on or Code			38. Fax Nur	mber <i>(if appl</i>	icable)
•	309-4981						() -	,
39. TCEQ Programs and I	D Numbers			ermits/registra	ation numb	pers that w	ill be affected	by the updates	submitted on this
Dam Safety	District	ts	Edwards Aqu	lifer	Em Em	issions Inv	entory Air	Industria	I Hazardous Waste
Municipal Solid Waste	□ Municipal Solid Waste □ New Source Review Air □ OSSF □ Petroleum Storage Tank □ PWS								
Sludge Storm Water ☐ Title V Air ☐ Tires ☐ Used Oil									
Voluntary Cleanup Waste Water Wastewater A			Agriculture	griculture Water Rights Other:					
SECTION IV: Pro	eparer II	nformation	<u>.</u>		•				
40. Name: Richard Record, P.G. 41. Title: Sr. Project Director									

A0. Name:	Richard Re	cord, P.G.		41. Title:	Sr. Project Director
42. Tele	phone Number	43. Ext./Code	44. Fax Number	45. E-Mail	Address
(972)	865-4862		() -	rrecord@)ensafe.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	David Baran Job Title: Sr. Vice F			President, Manufacturing		
Name (In Print):	Mr. David Baran			Phone:	(214) 309- 4448	
Signature:				Date:		

II. Facility Siting Criteria

Provide all Part B responsive information in Appendix II. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

For all new hazardous waste management facilities or areal expansions of existing hazardous waste management facilities provide a report which includes all applicable information regarding Unsuitable Site Characteristics found in 30 TAC Chapter 335, Subchapter G. The report must address each requirement applicable to the type of activity submitted in the application. Reference specific rule numbers whenever possible. Supporting information may be cross-referenced to other parts of this application such as Section V - Engineering Report or Section VI - Geology Report, but information submitted in previous applications must be fully reproduced herein. In addition, provide the information in Table II, as applicable.

For permit renewals provide a report which includes all applicable information regarding Unsuitable Site Characteristics found in 30 TAC Chapter 335, Subchapter G. In addition, provide the information in Table II, as applicable. The applicant may resubmit the information submitted with the original permit application provided this information has not changed. For a renewal this information is necessary to ensure a complete application is received.

For capacity expansions of existing facilities, please provide information in Table II, as applicable. Please note however, that additional technical information may be requested to address any facility siting characteristics noted in Table I, under Facility Siting Summary.

NOTE: The standards contained in §335.204(a)(6) - (9), (b)(7) - (12), (c)(6) - (11), (d)(6) - (11), and (e) (8) - (13) are not applicable to facilities that have submitted a notice of intent to file a permit application pursuant to §335.391 of this title (relating to Pre-Application Review) prior to May 3, 1988, or to facilities that have filed permit applications pursuant to §335.2(a) of this title which were submitted in accordance with Chapter 305 of this title and that were declared to be administratively complete pursuant to §281.3 of this title (relating to Initial Review) prior to May 3, 1988.[30 TAC 335.201(b)]

A. Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills.

Complete Table II.A-Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills.

B. Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]

RESERVED

C. Additional Requirements for Waste Piles [30 TAC 335.204(c)]

RESERVED

D. Additional Requirements for Storage Surface Impoundments [30 TAC 335.204(d)]

RESERVED

E. Additional Requirements for Landfills (and Surface Impoundments Closed as Landfills with wastes in place)

Complete Table II.E. - Additional Requirements for Landfills (and Surface Impoundments

TCEQ Part B Application TCEQ-00376 (Revised 10-31-2019) Page 21 of 61 Closed as Landfills with wastes in place)

- F. Flooding
 - 1. Identify whether the facility is located within a 100-year flood plain [40 CFR 270.14(b)(11)(iii)]. This identification must indicate the source of data for such determination and include a copy of relevant documentation (e.g., flood maps, if used and/or calculations). The boundaries of the hazardous waste management facility must be shown on the flood plain map. If the facility is not subject to inundation as a result of a 100-year flood event, indicate that the facility is not within the 100-year flood plain, and do not complete the remainder of the Flooding section in Table II. An applicant for a proposed hazardous waste landfill, areal expansion of a hazardous waste landfill, or a commercial hazardous waste land disposal unit may not rely solely on flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or a successor agency for this determination.
 - 2. If the facility is located within the 100-year flood plain the applicant must provide information detailing the specific flooding levels and other events (e.g., Design Hurricane projected by Corps of Engineers) which impact the flood protection of the facility. Information shall also be provided identifying the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, construction, operating, or maintaining the facility to withstand washout from a 100-year flood.
 - 3. State whether any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.), designed to prevent washout from the 100-year flood.
 - **a. If Yes**: provide in Section V an engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)]

Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]

b. If No: the applicant shall provide in Section V a plan for constructing flood protection devices and a schedule including specific time frames for completion. Provide engineering analyses to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)]

Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]

4. If applicable, and in lieu of the flood protection devices from above, provide a detailed description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded. [40 CFR 270.14(b)(11)(iv)(c)] The procedures should include:

a. Timing of such movement relative of flood levels, including estimated time TCEQ Part B Application TCEO-00376 (Revised 10-31-2019) Page 22 of 61 to move the waste, to show that such movement can be completed before flood waters reach the facility. Indicate which specific events shall be use to begin waste movement (e.g., Hurricane warning, Flash Flood watch, etc.);

- b. A description of the location(s) to which the waste will be moved and a demonstration that these facilities will be eligible to receive hazardous waste in accordance with appropriate regulations (i.e., a permitted facility);
- c. The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use; and
- d. The potential for accidental discharges of the waste during movement and precautions taken to preclude accidental discharges.
- G. Additional Information Requirements
 - 1. For a new hazardous waste management facility, include a map of relevant local land-use plans and descriptions of the major routes of travel in the vicinity of the facility to be used for the transportation of hazardous waste to and from the facility covering at least a five (5)-mile radius from the boundaries of the facility. [30 TAC 305.50(a)(10)(A)&(D)]

RESERVED

2. For a new commercial hazardous waste management facility as defined in 30 TAC 335.202 or the subsequent areal expansion of such a facility or unit of that facility, indicate on the map the nearest established residence, church, school, day care center, surface water body used for a public drinking water supply, and dedicated public park.

RESERVED

3. For new commercial hazardous waste management facilities, submit the following: [30 TAC 305.50(a)(12)(A)]-

RESERVED

- 4. Include the names and locations of industrial and other waste-generating facilities within 0.5 miles for a new on-site hazardous waste management facility and the approximate quantity of hazardous waste generated or received annually at those facilities. [30 TAC 305.50(a)(10)(B)&(C)]
- 5. Include the names and locations of industrial and other waste-generating facilities within 1.0 miles for a new commercial hazardous waste management facility and the approximate quantity of hazardous waste generated or received annually at those facilities. [30 TAC 305.50(a)(10)(B)&(C)]
- 6. For existing land disposal facility units provide documentation that the information required by 30 TAC 335.5 has been placed in the county deed records. If previously submitted, please reference the submittal by date and registration number.
- 7. If a surface impoundment or landfill (including post-closure) is to be permitted, provide exposure information to accompany this application and in accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j). This information will be considered separately from the TCEQ application completeness determination.
- 8. For a hazardous waste management facility requesting a capacity expansion of an existing hazardous waste management facility, please provide in Section

VI.A.1.a the requested fault delineation information. [30 TAC 305.50(a)(4)(D)]



Appendix II Siting Information

A Site Selection Report has not been submitted to the agency as the existing hazardous waste permit was issued for post-closure care as part of an Agreed Order between Dal-Tile Corporation and TWC, signed on March 13, 1991. This application is for the renewal of post-closure care permit for a closed landfill that has been in the detection monitoring period for 20 years.

The Texas Water Commission (TWC, precursor to the Texas Natural Resource Conservation Commission [TNRCC] and the current Texas Commission on Environmental Quality [TCEQ]) issued an Agreed Order to Dal-Tile Corporation on March 13, 1991 alleging violations of the Texas Solid Waste Disposal Act. The Agreed Order states that Dal-Tile disposed of glazing compound waste at the Elam Gravel Pit from the summer of 1980 until March 1987. A copy of the Agreed Order is provided in this appendix.

Dal-Tile proceeded to perform site assessments; installed groundwater monitoring wells, undertook testing of all known water wells, performed hydrological studies, performed risk assessments and exposure assessments to ensure the safety of human health and environment. The Agreed Order was signed by Dal Tile Corporation on March 14, 1991.

Several investigative studies were conducted at the Elam landfill to identify the location, quantity and potential impacts of waste disposed at the site. A Closure Plan was submitted to the TNRCC in February22, 1995. The TNRCC's review of that Closure Plan indicated that the closure plan conformed to the requirements of 31 Texas Administrative Code (TAC) §335.112 and§335.553(b). The Executive Director approved the Closure Plan with revisions dated November 11, 1995.

Closure activities included:

Closure under Risk Reduction Standard3 of Pond A by:

- 1. Constructing a low-permeability, soil-bentonite slurry wall around the perimeter of Pond A.
- 2. Stabilizing 37,453 cubic yards of lead contaminated soils and waste within the surrounding slurry wall, including confirmation sampling of stabilized soils.
- 3. Constructing an engineered, low-permeability clay HDPE cap, over the closure area.
- 4. Placing a protective, vegetated layer of topsoil over the cap.

Closure under Risk Reduction Standard No. 1 of Pond B by:

- 1. Stabilizing, excavating, and placing 17,056 cubic yards of lead contaminated soils and sediments from Pond B into the Pond A closure area.
- 2. Conducting verification sampling of Pond B to confirm that background lead levels existed in the soil and pond sediments that remain.

Closure under Risk Reduction Standard No. 2 of Pond C by:

1. Conducting verification sampling of Pond C sediments to confirm that the residential groundwater protection standard was met. The Soil/Air ingestion standard for residential use was met by sampling results summarized in the Closure Plan.

Closure under Risk Reduction Standard No. 1 of the surface soils around the perimeter of Ponds A and B.

Dal-Tile submitted to the TNRCC a Closure Completion Report on April 24, 1997. The Closure Completion Report was accepted by the TNRCC and the Elam Landfill was closed. On February 13, 1998, Dal-Tile submitted a Post-Closure Care Permit Application, which was accepted by the TNRCC and Permit No HW-50377 was issued on April 3, 2000.

In a letter of correspondence from the TNRCC dated October 14, 1998, the TNRCC indicated that Dal-Tile had fulfilled the requirements of the Agreed Order and the Agreed Order was terminated.

Appendix II.A Requirements for Landfills

Permittee: Dal-Tile Corporation

 Table II Facility Siting Criteria Information

Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills

Is the facility located or proposed to be located¹:

In wetlands? [as applicable: 30 TAC 335.204(a)(2), (b)(2), (c)_{No} (2), (d)(2), and/or (e)(2)

If Yes: the TCEQ shall not issue a permit for a new hazardous waste management facility or areal expansion of an existing facility into wetlands, pursuant to 30 TAC 335.205(a)(1).

In the critical habitat of an endangered species of plant or animal?⁶ [as applicable: 30 TAC 335.204(a)(8), (b)(10), (c) (9), (d)(9), and/or (e)(11)]

If Yes: submit in Section V information demonstrating that design, construction, and operational features will prevent adverse effects on such critical habitat.

On the recharge zone of a sole-source aquifer?2 [30 TAC 335.204(a)(3), (b)(3), (c)(3), (d)(3), and/or (e)(3)]

If Yes: then for storage and processing facilities (excluding storage surface impoundments), submit in Section V information demonstrating that secondary containment is provided to preclude migration to groundwater from spills, leaks, or discharges.

In an area overlying a regional aquifer? [as applicable: 30 TAC 335.204(a)(4), (b)(4), (c)(4), (d)(4), and/or (e)(4)]

If Yes: submit site-specific information in Section V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1).

In areas where soil unit(s) are within five feet of the containment structure, or treatment zone, as applicable, that have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10-5 cm/sec? [as applicable: 30 TAC 335.204(a)(5), (b)(5), (c)(5), (d)(5), and/or (e)(5)]

If Yes: provide additional information in Sections V and/or Section VI demonstrating compliance with 30 TAC 335.205(a)(1)

In areas of direct drainage within one mile of a lake at its maximum conservation pool level, if the lake is used to supply public drinking water through a public water system?⁶ [as applicable: 30 TAC 335.204 (a)(6), (b)(7), (c) (6), and/or (e)(8)].

If Yes: provide information in Section V demonstrating compliance with 30 TAC 335.205(a)(1).

No

No

No

No

No

Permittee: Dal-Tile Corporation

Permittee: Dal-Tile Corporation	Page 2 of 8
In areas of active geologic processes, including but not limited to erosion, submergence, subsidence, faulting, karst formation, flooding in alluvial flood wash zones, meandering river bank cuttings, or earthquakes? ⁶ [as applicable: 30 TAC 335.204(a)(7), (b)(8) ,(c)(7), (d)(7), and/ or (e)(9)]	No
Within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures? ⁶ [as applicable: 30 TAC 335.204(a)(9), (b)(12) ,(c)(11), (d)(11), and/or (e)(13)]	No
If Yes: specify in Section V the design, construction, and o adverse effects resulting from any fault movement.	operational features that will prevent

If a fault is found to be present, the width and location of the actual or inferred surface expression of the fault, including both the identified zone of deformation and the combined uncertainties in locating a fault trace, must be determined by a qualified geologist or geotechnical engineer and reported in Section VI.

Permittee: Dal-Tile Corporation

Table II.B. - Additional Requirements for Land Treatment Facilities [30 TAC 335.204(b)]:

Is the land treatment facility located or proposed to be located:

Within 1000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park which is in use at the time the notice of intent to file a permit application is filed with the commission, or which is in use at the time the permit application is filed with the commission?

If Yes: the TCEQ shall not issue a permit for a new hazardous waste land treatment unit or an areal expansion of an existing land treatment unit, pursuant to 30 TAC 335.204(b)(6) and 335.205(a).

Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?

If Yes: submit in Section V.F design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.

If Yes: submit Section V.F design, construction and operational features, which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

On a barrier island or peninsula?

If Yes: the TCEQ shall not issue a permit for a new hazardous waste land treatment unit or an areal expansion of an existing land treatment unit, pursuant to 30 TAC 335.204(b)(11) and 335.205(a)(1).

Permittee: Dal-Tile Corporation

Table II.C. - Additional Requirements for Waste Piles [30 TAC 335.204(c)]

Is the waste pile located or proposed to be located:

Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?

If Yes: submit in Section V.E design, construction, and operational features on the facility which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.

If Yes: submit Section V.E design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

On a barrier island or peninsula?⁶

If Yes: the TCEQ shall not issue a permit for a new hazardous waste pile or an areal expansion of an existing waste pile, pursuant to 30 TAC 335.204(c)(10) and 335.205(a)(1).

Permittee: Dal-Tile Corporation

Table II.D. - Additional Requirements for Storage Surface Impoundments [30 TAC335.204(d)]

Is the land treatment facility located or proposed to be located:

Within 1000 feet of an area of active coastal shoreline erosion even though the area is protected by a barrier island or peninsula

If Yes: submit in Section V.D design, construction, and operational features of the facility which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barrier island or peninsula.

If Yes: then submit in Section V.D design, construction, and operational features which will prevent adverse effects resulting from storm surge and erosion or scouring by water.

On a barrier island or peninsula?⁶

If Yes: the TCEQ shall not issue a permit for a new hazardous waste storage surface impoundment or an areal expansion of an existing storage surface impoundment, pursuant to 30 TAC 335.204(d)(10) and 335.205(a)(1).

Permittee: Dal-Tile Corporation

Page 6 of 8 Table II.E. - Additional Requirements for Landfills (and Surface Impoundments Closed as Landfills with wastes in place)

Is the landfill located or proposed to be located:

is the fandrin focated of proposed to be focated.	
Within 1000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated public park which is in use at the time the notice of intent to file a permit application is filed with the commission, or which is in use at the time the permit application is filed with the commission?	No
If Yes: the TCEQ shall not issue a permit for a new hazardous wexpansion of an existing landfill, pursuant to 30 TAC 335.204(e)	
(For commercial hazardous waste landfills) in the 100-year flood plain of a perennial stream that is delineated on a flood map adopted by the Federal Emergency Management Agency after September 1, 1985, as zone A1-99, VO, or V1-30?	No
If Yes: the TCEQ shall not issue a permit for a new hazardous v expansion of an existing landfill, pursuant to $30 \text{ TAC } 335.204(\epsilon)$	
Within 1000 feet of an area subject to active coastal shoreline erosion even though the area is protected by a barrier island or peninsula?	No
If Yes: then submit in Section V.G design, construction, and ope prevent adverse effects resulting from storm surge and erosion	
Within 5000 feet of a coastal shoreline subject to active shoreline erosion and which is unprotected by a barriers island or peninsula.	No
If Yes: then submit in Section V.G design, construction, and ope prevent adverse effects resulting from storm surge and erosion	
On a barrier island or peninsula? No	
If Yes: the TCEQ shall not issue a permit for a new hazardous v expansion of an existing landfill, pursuant to 30 TAC 335.204(e	

Permittee: Dal-Tile Corporation

Flooding (see Section II Instructions, Item F)

Is the facility within a 100-year flood plain?	No
Has a flood plain map been provided?	Yes
Has information about flooding levels and events, and other special flooding factors, been provided? ³	Yes

Do any flood protection devices exist at the facility (e.g., flood walls, dikes, etc.) designed to prevent washout from No, See Below the 100-year flood?³

If Yes: provide in Section V an engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)]⁴

If No: the applicant shall provide in Section V a plan for constructing flood protection devices and a schedule including specific time frames for completion. Provide engineering analyses to indicate the various hydrodynamic and hydrostatic forces expected to result at the facility as a consequence of a 100-year flood. [40 CFR 270.14(b)(11)(iv)(A)]⁵

If applicable, and in lieu of the flood protection devices from above, was a detailed description of the procedures to be followed to remove hazardous waste to safety before^{Not} Applicable the facility is flooded provided?^{3, 6}

Additional Information Requirements (see Section II instructions, Item G): Submitted?

1. Provide the source of information for all questions.

- 2. Note: Land treatment facilities, waste piles, storage surface impoundments, and landfills may not be located on the recharge zone of a sole-source aquifer.
- 3. Only required to be submitted if the facility is subject to inundation as a result of a 100-year flood event.
- 4. Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]
- 5. Include structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., flood walls, dikes) at the facility and how these will prevent washout. [40 CFR 270.14(b)(11)(iv)(B)]
- 6. The standards contained in §335.204(a)(6) (9), (b)(7) (12), (c)(6) (11), (d)(6) (11), and (e) (8) (13) are not applicable to facilities that have submitted a notice of intent to file a permit application pursuant to §335.391 of this title (relating to Pre-Application Review) prior to May 3, 1988, or to facilities that have filed permit applications pursuant to §335.2(a) of this title which were submitted in accordance with Chapter 305 of this title and that were declared to be administratively complete pursuant to §281.3 of this title (relating to Initial Review) prior to May 3, 1988.[30 TAC 335.201(b)]

Permittee: Dal-Tile Corporation

Page 8 of 8

TCEQ Part B Application TCEQ-00376

Revision No. Revision Date Is the facility located or proposed to be located: in wetlands? [as applicable: 30 TAC 335.204(a)(2), (b)(2), (c)(2), (d)(2), and/or (e)(2)]

 \Box Yes \boxtimes No

Based on a review of the two maps referenced above, the landfill is not located in a wetland. The two ponds located on-site and south of the landfill are listed as wetlands and classified as "L1OWHx", which is described as "lacustrine, limnitic, open water, permanently flooded and excavated. The vertical and lateral extent of the landfill does not extend into this wetland zone, which only encompasses the two individual ponds. The wetlands maps are provided as Figure 1A and Figure 1B in this appendix.

Sources of information:

- U.S. Department of the Interior Fish & Wildlife Service, National Wetlands Inventory Map for Hutchins, Texas (October 22, 2020).
- U.S. Geological Survey. Ferris, Hutchins Quadrangles, Texas [Map]. Photo-revised 2019.

Is the facility located or proposed to be located in the critical habitat of an endangered species of plant or animal? [as applicable: 30 TAC 335.204(a)(8), (b)(10), (c)(9), (d)(9), and/or (e)(11)]

 \Box Yes \boxtimes No \Box Not Applicable

A thorough review of the 94 endangered species (plants and animals) in the State of Texas was conducted using the above-referenced website. Ten listed threatened and endangered species have critical habitat in Dallas County, Texas so possibly at or near the landfill facility. A list of these species is provided in the website listed below.

Source of information:

• U.S. Fish & Wildlife Service website (http://www.fws.gov/endangered)

Is the facility located or proposed to be located on the recharge zone of a sole-source aquifer? [30 TAC 335.204(a)(3), (b)(3), (c)(3), (d)(3), and/or (e)(3)]

 \Box Yes \boxtimes No

Important water-bearing formations in the area of the Elam landfill are:

- Water-bearing Quaternary alluvium and fluviatile terrace deposits of the Trinity River,
- Cretaceous-age Ozon Formation (Ko on the map)
- Cretaceous-age Eagle Ford Formation (Kef on the map)
- Cretaceous-age Austin Chalk (Kau on the map)

The Cretaceous-age Trinity Group contains the most prolific aquifer in the region. The top of the Trinity Aquifer is approximately 2,300 feet below ground surface in the vicinity of the Elam landfill.

The Woodbine Formation serves as a secondary aquifer in the region. The Woodbine Formation is approximately 1,300 feet below ground surface in the vicinity of the Elam landfill.

Geologic cross-sections developed during site investigation and closure activities indicate that the shallow stratigraphy of the Site consists of surficial deposits of clayey sand underlain by a thin discontinuous layer of gravelly sand. Below the sand is a dense, dark blue to gray shale (Ozan Formation) that serves as a confining layer for the uppermost shallow groundwater-bearing unit at the Site (Woodbine Formation).

More detailed information regarding the geology of this area was previously submitted with the Closure Plan in 1994 and is provided in the Geology Report in Part B, Appendix VI.

Sources of information:

- Geologic Atlas of Texas, Dallas Sheet, revised 1987 (see Appendix VI.A)
- Texas Water Development Board, Major Aquifers of Texas, 2006 (https://www.twdb.texas.gov/groundwater/aquifer/major.asp) and Minor Aquifers of Texas, 2017 (https://www.twdb.texas.gov/groundwater/aquifer/minor.asp)
- Texas Department of Water Resources, Report 269 (https://www.twdb.texas.gov/publications/reports/numbered_reports/doc/R269/Report2 69.asp)
- Texas Water Commission, Bulletin 6309

Is the facility located or proposed to be located in an area overlying a regional aquifer? [as applicable: 30 TAC 335.204(a)(4), (b)(4), (c)(4), (d)(4), and/or (e)(4)]

 \boxtimes Yes \boxtimes No

A vertical hydraulic barrier (slurry wall) constructed around the landfill perimeter was part of the Closure Plan approved by the TNRCC. The slurry wall prevents contact between the affected wastes and adjacent soils and groundwater.

The approximate depth to the top of the Woodbine Formation, which serves as a secondary aquifer in this region, is 1,300 feet below ground surface and is overlain by a confining shale unit (Ozan Formation).

Source of information:

• Closure Plan prepared by RMT/Jones Nuese (1994). See As-Built Cross-Section (Figures 1-2 and 2-1 through 2-4) in Part B, Section VII, Post-Closure Plan Is the facility located or proposed to be located in areas where soil unit(s) are within five feet of the containment structure, or treatment zone, as applicable, that have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10-5 cm/sec? [as applicable: 30 TAC 335.204(a)(5), (b)(5), (c)(5), (d)(5), and/or (e)(5)]

🗆 Yes 🖾 No

Geologic cross-sections developed during site investigation and closure activities indicate that the shallow stratigraphy of the Site consists of surficial deposits of clayey sand underlain by a thin discontinuous layer of gravelly sand. Below the sand is a dense, dark blue to gray shale (Ozan Formation) that serves as a confining layer for the uppermost shallow groundwater-bearing unit at the Site (Woodbine Formation). The Geology Report provided in Part B, Appendix VI.A includes a Texas Geologic Atlas and stratigraphy, soil boring logs, well boring logs, geologic cross-sections, and a soil survey map.

Is the facility located or proposed to be located in areas of direct drainage within one mile of a lake at its maximum conservation pool level, if the lake is used to supply public drinking water through a public water system? [as applicable: 30 TAC 335.204 (a)(6), (b)(7), (c)(6), and/or (e)(8)].

 \Box Yes \boxtimes No \Box Not Applicable

The nearest lake used as a public drinking water source is Lake Ray Hubbard, which is located approximately 10.3 miles northwest and upgradient of the Elam landfill. The next closest downgradient lake is Lake Livingston, which is located approximately 140 miles southeast of the landfill. Lake Livingston is managed by the Trinity River Authority and is used as a drinking water source for the City of Houston.

Lake location maps are on Figures 3A (Trinity River Basin map), 3B (Dallas-Fort Worth Area Surface Water Map), 4A (Major Texas Rivers and Watershed Map), and 4B (Major Texas Rivers and Watershed Map – Detail) provided in this appendix.

Sources of information:

- Atlas of Texas Surface Waters, Commission on Environmental Quality, GI-316, August 2004
- Major Texas Rivers, Texas Water Development Board, February 2008

Is the facility located or proposed to be located in areas of active geologic processes, including but not limited to erosion, submergence, subsidence, faulting, karst formation, flooding in alluvial flood wash zones, meandering riverbank cuttings, or earthquakes? [as applicable: 30 TAC 335.204(a)(7), (b)(8),(c)(7), (d)(7), and/or (e)(9)]

 \boxtimes Yes \boxtimes No \square Not Applicable

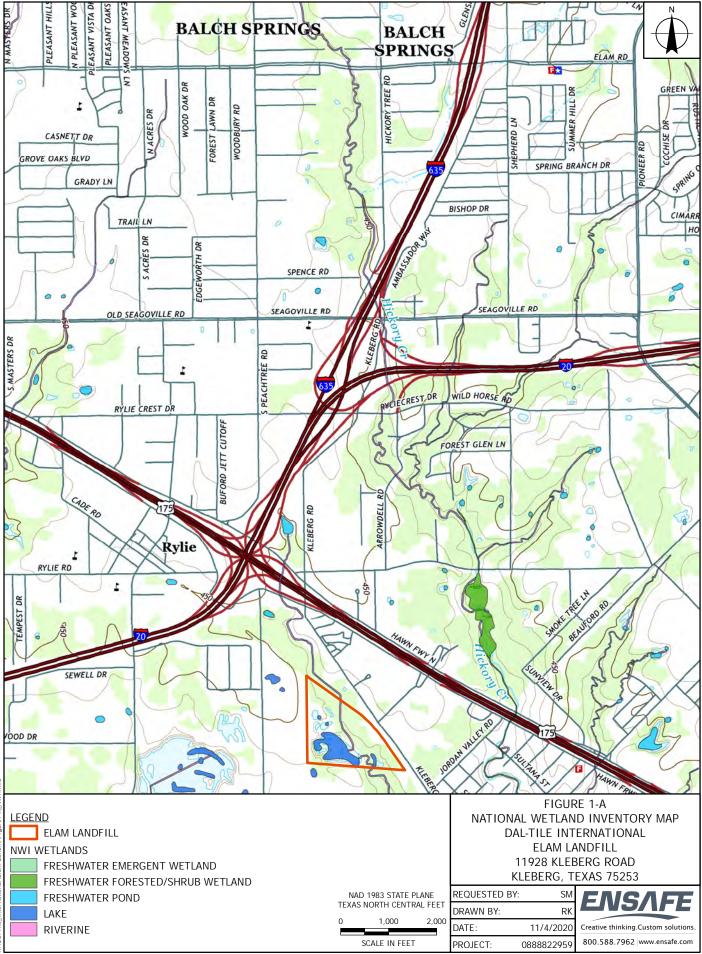
Is the facility located or proposed to be located within 30 feet of the upthrown side or 50 feet of the downthrown side of the actual or inferred surface expression of a fault that has reasonably been shown to have caused displacement of shallow Quaternary sediments or of man-made structures? [as applicable: 30 TAC 335.204(a)(9), (b)(12),(c)(11), (d)(11), and/or (e)(13)]

 \boxtimes Yes \boxtimes No \square Not Applicable

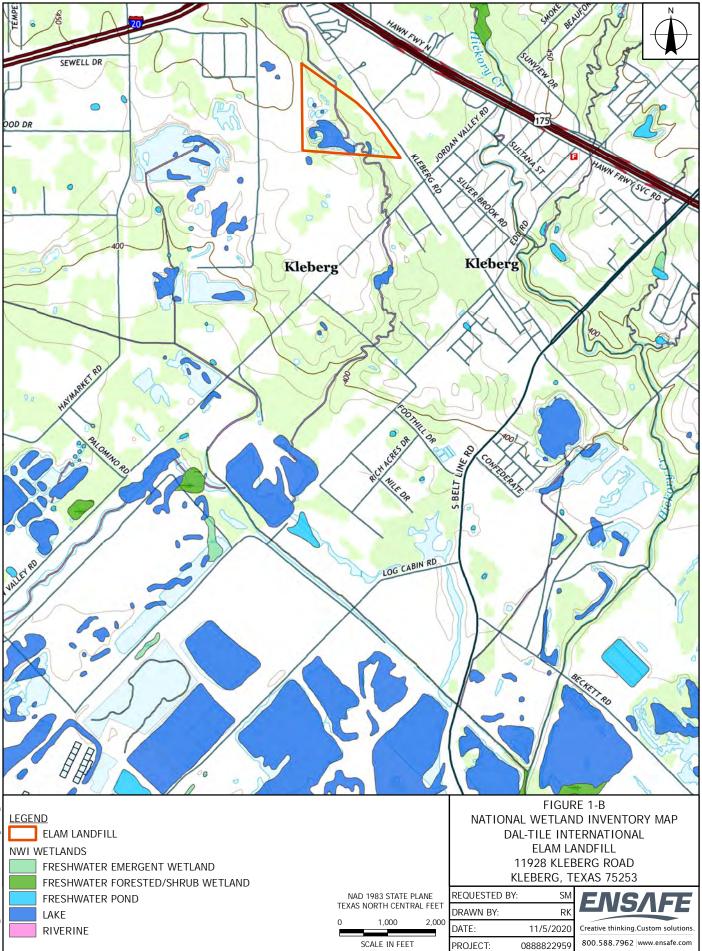
The Balcones Fault Zone does cross western Dallas County but is not present in the area of the Elam landfill, as illustrated on the Structural Geology Map of Dallas County, provided in Part B, Appendix VI.A.

Sources of information:

- Geologic Atlas of Texas, Dallas Sheet, revised 1987
- Structural Features of Dallas County, Texas Region
- Texas Water Development Board, Report 318



Source: U.S. Geological Survey. Hutchins, Seagoville Quadrangles, Texas [Map]. Photorevised 2019. 1:24,000. 7.5 Minute Series.



Source: U.S. Geological Survey. Hutchins, Seagoville Quadrangles, Texas [Map]. Photorevised 2019. 1:24,000. 7.5 Minute Series.

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October 5, 2020

Texas Parks and Wildlife Department 4200 Smith School Road Austin, Texas 78744

Re: Endangered Species Critical Habitat Review Elam Landfill 11928 Kleberg Road Dallas, Texas 75253

Dear Sir/Madam:

EnSafe Inc. is preparing a hazardous waste permit application renewal for the Dal-Tile Corporation Elam Landfill located at 11928 Kleberg Road, Dallas, Dallas County, Texas 75253. The existing landfill comprises approximately 9.15 acres of a larger property (approximately 50 acres). The facility has taken measures to eliminate surface and offsite impacts. All of the waste is located within a subsurface slurry wall and covered with an engineered vegetative cap, so there is no stormwater runoff or groundwater migration exposure inside or outside of the landfill boundary.

In accordance with 30 TAC 335.204(a)(8), would you please confirm that the landfill is not located in the critical habitat of an endangered species of plant or animal?

This information has been specifically requested in the past by the Texas Commission on Environmental Quality (TCEQ) during the previous permit application review. A previous request was completed in 2009 during the initial permit renewal.

We appreciate your assistance with this matter. Please contact me at (405) 274-4250 if you have questions or need additional information regarding this request.

Sincerely,

EnSafe Inc.

By: Sam Mehta, P.E. Senior Environment Engineer

Copy: Robert Hurt – Dal-Tile Corporation

Richard S. Record, P.G. Senior Environmental Geologist

creative thinking. custom solutions.*

October 5, 2020

Texas Parks and Wildlife Department 4200 Smith School Road Austin, Texas 78744

Re: Endangered Species Critical Habitat Review Elam Landfill 11928 Kleberg Road Dallas, Texas 75253

Dear Sir/Madam:

EnSafe Inc. is preparing a hazardous waste permit application renewal for the Dal-Tile Corporation Elam Landfill located at 11928 Kleberg Road, Dallas, Dallas County, Texas 75253. The existing landfill comprises approximately 9.15 acres of a larger property (approximately 50 acres). The facility has taken measures to eliminate surface and offsite impacts. All of the waste is located within a subsurface slurry wall and covered with an engineered vegetative cap, so there is no stormwater runoff or groundwater migration exposure inside or outside of the landfill boundary.

In accordance with 30 TAC 335.204(a)(8), would you please confirm that the landfill is not located in the critical habitat of an endangered species of plant or animal?

This information has been specifically requested in the past by the Texas Commission on Environmental Quality (TCEQ) during the previous permit application review. A previous request was completed in 2009 during the initial permit renewal.

We appreciate your assistance with this matter. Please contact me at (405) 274-4250 if you have questions or need additional information regarding this request.

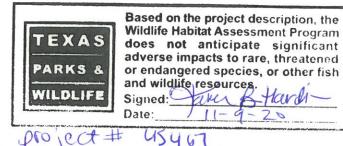
Sincerely,

EnSafe Inc.

By: Sam Mehta, P.E. Senior Environment Engineer

Copy: Robert Hurt - Dal-Tile Corporation

Richard S. Record, P.G. Senior Environmental Geologist



ENGINEERING | ENVIRONMENT | HEALTH & SAFETY | TECHNOLOGY 4545 Fuller Drive, Suite 342 | Irving, Texas 75038 | P 972-791-3222 | F 972-791-0405 | www.ensafe.com

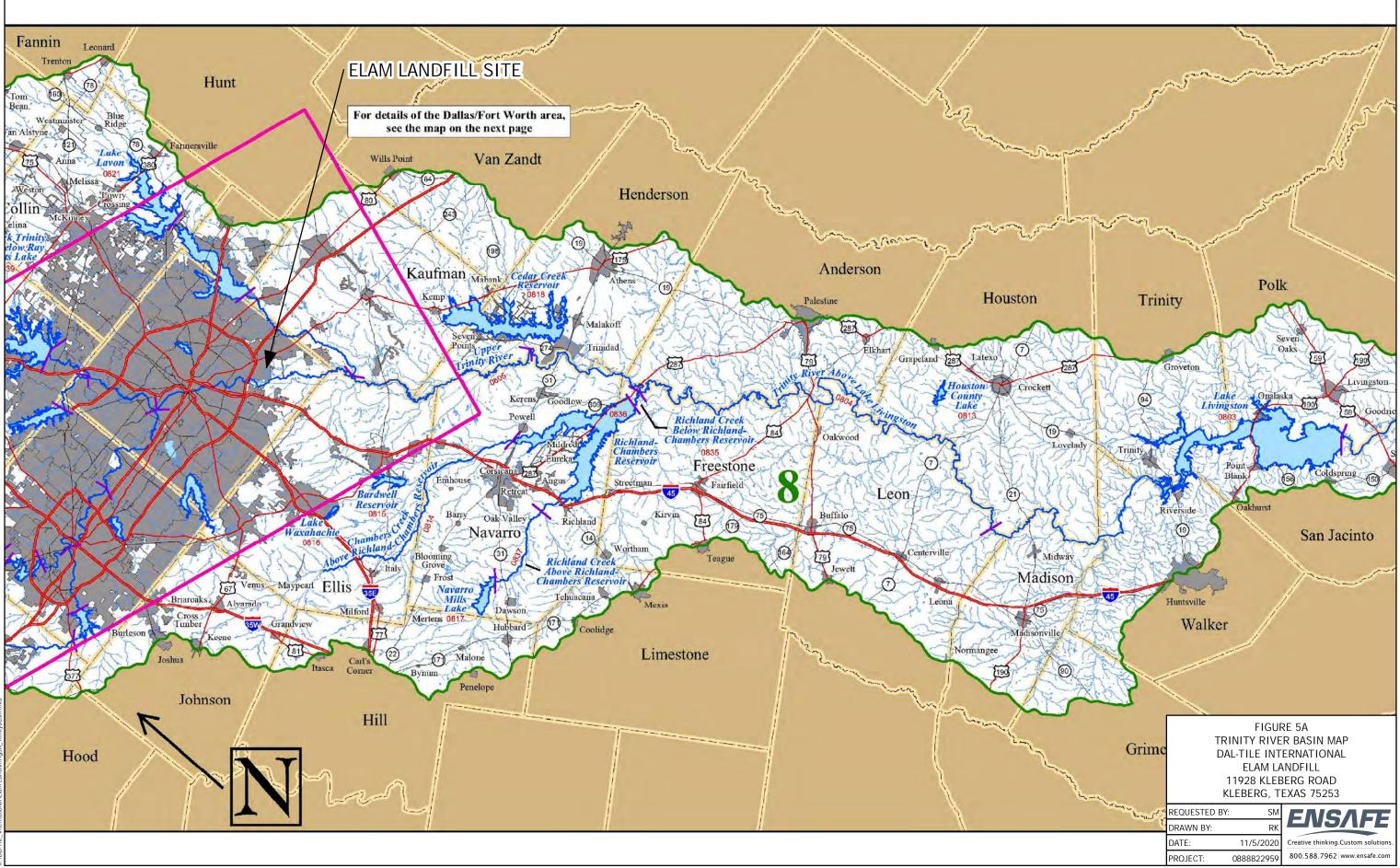
ENDANGERED SPECIES DALLAS COUNTY

Group	Name	Population	Status
Birds	Bald eagle (<u>Haliaeetus</u> <u>leucocephalus</u>)	U.S.A., conterminous (lower 48) States.	Recovery
Birds	Black-capped Vireo (<u>Vireo atricapilla</u>)	Wherever found	Recovery
Birds	Golden-cheeked warbler (=wood) (<u>Dendroica</u> <u>chrysoparia</u>)	Wherever found	Endangered
Birds	Least tern (<u>Sterna</u> <u>antillarum</u>)	U.S.A. (AR, CO, IA, IL, IN, KS, KY, LA_Miss. R. and tribs. N of Baton Rouge, MS_Miss. R., MO, MT, ND, NE, NM, OK, SD, TN, TX_except within 50 miles of coast)	Endangered
Birds	Piping Plover (<u>Charadrius</u> <u>melodus</u>)	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	Threatened
Birds	Red knot (<u>Calidris canutus</u> <u>rufa</u>)	Wherever found	Threatened
Clams	Texas fawnsfoot (<u>Truncilla</u> <u>macrodon</u>)	Wherever found	Candidate
Clams	Texas heelsplitter (<u>Potamilus</u> amphichaenus)	Wherever found	Under Review
Reptiles	Western Chicken turtle (Deirochelys	Wherever found	Under Review

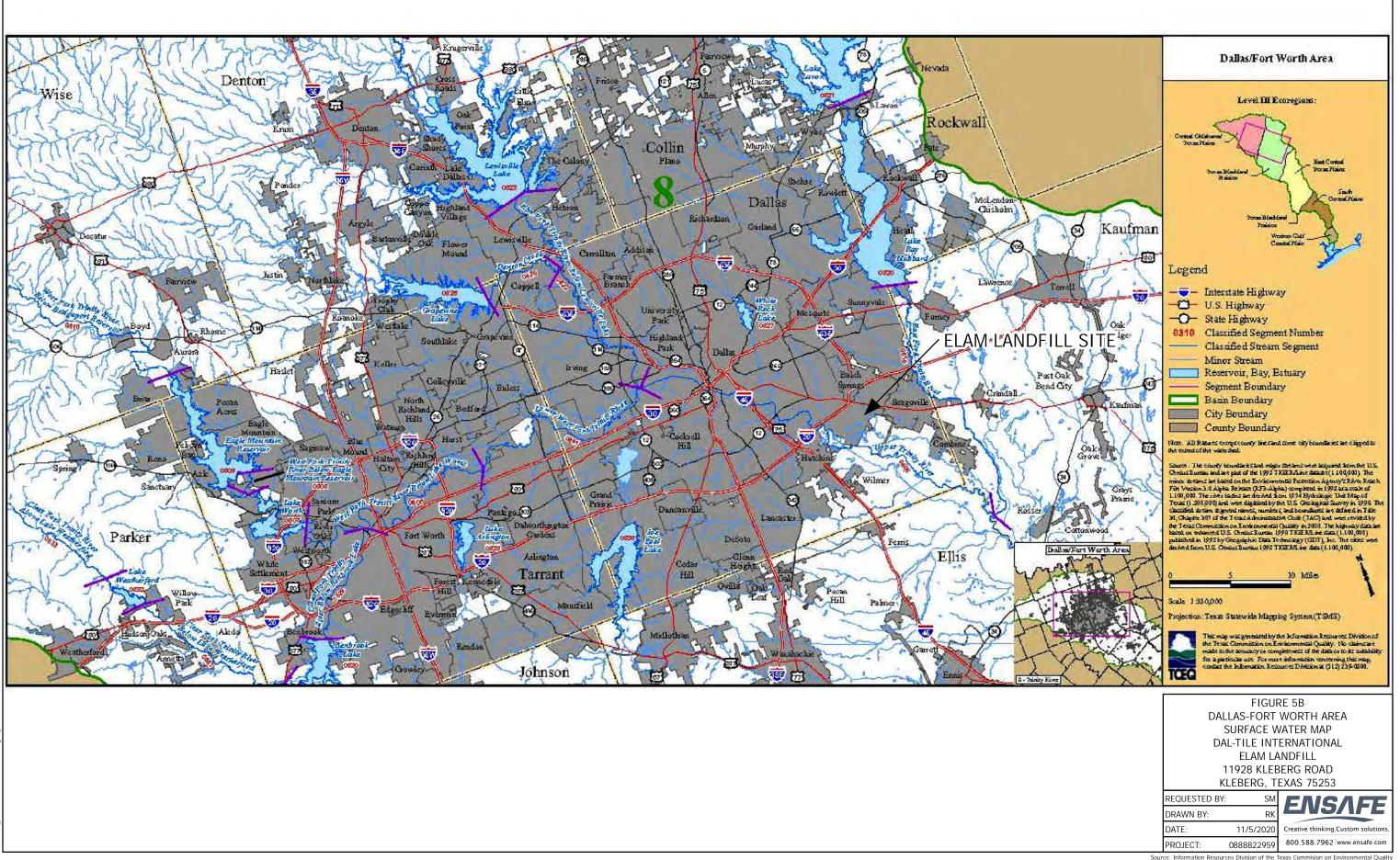


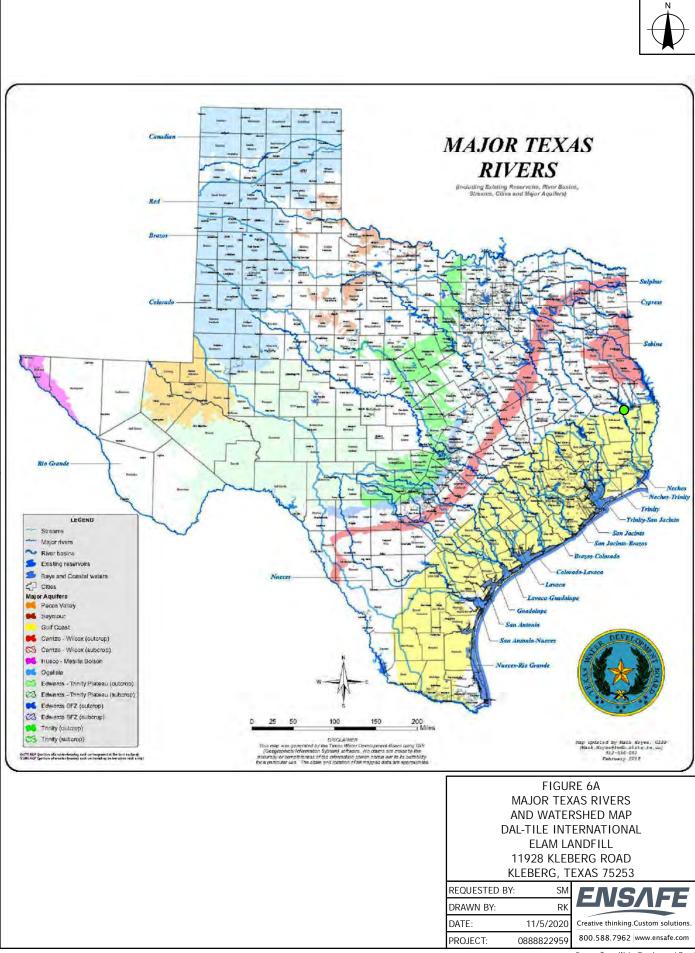
Group	Name	Population	Status	
	reticularia ssp. miaria)			
Birds	Whooping crane (Grus americana)	Wherever found, except where listed as an experimental population	Endangered	





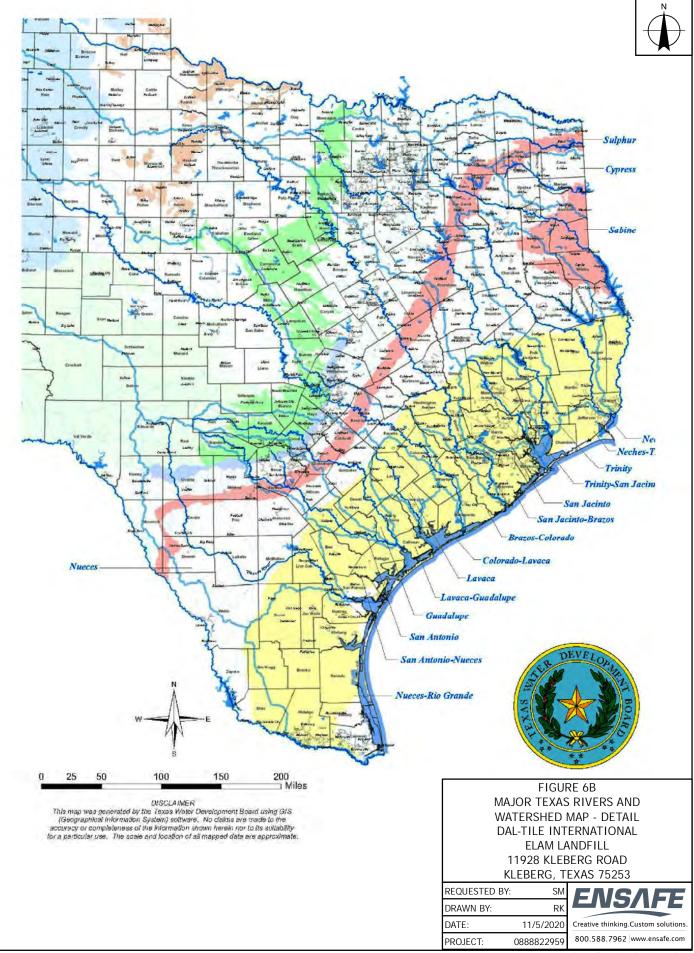
Source: Information Resources Division of the Texas Commision on Environmental Quality





I-Tile_International\Elam Landfill\Fig6A_MajorTXRiver_Wat

Source: Texas Water Development Board



al-Tile_International\Elam Landfill\Fig6B_MajorTXRiver_Watershed_E

Source: Texas Water Development Board

Appendix II.E Additional Requirements for Landfills Not applicable

Appendix II.F Flooding Identify whether the facility is located within a 100-year flood plain [40 CFR 270.14(b)(11)(iii)]. This identification must indicate the source of data for such determination and include a copy of relevant documentation (e.g., flood maps, if used and/or calculations). The boundaries of the hazardous waste management facility must be shown on the flood plain map. If the facility is not subject to inundation as a result of a 100-year flood event, do not complete Sections II.F.2. through II.F.4. below. An applicant for a proposed hazardous waste landfill, areal expansion of a hazardous waste landfill, or a commercial hazardous waste land disposal unit may not rely solely on flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or a successor agency for this determination.

The Elam landfill is not located within the 100-year floodplain. A Federal Emergency Management Agency (FEMA) map delineating the 100-year floodplain for the landfill area (provided by GeoSearch) is provided in this appendix.



FEMA (Site Only)

Target Property: Dal-Tile International - Elam Landfill 11928 Kleburg Road Dallas, dallas County, Texas 75253

Prepared For:

EnSafe Inc.

Order #: 157127 Job #: 383322 Project #: 0888822950 Date: 11/11/2020

phone: 888-396-0042 · fax: 512-472-9967 · www.geo-search.com

TARGET PROPERTY SUMMARY

Dal-Tile International - Elam Landfill 11928 Kleburg Road Dallas, dallas County, Texas 75253

USGS Quadrangle: Hutchins, TX Target Property Geometry: Point

Target Property Longitude(s)/Latitude(s): (-96.625637, 32.680531)

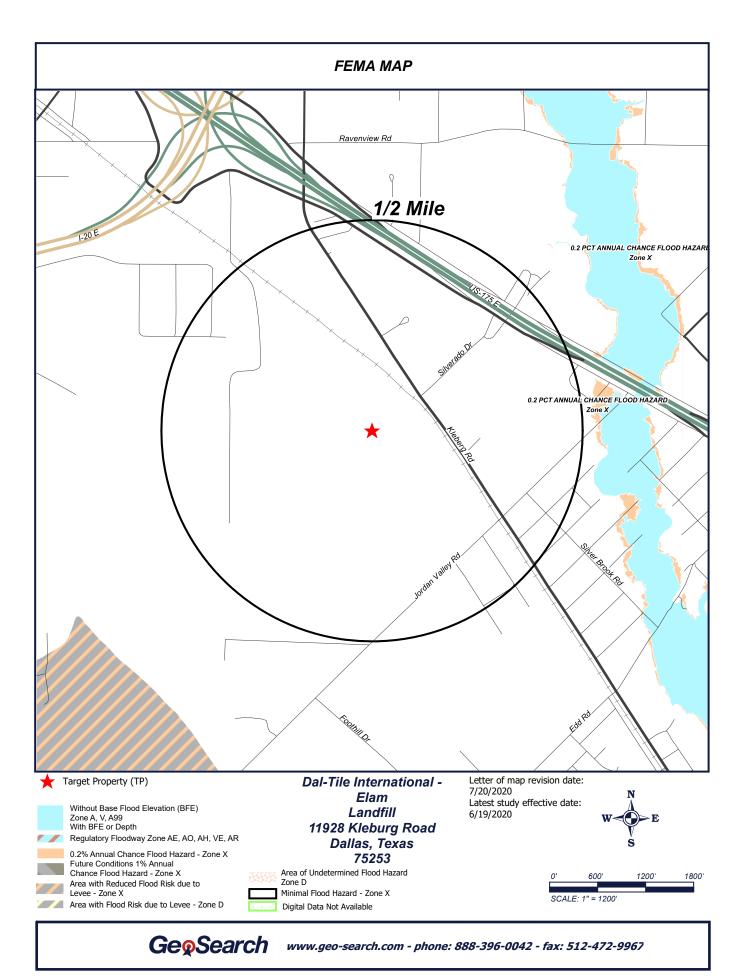
County/Parish Covered: Dallas (TX)

Zipcode(s) Covered: Dallas TX: 75253

State(s) Covered: **TX**

Disclaimer - The information provided in this report was obtained from a variety of public sources. GeoSearch cannot ensure and makes no warranty or representation as to the accuracy, reliability, quality, errors occurring from data conversion or the customer's interpretation of this report. This report was made by GeoSearch for exclusive use by its clients only. Therefore, this report may not contain sufficient information for other purposes or parties. GeoSearch and its partners, employees, officers and independent contractors cannot be held liable for actual, incidental, consequential, special or exemplary damages suffered by a customer resulting directly or indirectly from any information provided by GeoSearch.





JOB #: 383322 - 11/11/2020

FEMA - Federal Emergency Management Agency

The National Flood Hazard Layer (NFHL) data used in this report is derived from the Federal Emergency Management Agency. The NFHL dataset is a compilation of effective Flood Insurance Rate Map (FIRM) databases (a collection of the digital data that are used in GIS systems for creating new Flood Insurance Rate Maps) and Letters of Map Change (Letters of Map Amendment and Letters of Map Revision only) that create a seamless GIS data layer for United States and its territories. The NFHL is updated as new study or LOMC data becomes effective. Note: Currently, not all areas have modernized FIRM database data available. As a result, users may need to refer to the effective Flood Insurance Rate Map for effective flood hazard information. This data was provided by the Federal Emergency Management Agency's Map Service Center in November of 2013.

FEMA Flood Zone Definitions Relevant to Map

Zone X

Zone X

An area that is determined to be outside the 100 and 500 year floodplains.



www.geo-search.com · phone: 888-396-0042 · fax: 512-472-9967

Appendix II.G(6) Additional Information Requirements Deed Recordation

For existing land disposal facility units provide documentation that the information required by 30 TAC 335.5 has been placed in the county deed records. If previously submitted, please reference the submittal by date and registration number.

The official deed recordation certification from the Dallas County Clerk in fulfillment of Risk Reduction Standard No. 3 closure requirements for the Elam landfill were previously submitted to the TNRCC on February 22, 1999. Dallas County recorded the deed recordation as Instrument # 199900478674. A copy of the deed record is provided in this appendix.

478674 1432034 \$61.00

02/22/99

Deed

STATE OF TEXAS COUNTYOF DALLAS

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INDUSTRIAL SOLID WASTE

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Dallas County, Texas in compliance with the recordation requirements of said rules:

Dal-Tile International has performed a remediation of the land described herein. A list of the known waste constituents, including known concentrations which have been left in place is attached hereto (Table 1) and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration (No. 52013) files, which are available for inspection upon request at the central office of the Texas Natural Resource Conservation Commission in Austin, Texas.

The Texas Natural Resource Conservation Commission derives its authority to review the remediation of this tract of land from 361 002 of the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, which enables the Texas Natural Resource Conservation Commission to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to 5.012 and 5.013 of the Texas Water Code Ann. Chapter 5, the Texas Natural Resource Conservation Commission is given primary responsibility for implementing the laws of the State of Texas Water Code. In accordance with this authority, the Texas Natural Resource Conservation Commission requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the Texas Natural Resource Conservation Commission of the suitability of this land for any purpose, nor does it constitute any guarantee by the Texas Natural Resource Conservation Commission that the remediation standards specified in this certification have been met by Dal-Tile Corporation.

Being, a tract of land situated in the McKinney & Williams Survey, Abstract No. 1006, Dallas County, Texas, and being out of the G.S. Hunt 164.25 acre tract as recorded in Volume 925, page 111, of the Deed Records Dallas County, Texas, and being more particularly described in attached field notes and sketch.

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Contaminants and waste deposited hereon have been remediated and determined to meet nonresidential (i.e., industrial/ commercial) soil criteria, in accordance with a plan designed to meet

Texas Natural Resource Conservation Commission's requirements in 31 Tex. Admin. Code §335.555 (Risk Reduction Standard No. 3), which mandates that the remedy be designed to eliminate or reduce to the maximum extent practicable, substantial present or future risk. The remediation plan does require continued post-closure care and institutional control measures. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with the risk reduction standards applicable at the time of this filing. The current or future owner must undertake actions as necessary to protect human health or the environment in accordance with the rules of the Texas Natural Resource Conservation Commission. Institutional or legal controls placed on the property to ensure appropriate future use include restricted access to the site.

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The owner of the site is Dal-Tile Corporation, a Pennsylvania Corporation. More specific information may be obtained at 7834 C.F. Hawn Freeway, P.O., Box 17130, Dallas, Texas 75217 from Mr. Russell Townsend.

EXECUTED this the 17 day of FEBRUARY, 1999.

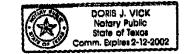
Dal-Tile Corporation A Pennsylvania Corporation

Mark A. Solls, Vice President **Dal-Tile Corporation**

STATE OF TEXAS DALLAS COUNTY

BEFORE ME, on this the <u>17</u>⁷³day of <u>بطرید سروی مع</u>, personally appeared Mark A. Solls of Dal-Tile Corporation, a Pennsylvania Corporation, known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

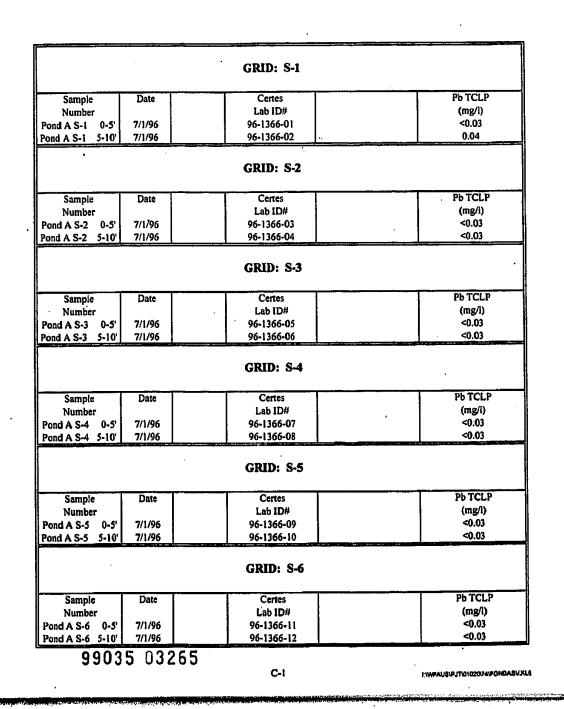
GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 17 th day of february. 1995.



Notary Public in and for the State of Texas, County of Dallas

<u>2-12-2002</u> My Commission Expires

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		GRID: S-7	
Sample	Date	Certes	Pb TCLP
Number		Lab (D#	(mg/l)
Pond A S-7 0-5'	7/1/96	96-1366-13	<0.03
Pond A S-7 5-10'	7/1/96	96-1366-14	<0.03
		GRID: S-8	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-8 0-5'	7/1/96	96-1366-15	<0.03
Pond A S-8 5-10'	7/1/96	96-1366-16	<0.03
	•	GRID: S-9	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-9 0-5'	7/1/96	96-1366-17	<0.03
Pond A S-9 5-10'	7/1/96	96-1366-18	<0.03
Sample	Date	GRID: S-10	Pb TCLP
•	Date	+	
Number		Lab ID#	(mg/l)
Pond A S-10 0-5'	7/1/96 7/1/96	96-1366-19	<0.03 <0.03
Pond A S-10 5-10'	/////90	96-1366-20	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-11 0-5'	7/1/96	96-1366-21	0.05
Pond A S-11 5-10'	7/1/96	96-1366-22	<0.03
		GRID: S-12	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-12 0-5'	7/1/96	96-1366-23	<0.03
Pond A S-12 5-10	7/1/26	96-1366-24	0.07

		GRID: S-13	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-13 0-5'	7/1/96	96-1366-25	<0.03
Pond A S-13 5-10'	7/1/96	96-1366-26	<0.03
		GRID: S-14	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-14 0-5'	7/1/96	96-1366-27	<0.03
Pond A S-14 5-10'	7/1/96	96-1366-28	<0.03
		GRID: S-15	• .
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-15 0-5'	7/1/96	96-1366-29	<0.03
Pond A S-15 5-10*	7/1/96	96-1366-30	<0.03
		GRID: S-16	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-16 0-5'	7/24/96	96-1505-01	0.03
Pond A S-16 5-10	7/24/96	96-1505-02	
		GRID: S-17	
Sample	Date	Certes	Pb TCLF
Number	20406	Lab ID#	(mg/l) <0.03
Pond A S-17 0-5	7/24/96	96-1505-03	<0.03
Pond A S-17 5-10'	7/24/96	96-1505-04	1 1 1 1 1 1 1 1 1 1
		GRID: S-18	
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond A S-18 0-5'	7/24/96	96-1505-05	< 0.03
Pond A S-18 5-10'	7/24/95	96-1505-06	<0.03

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		GRID: S-19	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-19 0-5'	7/24/96	96-1505-07	0.04
Pond A S-19 5-10'	7/24/96	96-1505-08	<0.03
		GRID: S-20	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-20 0-5'	7/24/96	96-1505-09	<0.03
Pond A S-20 5-10'	7/24/96	96-1505-10	<0.03
		GRID: S-21	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-21 0-5'	7/24/96	96-1505-11	0.04
Pond A S-21 5-10'	7/24/96	96-1505-12	<0.03
		GRID: S-22	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-22 0-5'	7/18/96	96-1462-01	<0.03
Pond A S-22 5-10	7/18/96	96-1462-02	<0.03
		GRID: S-23	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-23 0-5'	7/18/96	96-1462-03	<0.03
Pond A S-23 5-10'	7/18/96	96-1462-04	<0.03
		GRID: S-24	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-24 0-5	7/18/96	96-1462-05	<0.03
Pond A S-24 5-10	7/18/96	96-1462-06	0.13

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		GRID: S-25	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-25 0-5'	7/24/96	96-1505-13	<0.03
Pond A S-25 5-10'	7/24/96	96-1505-14	<0.03
		GRID: S-26	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-26 0-5'	7/24/96	96-1505-15	<0.03
Pond A S-26 5-10'	7/24/96	96-1505-16	<0.03
		GRID: S-27	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-27 0-5	7/24/96	96-1505-17	0.08
Pond A S-27 5-10'	7/24/96	96-1505-18	<0.03
		GRID: S-28	•
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-28 0-5'	7/24/96	96-1505-19	<0.03
ond A S-28 5-10'	7/24/96	96-1505-20	<0.03
		GRID: S-29	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-29 0-5'	7/24/96	96-1505-21	<0.03
ond A S-29 5-10'	7/24/96	96-1505-22	<0.03
·		GRID: S-30	·
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-30 0-5'	7/24/96	96-1505-23	0.04
ond A S-30 5-10'	7/24/96		

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		GRID: S-31	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
PondiA S-31 0-5'	7/18/96	96-1462-07	<0.03
Pond A S-31 5-10	7/18/96	96-1462-08	<0.03
		GRID: S-32	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-32 0-5'	7/18/96	96-1462-09	0.07
Pond A S-32 5-10'	7/18/96	96-1462-10	0.05
	•	GRID: S-33	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-33 5-10'	7/18/96	96-1462-12	0.18
Sample	Date	GRID: S-33 Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-33R 0-5'	7/30/96	96-1549-35	. 0.04
		GRID: S-34	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-34 0-5'	7/18/96	96-1462-13	0.06
Pond A S-34 5-10'	7/18/96	96-1462-14	0.12
		GRID: S-35	
	Date	Certes	Pb TCLF
Sample		Lab ID#	(mg/l)
Sample Number	1		
•	7/24/96	96-1505-25	0.05

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		GRID: S-36	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-36 0-5'	7/24/96	96-1505-27	0.46
Pond A S-36 5-10'	7/24/96	96-1505-28	0.08
		GRID: S-37	
Comple	Date	Certes	Pb TCLP
Sample Number	Date	Lab ID#	(mg/l)
Pond A S-37 0-5	7/24/96	96-1505-29	0.21
Pond A S-37 5-10	7/24/96	96-1505-30	<0.03
	•	GRID: 5-38	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mġ/l)
Pond A S-38 0-5'	7/24/96	96-1505-31	<0.03
Pond A S-38 5-10'	7/24/96	96-1505-32	0.04
		GRID: S-39	
Sample	Date	. Certes	Pb TCLF
Number	2440	Lab ID#	(mg/l)
Pond A S-39 0-5'	7/24/96	96-1505-33	<0.03
Pond A S-39 5-10'	7/24/96	96-1505-34	<0.03
		GRID: S-40	
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond A S-40 0-5'	7/24/96	96-1505-35	0.07
Pond A S-40 5-10'	7/24/96	96-1505-36	<0.03
		GRID: S-41	•
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond A S-41 0-5'	7/24/96	96-1505-37	<0.03
Pond A S-41 5-10'	7/24/96	96-1505-38	<0.03

TABLE 1 ----

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DAL TILE - ELAM REMAINING CONCENTRATIONS FOR LEAD GRID: S-42 Date Pb TCLP Certes Sample Lab ID# Number (mg/l) Pond A S-42 0-5* 7/18/96 96-1462-15 0.11 Pond A S-42 5-10' 7/18/96 96-1462-16 0.1 **GRID: S-43** Pb TCLP Sample Date Certes Lab ID# (mg/l) Number Pond A S-43 0-5' 7/18/96 96-1462-17 < 0.03 0.05 Pond A S-43 5-10' 7/18/96 96-1462-18 **GRID: S-44** Sample Date Certes Pb TCLP Lab ID# (mg/l) Number 7/18/96 0.38 Pond A S-43 0-5" 96-1462-19 7/18/96 0.04 96-1462-20 Pond A S-43 5-10' **GRID: S-45** Pb TCLP Date Sample Certes Number Lab ID# (mg/l) Pond A S-45 0-5' 7/18/96 96-1462-21 0.07 <0.03 Pond A S-45 5-10' 7/18/96 96-1462-22 **GRID: S-46** Pb TCLP Date Certes Sample Number Lab ID# (mg/l) Pond A S-46 0-5' 7/24/96 96-1505-39 0.12 7/24/96 0.04 Pond A S-46 5-10' 96-1505-40 **GRID: S-47** Pb TCLP Date Certes Sample Lab ID# (mg/i) Number Pond A S-47 0-5' 7/24/96 96-1505-41 < 0.03 Pond A S-47 5-10' 7/24/96 0.03 96-1505-42 99035 03272 C-8 INPAUSIPITIONZO/APONDASV.XLS

TABLE 1

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		TABLE 1 DAL TILE - ELAM	
	REMAININ	G CONCENTRATIONS FOR	LEAD
<u></u>		GRID: S-48	
Sample	Date	Certes	Pb TCLP
Number	· ·	Lab ID#	(mg/i)
Pond A S-48 0-5'	7/24/96	96-1505-43	0.08
Pond A S-48 5-10'	7/24/96	96-1505-44	0.04
		GRID: S-49	
Sample	Date	Certes	PbTCLP
Number		Lab ID#	(mg/l)
Pond A S-49 0-5'	7/24/96	96-1505-45	0.07
Pond A S-49 5-10	7/24/96	96-1505-46	<0.03
Sample	Date	Certes	PbTCLP
Number		Lab ID#	(mg/l)
Pond A S-50 0-5'	7/24/96	96-1505-47	<0.03
Pond A S-50 5-10'	7/24/96	96-1505-48	<0.03
		GRID: S-51	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l) <0.03
Pond A S-51 0-5' Pond A S-51 5-10'	7/24/96 7/24/96	96-1505-49 96-1505-50	0.03
		GRID: S-52	
Sample	Date	Certes	Pb TCLP (mg/l)
Number Pond A S-52 0-5'	7/24/96	Lab ID# 96-1505-51	(mg/i) 0.04
Pond A S-52 0-5' Pond A S-52 5-10'		96-1505-52	0.06
	<u> </u>	GRID: S-53	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l) <0.03
Pond A S-53 0-5' Pond A S-53 5-10'	7/24/96	96-1462-23 96-1462-24	<0.03
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TABLE 1
DAL TILE - ELAM
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		GRID: S-54	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-54 0-5'	7/24/96	96-1462-25	<0.03
Pond A S-54 5-10	7/24/96	96-1462-26	<0.03
		GRID: S-55	· · · · · · · · · · · · · · · · · · ·
Sample	Date	Certes	Pb TCLP
Number	Date	Lab ID#	(mg/l)
Pond A S-55 0-5'	7/24/96	96-1462-27	<0.03
Pond A S-55 5-10'	7/24/96	96-1462-27	<0.03
		GRID: S-56	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-56 0-5'	7/24/96	96-1462-29	1.79
Pond A S-56 5-10'	7/24/96	96-1462-30	<0.03
		GRID: S-57	•
Sample	Date	Certes	Pb TCLP
Number	7/20/07	Lab ID#	(mg/l)
Pond A S-57 0-5' Pond A S-57 5-10'	7/30/96 7/30/96	96-1549-01	0.07
'ond A 5-57 5-10]	7/30/90	96-1549-02	<0.03
		GRID: S-58	
Sample	Date	Certes	Pb TCLP
Number	.	Lab ID#	(mg/l)
Pond A S-58 0-5	7/30/96	96-1549-03	<0.03
Pond A S-58 5-10	7/30/96	96-1549-04	<0.03
		GRID: S-59	
•	Date	Certes	Pb TCLI
Sample	Date		1
Sample Number	Late	Lab ID#	(mg/l)
	7/30/96	Lab ID# 96-1549-05	(mg/l) <0.03

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		GRID: S-60	•
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-60 0-5'	7/30/96	96-1549-07	<0.03
Pond A S-60 5-10	7/30/96	96-1549-08	0.06
		GRID: S-61	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-61 0-5'	7/30/96	96-1549-09	· <0.03
Pond A S-61 5-10'	7/30/96	96-1549-10	0.03
		GRID: S-62	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l) <0.03
Pond A S-62 0-5' Pond A S-62 5-10'	7/30/96 7/30/96	96-1549-11 96-1549-12	<0.03
		GRID: S-63	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-63 0-5	7/30/96	96-1549-13	. 0.06
Pond A S-63 5-10'	7/30/96	96-1549-14	0.03
		GRID: S-64	
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond A S-64 0-5'	7/30/96	96-1549-15	0.16
Pond A S-64 5-10'	7/30/96	96-1549-16	0.04

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		GRID: S-65	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/i)
Pond A S-65 0-5'	7/30/96	96-1549-17	0.04
		GRID: S-65	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-65R 5-10'	8/7/96	96-1591-01	0.37
		GRID: S-66	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-66 0-5'	7/30/96	96-1549-19	<0.03
Pond A S-66 5-10	7/30/96	96-1549-20	<0.03
		GRID: S-67	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-67 0-5'	7/30/96	96-1549-21	<0.03
Pond A S-67 5-10'	7/30/96	96-1549-22	0.08
		GRID: S-68	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-68 0-5'	7/30/96	96-1549-23	1.81
Pond A S-68 5-10'	7/30/96	96-1549-24	<0.03
		GRID: \$-69	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-69 0-5'	7/30/96	96-1549-25	<0.03
Pond A S-69 5-10	7/30/96	96-1549-26	0.04

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		GRID: S-70	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-70 0-5' 7	/30/96	96-1549-27	0.06
Pond A S-70 5-10 7	/30/96	96-1549-28	0.36
		GRID: S-71	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-71 0-5 7	/30/96	96-1549-29	<0.03
Pond A S-71 5-10 7	/30/96	96-1549-30	<0.03
		GRID: S-72	· · ·
Sample	Date	Certes	Pb TCLP
Number		Lab 1D#	(mg/l)
	/30/96	96-1549-31	0.62
Pond A S-72 5-10 7	/30/96	96-1549-32	0.06
		GRID: S-73	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond A S-73 0-5'	/30/96	96-1549-33	1.06
			1.19

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GRID: S-1				
Sample	Date	Certes	Pb TCLP	
Number		Lab ID#	(mg/i)	
Pond B S-1 0-5'	5/17/96	96-1055-01	<0.03	
<u>, </u>		GRID: S-2		
Sample	Date	Certes	Pb TCLP	
Number		Lab ID#	(mg/l)	
Pond B S-2 0-5'	5/17/96	96-1055-02	<0.03	
		GRID: S-3		
Sample	Date	Certes	Pb TCLP	
Number		Lab ID#	(mg/l)	
Pond B S-3 0-5'	5/17/96	96-1055-03	0.05	
		GRID: S-4		
Sample	Date	Certes	. Pb TCLP	
Number		Lab ID#	(mg/l)	
Pond B S-4 0-5	5/17/96	96-1055-04	0.03	
- - - - - - - - - - -		GRID: S-5		
Sample	Date	Certes	Pb TCLP	
Number		Lab ID#	(mg/l)	
Pond B S-5 0-5'	5/17/96	96-1055-05	<0.03	

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		GRID: S-6	
	<u></u>	Certes	Pb TCLP
Sample	Date		
Number		Lab ID#	(mg/l)
Pond B S-6 0-5'	6/3/96	96-1144-01	<0.03
		GRID: S-7	· · ·
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-7 0-5'	6/3/96	96-1144-02	2.73
Pond B S-7 5-10'	6/3/96	96-1144-03	1.32
		GRID: S-8	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-8 0-5'	6/3/96	96-1144-04	0.12
Pond B S-8 5-10'	6/3/96	96-1144-05	0.29
		GRID: S-9	•
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-9 0-5'	6/3/96	96-1144-06	<0.03
Pond B S-9 5-10'	6/3/96	96-1144-07	1.15
· .		GRID: \$-10	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-10 0-5'	6/3/96	96-1144-08	1.17
Pond B S-10 5-10'	6/3/96	96-1144-09	3.01
•	·	GRID: S-11	
Sample	Date	Certes	Pb TCLP
Number	612106	Lab ID#	(mg/l)
Pond B S-11 0-5'	6/3/96	96-1144-10 05-1144-11	- 3.19
Pond B S-11 5-10'	6/3/96	96-1144-11	1.91

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		GRID: S-12	
Sample	Date	Certes	Pb TCLP
Number	Late	Lab ID#	(mg/l)
Pond B S-12 0-5	6/3/96	96-1144-12	3.6
Pond B S-12 5-10'	6/3/96	96-1144-13	2.95
0110 0 0-12 0-10	0/3/70		
		GRID: S-13	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-13 0-5'	6/3/96	96-1144-14	0.52
	•	GRID: S-14	<u> </u>
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-14 0-5'	6/3/96	96-1144-15	<0.03
		GRID: S-15	:
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/i)
Pond B S-15 0-5'	6/3/96	96-1144-16	0.13
Pond B S-15 5-10'	6/3/96	96-1144-17	. 0.23
		GRID: S-16	
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond B S-16 0-5'	6/3/96	96-1144-18	<0.03
Pond B S-16 5-10'	6/3/96	96-1144-19	0.47
		GRID: S-17	
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond B S-17 0-5' Pond B S-17 5-10'	6/3/96 6/3/96	96-1144-20 96-1144-21	0.54

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GRID: S-18			
Sample	Date	Certes	Pb TCLP
Number	ļ	Lab ID#	(mg/l)
Pond B S-18 0-5'	6/3/96	96-1144-22	· 3.3
Pond B S-18 5-10'	6/3/96	96-1144-23	2.77
	-	GRID: S-19	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-19 0-5'	6/3/96	96-1144-24	1.76
Pond B S-19 5-10'	6/3/96	96-1144-25	3.66
		GRID: S-20	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-20 0-5'	6/3/96	96-1144-26	0.08
Pond B S-20 5-10'	6/3/96	96-1144-27	<0.03
		GRID: S-21	•
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-21 0-5'	6/3/96	96-1144-28	0.46
Pond B S-21_5-10'	6/3/96	96-1144-29	0.24
	·	GRID: S-22	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/i)
Pond B S-22 0-5'	6/3/96	96-1144-30	0.9
Pond B S-22 5-10	6/3/96	96-1144-31	0.21
		GRID: S-23	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-23 0-5'	6/3/96	96-1144-32	2.22
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		GRID: S-24	
		GRID; 5-24	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-24 0-5"	6/3/96	96-1144-34	2.64
		GRID: S-26	. <u> </u>
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-26 0-5'	6/3/96	96-1144-38	4.8
		GRID: S-27	<u> </u>
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B S-27 0-5'	6/3/96	96-1144-39	4.69
Pond B S-27 5-10'	6/3/96	96-1144-40	1.7
		GRID: S-24	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	' (mg/l)
Pond B S-24 5-10	6/20/96	96-1365-01	0.04
		GRID: S-25	
Sample	Date	Certes	Pb TCLP
Number	1	Lab ID#	(mg/l)
Pond B S-25 0-5'	6/20/96	96-1365-02	<0.03
Pond B S-25 5-10	6/20/96	96-1365-03	0.07
	·	GRID: 33-1	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B 33-1 0-5'	7/8/96	96-1446-01	<0.03
Pond B 33-1 5-10'	7/8/96	96-1446-02	0.03

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		GRID: 33-2	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B 33-2 0-5'	7/8/96	96-1446-03	<0.03
Pond B 33-2 5-10	7/8/96	96-1446-04	<0.03
		GRID: 33-3	
Sample	Date	Certes	Pb TCLP
Number	Dale	Lab ID#	(mg/l)
Pond B 33-3 0-5'	7/8/96	96-1446-05	<0.03
Pond B 33-3 5-10'	7/8/96	96-1446-06	<0.03
		GRID: 33-4	
Sample	Date	Certes	Pb TCLP
Number		Lab ID#	(mg/l)
Pond B 33-4 0-5'	7/8/96	96-1446-07	<0.03
Pond B 33-4 5-10'	7/8/96	96-1446-08	<0.03
		GRID: 33-5	
Sample	Date	Certes	Pb TCLI
Number		Lab ID#	(mg/l)
Pond B 33-5 0-5'	7/8/96	96-1446-09	0.03
	7/8/96	96-1446-10	<0.03
Pond B 33-5 5-10'		GRID: 33-6	
	Date	GRID: 33-6	
Pond B 33-5 5-10' Sample Number		Certes Lab ID#	(mg/l)
Sample Number Pond B 33-5 0-5'	7/8/96	Certes Lab ID# 96-1446-11	<0.03
Sample Number Pond B 33-5 0-5'		Certes Lab ID#	(mg/l)
Pond B 33-5 5-10' Sample	7/8/96	Certes Lab ID# 96-1446-11	(mg/l) <0.03
Pond B 33-5 5-10' Sample Number Pond B 33-6 0-5'	7/8/96	Certes Lab ID# 96-1446-11 96-1446-12	(mg/l) <0.03
Pond B 33-5 5-10' Sample Number Pond B 33-6 0-5' Pond B 33-6 5-10'	7/8/96 7/8/96	Certes Lab ID# 96-1446-11 96-1446-12 GRID: 33-7	(mg/l) <0.03 <0.03 Pb TCLI (mg/l)
Pond B 33-5 5-10' Sample Number Pond B 33-6 0-5' Pond B 33-6 5-10' Sample	7/8/96 7/8/96	Certes Lab ID# 96-1446-11 96-1446-12 GRID: 33-7 Certes	(mg/l) <0.03 <0.03

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GRID: 33-8					
Sample	Date	Certes	Pb TCLP		
Number		Lab ID#	(mg/l)		
Pond B 33-8 0-5'	7/8/96	96-1446-15	<0.03		
Pond B 33-8 5-10'	7/8/96	96-1446-16	<0.03		

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Sample	Date	Certes	Total Pb	SPLP Pb
Number		Lab 1D#	(mg/kg)	(mg/l)
Pond C-1	3/21/96	96-0630-01	31.7	NA
Pond C-2	3/21/96	96-0630-02	94.4	<0.002

Note: NA indicates the parameter was not analyzed for the sample

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Being 9.153 acres of land, more or less, situated in the McKinney & Williams Survey, Abstract #1006, Dallas County, Texas, and being out of the G.S. Hunt 164.25 acre tract as recorded in Volume 925, page 111, Deed Records of Dallas County, Texas, and being more particularly described as follows:

Beginning at a point for the northwest corner of said 9.153 acres, said point bears S 2°25′00″E, 481.47 feet and N77°35′41″E, 30.00 feet from an iron rod found, said iron rod being the northwest corner of said Hunt tract and also being the intersection of the west line of McKinney & Williams Survey, Abstract #1006, and the southwest line of the T&NO Railroad;

Thence N77°35'41"E along a fence, 176.77 feet to a point for the northeast corner of this;

Thence S50°59'47"E along a fence, 119.93 feet to a point;

Thence S51°49'27"E along a fence, 232.94 feet to a point;

Thence S39°35'29"E along a fence, 145.45 feet to a point;

Thence S24°01'13"E along a fence, 247.41 feet to a point;

Thence S24°02'19"E along a fence, 20.28 feet to a point for the southeast corner of this;

Thence S43°50'24"W along a fence, 155.23 feet to a point;

Thence S63°25'05"W along a fence, 560.22 feet to a point;

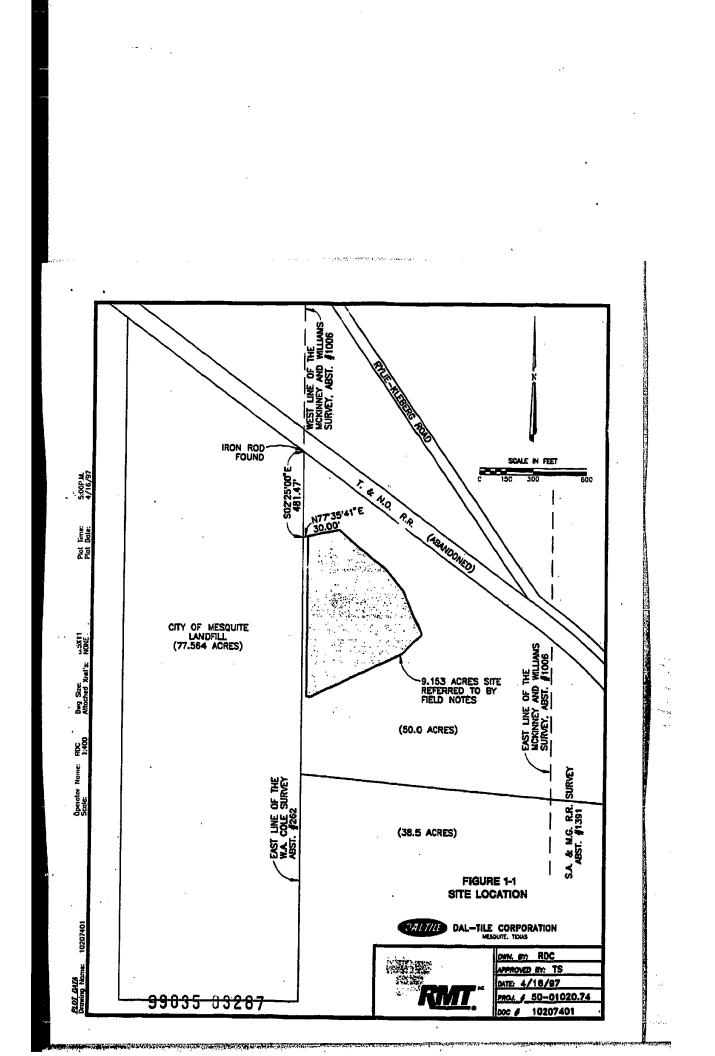
Thence N88°09'46"W along a fence, 25.58 feet to a point for the southwest corner of this;

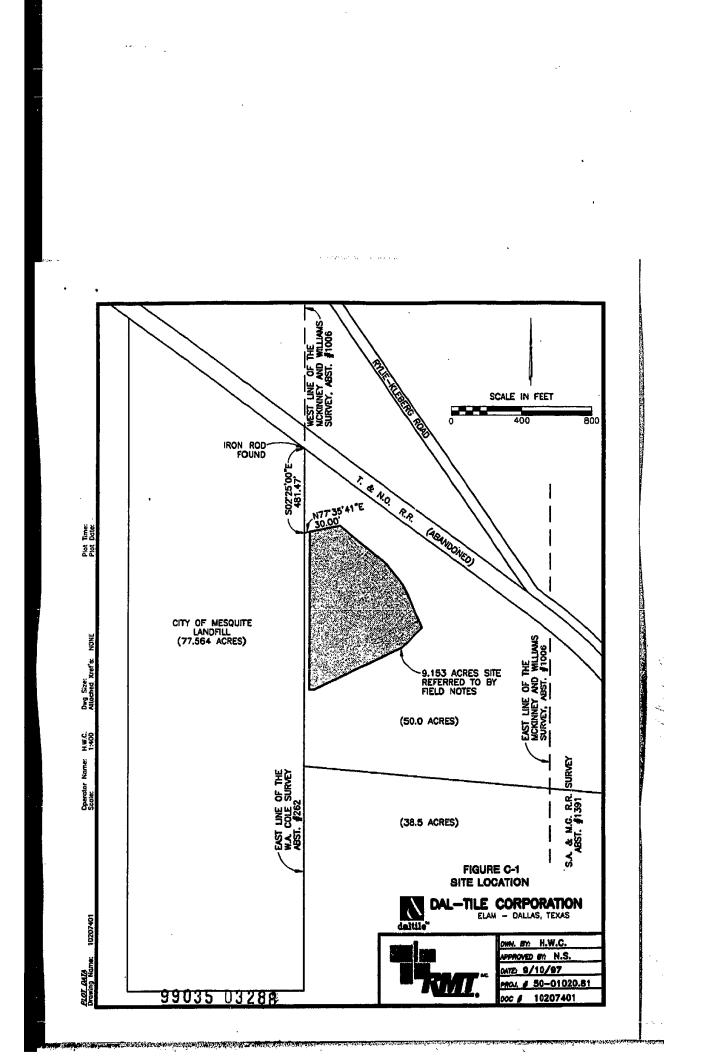
Thence N01°03'10"W along a fence, 900.05 feet to the point of beginning and containing 9.153 acres of land, more or less.

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Dal-Tile International Final April 1997





Being 9.153 acres of land, more or less, situated in the McKinney & Williams Survey, Abstract #1006, Dallas County, Texas, and being out of the G.S. Hunt 164.25-acre tract as recorded in Volume 925, page 111, Deed Records of Dallas County, Texas, and being more particularly described as follows:

Beginning at a point for the northwest corner of said 9.153 acres, said point bears S 2°25′00″E, 481.47 feet and N77°35′41″E, 30.00 feet from an iron rod found, said iron rod being the northwest corner of said Hunt tract and also being the intersection of the west line of McKinney & Williams Survey, Abstract #1006, and the southwest line of the T&NO Railroad;

Thence N77°35'41"E along a fence, 176.77 feet to a point for the northeast corner of this;

Thence S50°59'47"E along a fence, 119.93 feet to a point;

Thence S51°49'27"E along a fence, 232.94 feet to a point;

Thence 539°35'29"E along a fence, 145.45 feet to a point;

Thence S24°01'13"E along a fence, 247.41 feet to a point;

Thence S24°02'19"E along a fence, 20.28 feet to a point for the southeast corner of this;

Thence S43°50'24"W along a fence, 155.23 feet to a point;

Thence S63°25'05"W along a fence, 560.22 feet to a point;

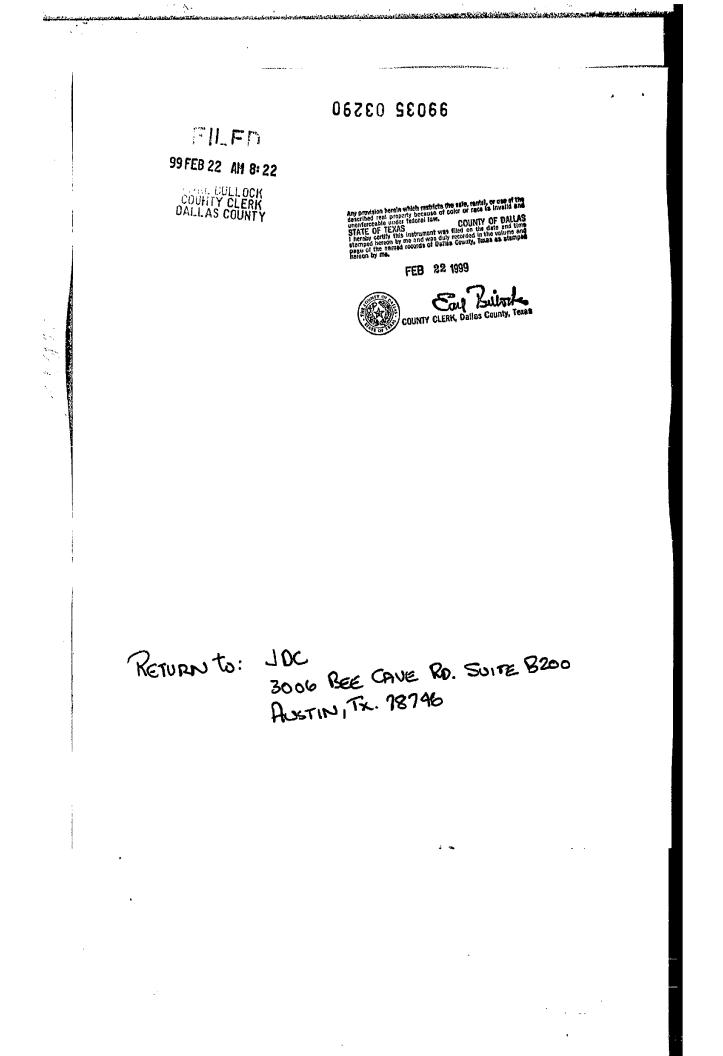
and the second second

Thence N88°09'46"W along a fence, 25.58 feet to a point for the southwest corner of this;

Thence N01°03'10"W along a fence, 900.05 feet to the point of beginning and containing 9.153 acres of land, more or less.

RMT, Inc. G:\WPAUS\PJT\01020\61\ELAM.DOC 99035 03289

Dal-Tile International February 1998



Appendix II.G(7) Additional Information Requirements Exposure Assessment

If a surface impoundment or landfill (including post-closure) is to be permitted, provide exposure information to accompany this application and in accordance with 30 TAC 305.50(a)(8) and 40 CFR 270.10(j). This information will be considered separately from the TCEQ application completeness determination.

During the Agreed Order and closure periods, a Risk Assessment and an Exposure Assessment were performed. These assessments comprise Section 4 of the Closure Plan, which was submitted to the TNRCC on February 22, 1995. The Exposure Assessment is provided in this appendix.

Information gathered during the remedial investigation was evaluated to identify current and potential future risk of exposure to hazards at the Elam landfill. The Exposure Assessment was conducted to identify any potential or complete exposure pathways, assuming no remedial action was performed.

The Exposure Assessment assumed industrial land use under present and future conditions and that a deed restriction would prevent residential use of the Site. Adjacent land use was assumed to be residential. No completed exposure pathways were identified as a result of the analysis. The following potential future pathways were identified:

- Potential future exposure of residents to impacts to drinking water; and
- Potential future exposure of trespassers or residents to wastes in the landfill.

The objective of the remedy that was proposed by Dal-Tile Corporation and accepted by the TNRCC was to eliminate and/or control release mechanisms and potential future exposures. Implementation of these remedies included stabilizing the lead waste, installing engineering controls at the landfill (i.e., slurry wall and landfill cap), deed recordation, inspection, landfill maintenance, and establishing a groundwater monitoring program.

The results of detection monitoring have documented that there has been no off-site migration of contaminants beyond the property boundary to offsite residential water wells.

CLOSURE PLAN FOR ELAM SITE

PREPARED FOR: DAL-TILE CORPORATION

FEBRUARY, 1995



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GULF COAST REGION OF

RMT/JONES & NEUSE, INC. — AUSTIN, TX 912 Capital of Texas Highway South - Suite 300 - 78746-5210 512/327-9840 - 512/327-6163 FAX

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Section 4

RISK ASSESSMENT/RISK REDUCTION EVALUATION OF PROPOSED REMEDIAL ALTERNATIVE

The proposed remedial action alternative for closure of the Elam site, which is presented in Section 6 of this Closure Plan, is evaluated herein to determine the ability and effectiveness of the selected remedy to achieve the risk reduction requirements of Standard Number 3. A risk reduction evaluation of the proposed remedial alternative for closure of the Elam site was conducted to determine if the remedy provided the required level of protection to human health and the environment. The risk assessment evaluation consisted of the following four steps:

- Data evaluation and hazard identification;
- Toxicity assessment;
- Exposure assessment; and,
- Risk evaluation of remedial alternatives.

The risk reduction evaluation, performed for the proposed remedial alternative, is discussed in the following sections of this report.

4.1 <u>Summary of Site Investigation Data - Hazard Identification</u>

The data collected during the site investigation was reviewed to identify the sources for environmental impacts and the constituents of concern at the Elam site, and to perform a preliminary assessment of potential release mechanisms, exposure routes and exposure points to include in the risk evaluation. This information, which is presented in detail in Section 2.0 of this report, is summarized in Table 4-1.

4.2 <u>Toxicity Assessment</u>

Information gathered during site investigations was examined to identify the inorganic and organic constituent(s) of concern in wastes and environmental media at the site. Metals analyses performed on soil samples collected from borings advanced into the pond and adjacent areas indicated that lead (1.0 to 52,300 mg/kg) and zinc (37.6 to 16,700 mg/kg) were the primary metal constituents in the wastes. Previous studies had indicated that no organic constituents were present in the wastes.

4-1

RMT/JN REPORT

Lead was identified as the constituent of concern for purposes of developing the risk assessment for the Elam site based on the toxicity and concentration of this metal detected in the wastes. The toxicity assessment of lead is included in the following paragraphs.

A lead speciation analysis was performed on a sample of the Dal-Tile waste by the Department of Geological Sciences, University of Colorado at Boulder using an electron microprobe. The microprobe analysis was performed to identify of the lead phases in the waste that may be soluble under environmental conditions. It was determined that the sample contained three different forms of lead as follows:

Compound	Percentage of Sample		
(Pb-Ca) CO ₃ •xH ₂ O	43		
PbCaZnAlSiO ₄	33		
PbSiO₃	24		

It was noted that none of the lead phases analyzed appeared to be altered or exhibited peripheral rinding. The solubility controls on lead bearing phases under natural environmental conditions are: 1) grain size (which determines the rate of dissolution), 2) protective rinding by alteration products, and 3) the solubility of the lead compounds. Of these three criteria, the solubility of the material is the rate limiting variable.

A histogram illustrating the size distribution of lead bearing grains in the waste sample is provided as Figure 4-1. The histogram indicates that lead bearing grains are concentrated in the small size fraction (generally less than 20 μ m), with 77 percent of the measured grains being less than 5 μ m in size along the main grain axis. Therefore, the particle size distribution places the waste in a highly soluble physical form. As previously mentioned, there are no protective rindings formed on any of the grains that would inhibit or prevent dissolution of the material, which also places the waste in a highly soluble physical form. The mineral form of lead carbonate (PbCO₃), in the absence of calcium substitution, has a solubility of 1.1 mg/L in water at 20°C, while PbSiO₃ was reported to be insoluble under similar conditions. This chemical insolubility is what prevents the Dal-Tile waste from leaching into ground water and surface water at the Elam site.

RMT/JN REPORT

DAL-TILE CORPORATION - ELAM SITE

It was concluded in the microprobe analysis that, although lead particle sizes in the sample were small (generally less than 5 μ m), and the grains were unprotected by alteration rinds, the lead phases should not be highly soluble in pH 7 water due to the form in which it was encountered. Further, it was predicted that the lead bearing solids in the sample would be relatively insoluble during leaching tests using environmental fluids such as rainwater, which represent the most accurate method of determining environmental lead solubility. However, it was stated that in the event that leaching was simulated with acidic fluids, such as the acetic acid used during the TCLP analysis, the lead concentrations in solution will be considerably greater and probably in excess of the permissible standard (5.0 mg/L). The conclusion of low waste leachability is supported by the fact that the ground water at the Elam site has never exhibited elevated levels of lead in any of the sampling events.

4.2.1 Lead Toxicity

Young children are the population sub-group at greatest risk due to the toxic effects of lead. The sensitive health endpoints for low-level lead exposures of children are neurobehavioral effects (mental development, nerve conduction velocities) and growth retardation (short gestational periods, lower birth rates). Adverse health effects have also been noted on IQ, hearing, kidney, heme synthesis, enzymatic activities and hemoglobin content of blood at low levels of exposure. Higher exposures can cause anemia, encephalopathy, and even death.

4.2.2 Risk Assessment for Lead Exposure

The U.S. Environmental Protection Agency (EPA) has not established a Reference Dose (RFD) or Carcinogenic Slope Factor (CSF) for lead, but a special health effects model, called the Uptake/Biokinetic (UBK) Model, is used to assess the risks of lead exposure. Using site-specific data, the UBK model will estimate the total lead uptake and estimate the resulting distribution of blood lead levels for children, which is a useful index of health risk.

The UBK model was not run for the Elam site since no completed exposure pathways were identified. In addition, the UBK model is limited to an evaluation of risks to children and is not sufficiently flexible to allow for the assessment of adult exposures or of exposure frequencies other than the default (350 days per year). These limitations did not allow for the analysis of future exposure pathways identified at the site and discussed in this Closure Plan.

4.3 Exposure Assessment

The information gathered during the remedial investigation was evaluated to identify current and potential future risks of exposure to hazards at the Elam site. The assessment was conducted to identify any completed exposure pathways and any potential exposure pathways assuming that no remedial action was performed at the site. This assessment is presented in the sections that follow.

4.3.1 Current and Future Conditions in the Absence of Remedial Action

This exposure assessment was conducted to identify any completed exposure pathways and any potential exposure pathways assuming that no remedial action was performed at the Elam site, and provides a baseline from which to estimate the reduction in risk provided by the remedial alternative proposed in Section 6 of this report. The assessment assumed industrial land use under present and future conditions, and that deed restrictions will prevent residential use of the site. Adjacent land use is assumed to be residential under present and future conditions, and residential exposures due to cross-media impacts and a trespasser exposure were considered. The exposure assessment is summarized in Table 4-2.

4.3.2 Exposure Pathways of Concern

No completed exposure pathways were identified during the analysis. The following potential future exposure pathways were identified to be of concern in the absence of remedial action:

- Potential future exposure of residents to impacts in drinking water (ingestion of impacted drinking water); and,
- Potential future exposure of trespassers or residents to wastes at the site (ingestion and inhalation of waste and particulates).

The elimination and control of these exposure pathways is the objective of the remedy proposed in Section 6 of this Closure Plan.

4.4 <u>Risk Reduction</u>

The objective of the proposed remedy is to eliminate and/or control release mechanisms and potential future exposures. The remedy was evaluated to qualitatively assess the degree of risk

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DAL-TILE CORPORATION - ELAM SITE

reduction and its ability to achieve the requirements of Standard Number 3. This evaluation is contained in the following sections of this Closure Plan.

4.4.1 Long-term Effectiveness and Permanence

The types of controls proposed in the remedy for the Elam site were evaluated for their long-term effectiveness and permanence. Implementation of these remedies will control or eliminate the potential future exposure pathways of concern which were identified in Section 4.3.2. As described in Section 6 of this report, the long-term effectiveness and permanence of the remedy is addressed by post-closure care of the facility which includes deed recordation, inspection and maintenance activities, and a ground-water detection monitoring program. The remedial actions are summarized in Table 4-3.

4.4.2 Reduction of Toxicity, Mobility or Volume

Reductions in toxicity and mobility of lead will be achieved through stabilization of the wastes disposed in the pond with a calcium oxide - magnesium oxide mixture. As described in Section 6 and noted in Appendix A, waste samples which previously had TC lead in excess of 200 mg/L were stabilized so that TC lead was at or below 0.1 mg/L.

4.4.3 Summary of Estimated Risk Reduction

The degree of risk reduction to human ingestion and inhalation exposures provided by the proposed remedy was evaluated by examining current EPA cleanup policy. The TSCA PCB spill cleanup policy rule (FR vol. 52, no. 6, April 2, 1987) states that the OHEA assessment concluded that the placement of a 10-inch cap of clean soil over PCB contaminated soils would reduce the level of oncogenic risk by an order of magnitude (i.e., would reduce the risk by a factor of 10). Similarly, if this logic is applied to the proposed remedial action at the Elam site, the level of risk is reduced by three orders of magnitude by the composite cap. A factor of 10 would be assigned for each of the composite cap components consisting of 12-inches of topsoil and vegetative cover, two feet of compacted clay and an FML to give a total reduction in risk of 1,000 fold. The slurry wall and stabilization process would provide similar reductions in risk, which results in a total of 100,000 fold reduction in oncogenic risk at the site. The degree of risk reduction for the proposed remedy was estimated by examining the effectiveness of the cap and slurry wall to reduce leachate generation and the effectiveness of the stabilization methods in reducing the mobility of lead. These actions appear to provide decreases in leachate generation (4 orders of magnitude) and reductions in the mobility of lead (1 order of magnitude) which greatly reduce the potential for the

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release of waste constituents to the environment and reduce the potential for exposure of receptors by a total of five orders of magnitude (i.e., 100,000 fold reduction in risk).

4.5 <u>Reductions in Leachate Generation</u>

Leachate generation was estimated using the Hydrogeologic Evaluation of Landfill Performance (HELP) computer model which was developed by the United States Department of the Army Waterways Experimental Station, Corps of Engineers, Environmental Laboratory. This model is used to estimate the amount of runoff, infiltration and leachate generation in open, partially closed or closed landfill units.

Version 2.05 of the HELP model was employed to estimate the amount of leachate generated in the open site versus the proposed capped site. The amount and rate of leachate leaving the system is a function of many factors, including: precipitation, evaporation, surface area, and the thicknesses and types of soils and wastes through which precipitation must percolate. The parameters used and the outcome of the HELP model are included in Appendix C. Under existing conditions, annual leachate generation is estimated at 4,220 cu. ft. per acre and implementation of the proposed remedy (engineering cap), estimates leachate generation as 0.002 cu. ft. per acre. Installation of the cap appears to provide in excess of a 1,000,000-fold decrease in leachate generation.

Table 4-1

Summary of Site Investigation Data and Conceptual Model for the Site

Components of Site Model	Variables	Assessment
	Surface Soils ^(1,2)	Source: Exists
		Remedy: Source can be treated and/or contained
Source	Ponds A, B and C	Source: Exists
		Remedy: Source can be removed, treated and/or contained
	Leaching of waste	Source: Potential for metals to leach from westes in the surface soils and ponds ^{12,3)}
	constituents	Remedy: Source can be treated and/or contained to eliminate this mechanism
Release Mechanisms	Spills of waste	Source: Mechanism may have existed as indicated by presence of metals in surface soils and in pond sediments at site
		Remedy: This mechanism can be eliminated and impacts to pond can be removed
	Windblown dust impacted with waste and waste constituents	Source: Vegetation, site location and site topography make this mechanism unlikely
		Remedy: This mechanism can be eliminated or effectively controlled
	Ingestion of	Source: Private wells exist, but currently there are no impacte in wells as indicated by previous sampling events
	impacted drinking water	Remedy: Potential future pathway which can be interrupted or eliminated through treatment and/or containment
Exposure	Direct contact with wastes	Source: Site is presently secured
Pathways		Remedy: This pathway can be eliminated and controlled through institutional and engineering controls
Desert	D	Source: Potential future receptors at downgradient private wells
Receptors	Residents	Remedy: Receptor can be protected against exposure by engineering controls

Notes:

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(1) The waste is a homogeneous wastewater treatment sludge.

(2) Known waste composition includes lead (1.0 to >50,000 mg/kg) and zinc (1.0 to >18,000 mg/kg). Total lead concentrations exceeded the residential and industrial SAI-MSC for lead in soil.

[3] Toxicity characteristic analyses of the weste indicated leachable lead ranging from 8DL to >200 mg/L.

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Table 4-2

Exposure Assessment

Exposure Pathway	Current Exposure		Potential Future Exposure	
Trespasser - Incidental ingestion of waste materials	None:	The site is currently secured to prevent access.	Yes:	There is the potential for exposure if institutional controls are not maintained.
Trespasser/Residential - Inhalation of dust containing waste and waste constituents	None:	Vegetative cover, location and topography make dust generation unlikely.	Yes:	There is the potential for exposure if institutional controls are not mainteined.
Residential - Ingestion of impacted drinking water	None:	Groundwater impacts were not detected in private supply wells:	Yes:	There is the potential for weste constituents to leach into the groundwater.
Trespasser - Ingestion of impacted surficial soil	None:	The site is secured to prevent access,	Yes:	There is the potential for westee and waste constituents to be released from the site.

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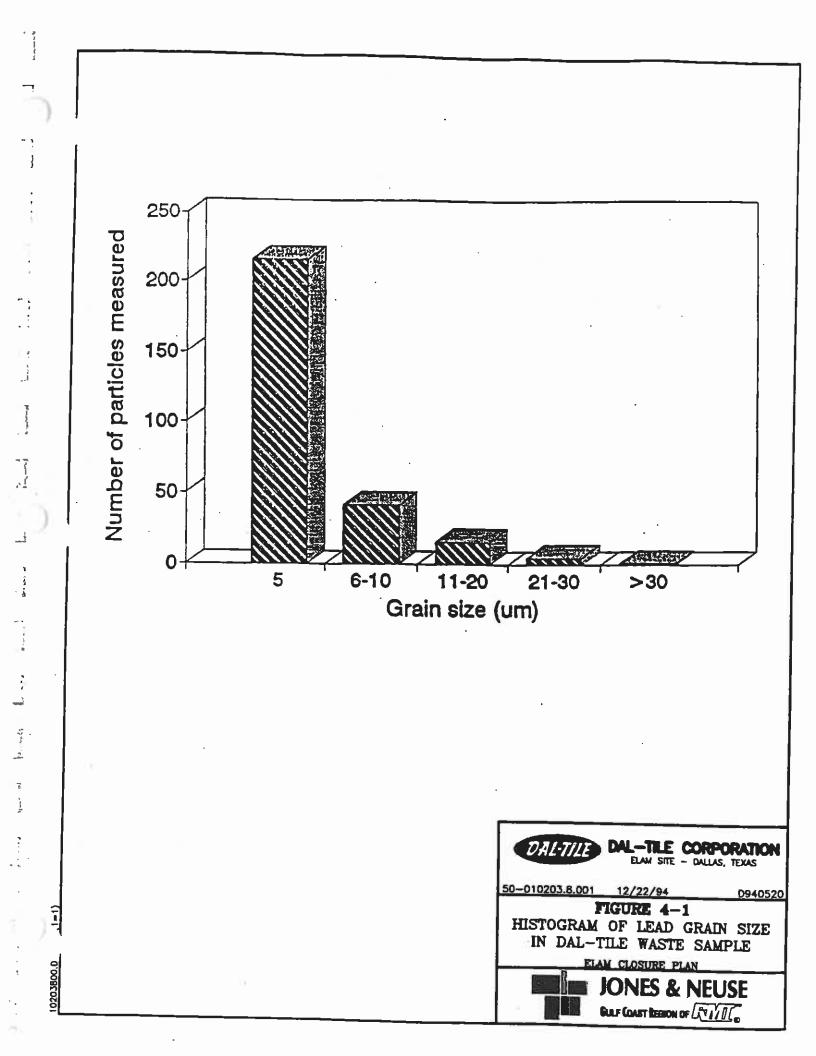
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Table 4-3

Remedies proposed for the Elam Site

Remedy	Type of Control	Affected Release Mechanism	Affected Exposure Pathway	
Engineered Cap	engineering	leaching, spille	Ingestion of impacted drinking water. Ingestion and inhalation of waste particles.	
Siurry Wall	engineering	leaching	Ingestion of impacted drinking water.	
Stabilization	engineering	leaching	Ingestion of impacted drinking water. Ingestion or inhalation of waste particles.	
Perimeter Fencing	institutional	NA	Ingestion and inhalation of waste particles.	



III. Facility Management

Provide all Part B responsive information in Appendix III. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

- A. Compliance History and Applicant Experience
 - 1. Provide listings of all solid waste management sites in Texas owned, operated, or controlled by the applicant as required by 30 TAC 305.50(a)(2).
 - 2. For a new commercial hazardous waste management facility, provide a summary of the applicant's experience in hazardous waste management as required by 30 TAC 305.50(a)(12)(F).

RESERVED

- B. Personnel Training Plan RESERVED
- C. Security

Describe how the facility complies with the security requirements of 40 CFR 264.14 or submit a justification demonstrating the reasons for requesting a waiver of these requirements.

D. Inspection Schedule

Describe summary of inspection schedule and Table III.D in Appendix III.D in accordance with instructions below.

Provide an inspection schedule summary for the facility which reflects the requirements of 40 CFR 264.15(b), 264.33 and, where applicable, the specific requirements in 40 CFR 264.174, 264.193(i), 264.195, 264.226, 264.254, 264.273, 264.303, 264.347, 264.552, 264.574, 264.602, 264.1033(f), 264.1034, 264.1052, 264.1053(e), 264.1057, 264.1058, 264.1063, 264.1084, 264.1085, 264.1086, 264.1088, 264.1101(c)(4) and 270.14(b)(5). The inspection schedule should reflect the requirements described below. The schedule should encompass each type of hazardous waste management (HWM) unit (i.e., facility component) and its inspection requirements. For incorporation into a permit, complete Table III.D. - Inspection Schedule for all units to be permitted.

The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or which may pose a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

The owner or operator must develop and follow a written schedule for inspecting other basic elements such as monitoring equipment, safety and emergency equipment, security devices, the presence of liquids in leak detection systems, where installed, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

If the owner or operator of a facility which contains a waste pile wishes to pursue an exemption from the groundwater monitoring requirements for that waste management unit, the inspection schedule must include examination of the base for cracking, deterioration, or other conditions that may result in leaks. The frequency of inspection

must be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation (e.g., waste type, rainfall, loading rates, and subsurface stability).

- E. Contingency Plan RESERVED
- F. Emergency Response Plan RESERVED



Appendix III Facility Management

Appendix III.A

Compliance History and Applicant Experience

Provide listings of all solid waste management sites in Texas owned, operated, or controlled by the applicant as required by 30 TAC 305.50(a)(2).

RN103778668 Conroe Manufacturing Facility, 10399 Silver Springs Rd, Conroe, Texas 77303 2373

RN102864477 Dal-Tile, 3000 Gray Street, Coleman, Texas 768340-3305 – Inactive.

RN100542976 Dal-Tile International, 12001 Railroad Drive, El Paso, Texas 79934-2607 – Active

RN104675814 Dal Tile Walton Landfill, 14550 Kleberg Rd., Dallas, Texas 75253-5503 – Closed in 2009

RN102829223 Dal-Tile Corporation, 200 S. Buckner Blvd. Dallas, Texas 75217-6517 – PST Inactive

- RN100216779 Dal-Tile Dallas Manufacturing, 7834 C.F. Hawn Freeway, Dallas, Texas 75217-6529 VCP Closed in 2008
- RN103858163 Dal-Tile Elam Landfill, 11928 Kleberg Rd. Dallas, Texas 75253-2739 Closed, post-closure care period.
- RN104378153 Dal-Tile Pleasant Run, 2000 E. Pleasant Run Rd. Wilmer, Texas 75172 Closed; post-closure care period.
- RN101870236 Master Halco, 8008 CF Hawn Freeway, Dallas, Texas 75217-6533- VCP No. 1965 Closed January 17, 2008.

Appendix III.C

Security

Describe how the facility complies with the security requirements of 40 CFR 264.14 or submit a justification demonstrating the reasons for requesting a waiver of these requirements.

The site is completely enclosed by an 8-foot high, man-made, chain-link fence with three strands of barbed wire at the top. There is one access gate located adjacent to Pleasant Run Road, which is locked at all times. Dal-Tile contracts independent maintenance personnel who are responsible for maintaining the integrity of the fence and gate. Inspections are performed semi-annually to ensure that the structural integrity of the security system is not compromised by vandalism, natural damage, or normal wear and tear. Signs are clearly posted on the fence indicating that trespassing on the property is prohibited. Appendix III.D Inspection Schedule Permit No. 50377

Table III.D- Inspection Schedule

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
Final Cover System	Minor Cap Settlement (<6 inches over a 20 ft2 area)	Semi-Annually
	Major Cap Settlement (>6 inches over a 20 ft2 area)	Semi-Annually
	Ponded Water > 100 ft2 and 3 inches deep	Semi-Annually
	Erosion Rills > 6 inches long and 2 inches deep	Semi-Annually
	Sloughing of Slopes	Semi-Annually
	Burrowing Animals	Semi-Annually
	Bare Spot > 50 ft2	Semi-Annually
	Grass Taller than 4 inches high	Semi-Annually
Run-On/Runoff Control Systems	Erosion of Division Berms or Sloughing Slopes	Semi-Annually
	Obstacles within Ditches	Semi-Annually
	Bare Spot > 50 ft2	Semi-Annually
	Damage due to Off-Road Vehicles or Vandalism	Semi-Annually
Groundwater Monitoring Systems	Damage to Lock System	Semi-Annually

Permit No. 50377

Permittee: Dal-Tile Corporation

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
	Cap Damaged or Missing	Semi-Annually
	Damage to Well Casing	Semi-Annually
	Crack in Concrete Pad > ¼ inch long	Semi-Annually
	Damaged or Missing Protective Well Barriers	Semi-Annually
	Clogged Well Screen or Silting of Wells	Semi-Annually
General Facility	Missing Monument	Semi-Annually
	Damaged Monument	Semi-Annually
	Fence and/or Gate Damage	Semi-Annually
	Missing Gate Lock	Semi-Annually
	Vandalism to Warning Signs	Semi-Annually

IV. Wastes and Waste Analysis

Provide all Part B responsive information in Appendix IV. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> <u>and Instructions</u>.

- A. Waste Management Information RESERVED
- B. Waste Managed In Permitted Units

For all hazardous waste management facilities and for inclusion into a permit, complete Table IV.B. - Wastes Managed In Permitted Units for each waste and debris to be managed in a permitted unit. Provide a description, EPA waste codes, and TCEQ waste form codes and classification codes. Guidelines for the Classification & Coding of Industrial Wastes and Hazardous Wastes, TCEQ publication RG-22, contains guidance for how to properly classify and code industrial waste and hazardous waste in accordance with 30 TAC 335.501-335.515 (Subchapter R).

Applicants need not specify the complete 8-digit waste code formulas for their wastes but must include the 3-digit form codes and 1-digit classification codes. This allows the applicant to specify major categories of wastes in an overall manner without having to list all the specific waste streams as generated.

- C. Sampling and Analytical Methods RESERVED
- D. Waste Analysis Plan RESERVED

Appendix IV Waste and Waste Analysis Appendix IV.B Waste Managed in Permitted Units

Permit No. 50377

Permittee: Dal-Tile Corporation

Page 1 of 1

Table IV.B. - Wastes Managed In Permitted Units

No.	Waste	EPA Hazardous Waste Numbers	TCEQ Waste Form Codes and Classification Codes
1	Tile glazing materials	D008	Not applicable
	1	Remove Last Row	Add Row

V. Engineering Reports

Provide all Part B responsive information in Appendix V. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

For multiple units provide an include all Part B responsive information in a separate Appendix for each unit.

The engineering report represents the conceptual basis for the storage, processing, or disposal units at the hazardous waste management (HWM) facility. It should include calculations and other such engineering information as may be necessary to follow the logical development of the facility design. Plans and specifications are an integral part of the report. They should include construction procedures, materials specifications, dimensions, design capacities relative to the volume of wastes (as appropriate), and the information required by 40 CFR 270.14(b)(8), 270.14(b)(10). Since these reports may be incorporated into any issued permit, the report should not include trade names, manufacturers, or vendors of specific materials, equipment, or services unless such information is critical to the technical adequacy of the material. Technical specifications and required performance standards are sufficient to conduct a technical review. For landfills, surface impoundments, and waste piles, a Construction Quality Assurance Plan, which considers the guidance in EPA publication 530-SW-85-014, Minimum Technology Guidance on Double Liner Systems for Landfills and Surface Impoundments; Design, Construction, and Operation, and/or EPA/600/R-93/182, Quality Assurance And Quality Control For Waste Containment Facilities, should be submitted.

For facilities which will receive wastes from off-site sources, the engineering report must also contain information on the units which will manage these off-site wastes in accordance with 30 TAC 335.45(a).

Certain ancillary components or appurtenant devices must be addressed in the Part B application. These include but are not limited to sumps, pipelines, ditches, and canals. The technical information and the level of detail required will vary with the nature, scope, and location of the ancillary component. At a minimum they should be included in descriptions of piping and process flow. More information may be required. A single area containing a large number of ancillary components or a remote appurtenant device in an unusually sensitive location may warrant some specific permit requirements. All ancillary components must be included in calculating closure cost estimates.

In each of the unit-specific sections, describe precautions taken to prevent accidental commingling of incompatible wastes. If reactive or ignitable wastes are to be managed, or if incompatible wastes are deliberately commingled, provide information to ensure that precautions are taken to avoid danger due to:

- · generation of extreme heat or pressure, fire, explosion, or violent reaction;
- production of uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
- production of uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
- · damaging the structural integrity of the device or facility containing the waste; or
- \cdot threatening human health or the environment by any other means.

Comprehensive consideration should be given to ensure that the facility is designed in accordance with good public health and hazardous waste management practices. The application will be evaluated primarily for the aspects of design covered by the regulations. Nothing in any approval is intended to relieve the facility owner or operator of any liabilities or responsibilities with respect to the design, construction, or operation of the project.

- A. General Engineering Reports
 - 1. General Information

Complete Table V.A. - Facility Waste Management Handling Units listing all past, current or proposed units. *[Indicate units' status as* Active, Closed, Inactive *(built but not yet managing waste)*, Proposed *(not yet built)*, Never Built, Transferred, or Post-Closure. *Indicate appropriate units for Capacity information.]* Note for renewals and modifications involving adding or dropping units from the permit: List all TCEQ Permit Unit Numbers that have been assigned previously as in a current permit Attachment D -Authorized Facility Units table and do not reuse or reassign permit numbers for units that have been replaced, closed, removed from the permit, or transferred to other ownership. All Notice of Registration (NOR) Numbers must match the State of Texas Environmental Electronic Reporting System (STEERS) and may not be reused for replacement units.

Provide an overall plan view of the entire facility. Identify each hazardous or industrial solid waste management unit (container storage area, tank, incinerator, etc.) to be permitted in relation to its location and the type of waste managed in that unit. Also provide a plan view at an appropriate scale to clearly show the location of all hazardous waste management units to be permitted on one or more $8 \ 1/2" \times 14"$ sheets. Indicate on this plan view how the design or operation provides for buffer zones or waste segregation as appropriate for incompatible, ignitable, or reactive wastes.

Submit a topographic map or maps of the facility which clearly shows the information specified in 40 CFR 270.14(b)(19), 270.14(c)(3), and 270.14(d)(1)(i) (for large HWM facilities, the TCEQ will allow the use of other scales on a caseby-case basis). Please note that the term "facility" includes all contiguous land, structures, other appurtenances, and improvements on the land for storing, processing, or disposing of hazardous and industrial solid waste.

2. Features to Mitigate Unsuitable Site Characteristics

For all new hazardous waste management storage and/or processing facilities or areal expansions of existing hazardous waste management storage and/or processing facilities, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(a)(1) and (a)(3) through (9).

3. Construction Schedules - RESERVED

- 4. Provide detailed plans and specifications which when, accompanied by the engineering report, will be sufficiently detailed and complete to allow the Executive Director to ascertain whether the facility will be constructed and operated in compliance with all pertinent permitting requirements. Engineering plans and specifications must be prepared under the supervision of and sealed by a licensed Professional Engineer, with current license, along with the Registered Engineering Firm's name and Registration Number as required by the Texas Engineering Practice Act. For some facilities, plans in the form of a standard piping and instrumentation diagram will be sufficient. Overall dimensions and materials of construction must be shown.
- B. Container Storage Areas -RESERVED
- C. Tanks and Tank Systems -RESERVED
- D. Surface Impoundments RESERVED
- E. Waste Piles -RESERVED
- F. Land Treatment Units -RESERVED
- G. Landfills

For Closed Landfills

1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.

2. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.

3. Complete Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill.

4. Complete Table V.G.4. - Landfill Leachate Collection System used for the landfill.

Provide an engineering report which includes all of the information specified in 30 TAC 305.50(a)(5), (6), (9), (10), and (12), 335.173, 40 CFR 264.19, 264.300, 264.301, 264.302, 264.303(a), 264.304, 264.309, 264.312, 264.313, 264.315-264.317, and applicable requirements of 270.21. The text of the report should be written to supplement engineering plans, specifications, and test results necessary to provide a detailed description of how the landfill will comply with these standards.

For landfills at a new hazardous waste management facility or which are part of an areal expansion of an existing hazardous waste management facility, include in the engineering report design, construction, and operational information specified in 30 TAC 335.204(e).

For all landfills, include in the report the following information.

- 1. Complete Table V.G.1 Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.
- 2. If a landfill will manage ignitable or reactive waste, as indicated on Table V.G.1,

describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.312.

- 3. If a landfill will manage incompatible waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.313.
- 4. If a landfill will manage F020, F021, F022, F023, F026, and F027 waste, as indicated on Table V.G.1, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.317.
- 5. Describe the landfill. A plan view and cross-section of the landfill should be included with the engineering report. As appropriate, detailed plan, elevation, cross-section of landfill containment facilities shall be included with the report.
- 6. Containment System

We suggest that the applicant use available recognized guidance documents, such as EPA publication 530-SW-85-014, which provide design guidance for liner systems. The applicant is strongly encouraged to test each synthetic liner after installation by an electrical leak location test, such as the electric field method described in EPA Technical Guidance Document EPA/600/R-93/182, Quality Assurance and Quality Control for Waste Containment Facilities, or an equivalent method, such as those found in ASTM publications, and approved by the Executive Director. Construction above the liner may not proceed until any detected leaks are sealed.

- a. Complete Table V.G.3. Landfill Liner System and specify the type of liner used for the landfill.
- b. In the engineering report, describe the design, installation, construction, and operation of the liner and leachate collection system. The description must demonstrate that the liner system will prevent discharge to the land, groundwater, and surface water. The following analyses should be included as attachments to the engineering report (A QAPP should be included in the report to ensure that each analysis is performed appropriately):

For artificial liners:

- (1) Seaming method
- (2) Surface preparation method
- (3) Tensile Strength
- (4) Impact Resistance
- (5) Compatibility Demonstration
- (6) Foundation Design (including Settlement Potential, Bearing Capacity and Stability, and Potential for Bottom Heave Blow-out)

For soil liners:

- (7) Waste Migration Analysis (based on head, porosity, and permeability) for the most mobile and least attenuated waste constituents
- (8) Atterberg Limits, % passing a #200 sieve, and Permeability
- (9) Moisture Content
- (10) Standard Proctor Density, Compaction Data

For Leachate Collection System

For incorporation into the permit, complete Table V.G.4. - Landfill Leachate Collection System and Table V.G.5 - Landfill Soil Specifications used for the landfill.

- (11) Capacity of the system:
 - (a) rate of leachate removal
 - (b) capacity of sumps
 - (c) thickness of mounding and maximum hydraulic head
- (12) Pipe Material and Strength
- (13) Pipe Network Spacing and Grading
- (14) Collection Sump(s) Material and Strength
- (15) Drainage Media Specifications and Performance
- (16) Analyses showing that pipe and pipe perforation size will prevent clogging and allow free liquid access to the pipe.
- (17) Compatibility Demonstration
- c. State whether the liner system components are chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.
- d. Provide a quality assurance/quality control plan for all components to demonstrate that all components will be properly installed and will perform to design specifications.
- e. Whether the leachate collection components are chemically resistant to the waste and how this resistance was determined. Attach any tests or documentation to the engineering report.
- f. Provide a Response Action Plan that proposes actions to be taken in the case of exceedance of the landfill Action Leakage Rate. At a minimum the Response Action Plan must include the requirements of 40 CFR 264.304.
- 7. For Dikes:
 - a. Slope Stability Analysis;
 - b. Hydrostatic and Hydrodynamic Analyses
 - c. Ability to withstand scouring from leaking liner.
- 8. Landfills that receive waste on or after May 8, 1985 (or for newly-regulated units, the effective date of the new RCRA regulation) into new units and/or lateral expansions or replacements of existing units must meet the minimum technological requirements of the Hazardous and Solid Waste Amendments of 1984, unless an appropriate waiver is granted by the Commission. The owner or operator of each new landfill unit for which the construction commences after January 29, 1992, or each lateral expansion of an existing landfill unit where construction commences after July 29, 1992, or replacement of an existing landfill unit that commence reuse after July 29, 1992 must install two or more liners and leachate collection and removal system unless commission approves alternate design or operating practices. Plans and specifications for both new and existing landfills must demonstrate conformity with 30 TAC 335.173 and 40 CFR 264.301(c).
- 9. Site Development Plan

Describe the methods used to deposit waste in the landfill. This description

should include rate of waste deposition, waste segregation, average lift size, maximum lift, average cell or trench size, maximum cell or trench size, and other information necessary to depict how the landfill will be developed. Do not include liner or leachate collection system information, closure information, or handling of special wastes. This will be included elsewhere in the report.

10. Run-on Control [30 TAC 335.173(g)]

The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 100-year, 24-hour storm.

In the engineering report, include the following analyses:

- a. Run-on volume and depth calculations from the peak discharge of the 100year, 24-hour storm; and
- b. For ditches on the plant property, back-water calculations.

Collection and holding facilities (e.g., tanks or basins) associated with the run-on control system must be emptied or otherwise managed expeditiously. [30 TAC 335.173(i)]

11. Run-off Control [30 TAC 335.173(h)]

The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control the water volume resulting from a 100-year, 24-hour storm.

Include all analyses used to calculate run-off volumes.

Collection and holding facilities (e.g., tanks or basins) associated with run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system. [30 TAC 335.173(i)]

12. Wind Dispersal [30 TAC 335.173(j)]

If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the landfill to minimize wind dispersal. Based upon the characteristics of the material to be landfilled describe the likelihood of wind dispersal occurring. Describe in detail any method and/or control mechanism used to prevent wind dispersal.

13. Liquid Waste

If liquid waste or waste containing free liquids is to be stabilized and then placed in the landfill, the procedures used to stabilize the waste must be described in the engineering report. The waste must be treated prior to landfilling using a treatment technology that does not solely involve the use of a material that functions primarily as a sorbent. Provide supporting documentation to verify that an appropriate stabilization procedure is used to comply with 30 TAC 335.175.

- 14. The Commission may approve an alternate design or operating practice for a landfill if the owner or operator demonstrates that such design or operating practices, together with location characteristics [40 CFR 264.301(d)]:
 - a. Will prevent the migration of hazardous constituents into the groundwater or surface water at least as effectively as the liners and leachate collection

and removal system; and

- b. Will allow detection leaks of hazardous constituents through the top liner at least as effectively.
- 15. Exemption from Double-Liner Requirements for Monofills [264.301(e)]

Owners or operators of hazardous waste monofills will be exempted from the double-liner requirements if the Commission finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics are at least as effective as a double liner in preventing migration of hazardous constituents to the groundwater or surface water. If an exemption is sought, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the groundwater or surface water at any future time.

16. Above-grade Benefits

The engineering report must evaluate the benefits, if any, associated with the construction of the landfill above existing grade at the proposed site, the costs associated with the above-grade construction, and the potential adverse effects, if any, which would be associated with the above-grade construction. [TX. Health and Safety Code 361.108]

17. Feasibility Study - Applicable to New Hazardous Waste Landfills or Areal Expansions of Existing Hazardous Waste Landfill

In accordance with the Health and Safety Code Section 361.106 and 30 TAC Section 335.205(a)(2), provide a feasibility study demonstrating that there is no practical, economic, and feasible alternative that is reasonably available to manage the types and classes of hazardous wastes to be disposed of at a proposed new hazardous waste landfill or the areal expansion of an existing hazardous waste landfill.

- H. Incinerators -RESERVED
- I. Boilers and Industrial Furnaces -RESERVED
- J. Drip Pads -RESERVED
- K. Miscellaneous Units -RESERVED
- L. Containment Buildings -RESERVED

Appendix V Engineering Report

The engineering report for the Elam Landfill was previously submitted to the TCEQ with the Closure Plan on February 22, 1995 and in the Closure Completion Report which was provided to the TNRCC on April 24, 1997. A complete copy of the Closure Report is provided on the compact disc provided in Part B Attachment V. Selected figures from the Closure Report are also provided in Part B Attachment V Compact Disk containing the Closure Report.

Appendix V.A

General Engineering Reports

General Information

Complete Table V.A. – Facility Waste Management Handling Units listing all past, current or proposed units. *[Indicate units' status as* Active, Closed, Inactive *(built but not yet managing waste)*, Proposed *(not yet built)*, Never Built, Transferred, or Post-Closure. *Indicate appropriate units for Capacity information.]* Note for renewals and modifications involving adding or dropping units from the permit: List all TCEQ Permit Unit Numbers that have been assigned previously as in a current permit Attachment D –Authorized Facility Units table and do not reuse or reassign permit numbers for units that have been replaced, closed, removed from the permit, or transferred to other ownership. All Notice of Registration (NOR) Numbers must match the State of Texas Environmental Electronic Reporting System (STEERS) and may not be reused for replacement units.

Provide an overall plan view of the entire facility. Identify each hazardous or industrial solid waste management unit (container storage area, tank, incinerator, etc.) to be permitted in relation to its location and the type of waste managed in that unit. Also provide a plan view at an appropriate scale to clearly show the location of all hazardous waste management units to be permitted on one or more 8 1/2" x 14" sheets. Indicate on this plan view how the design or operation provides for buffer zones or waste segregation as appropriate for incompatible, ignitable, or reactive wastes.

An overall plan view of the Site is included in this appendix.

Submit a topographic map or maps of the facility which clearly shows the information specified in 40 CFR 270.14(b)(19), 270.14(c)(3), and 270.14(d)(1)(i) (for large HWM facilities, the TCEQ will allow the use of other scales on a case-by-case basis). Please note that the term "facility" includes all contiguous land, structures, other appurtenances, and improvements on the land for storing, processing, or disposing of hazardous and industrial solid waste.

A topographic map of the Site is provided in this appendix.

Permittee: Dal-Tile Corporation

Page 1 of 1

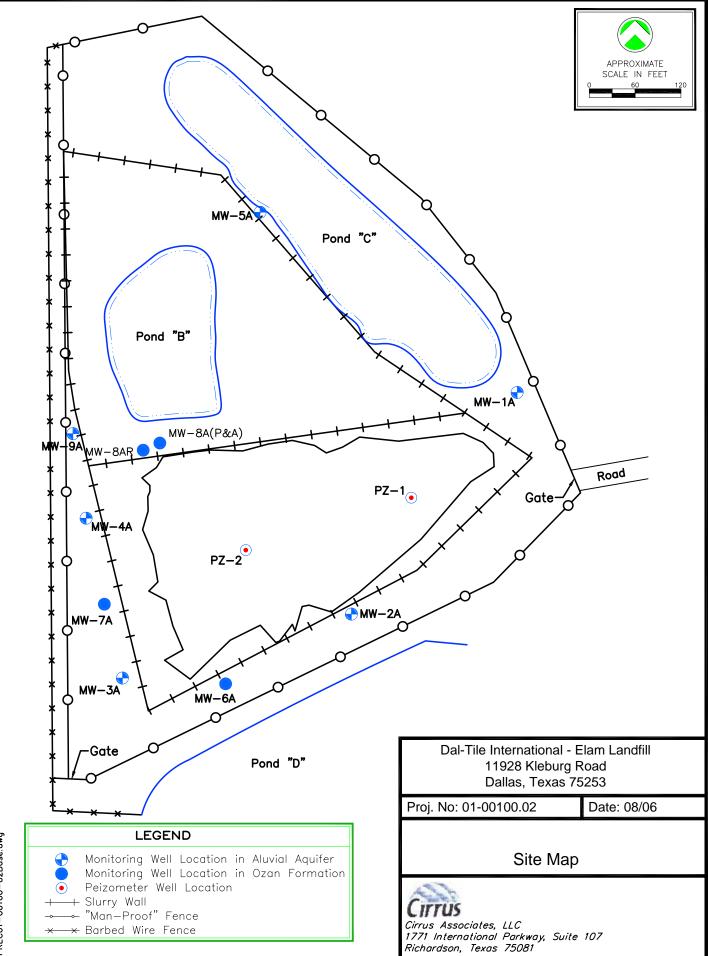
Table V.A Facility Waste Management Hand	ling Units
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TCEQ Permit Unit No. ¹	Unit Name	NOR No. ¹	Unit Description ³	Capacity	Unit Status ²
Not applicable					
				Remove Last Row	Add Row

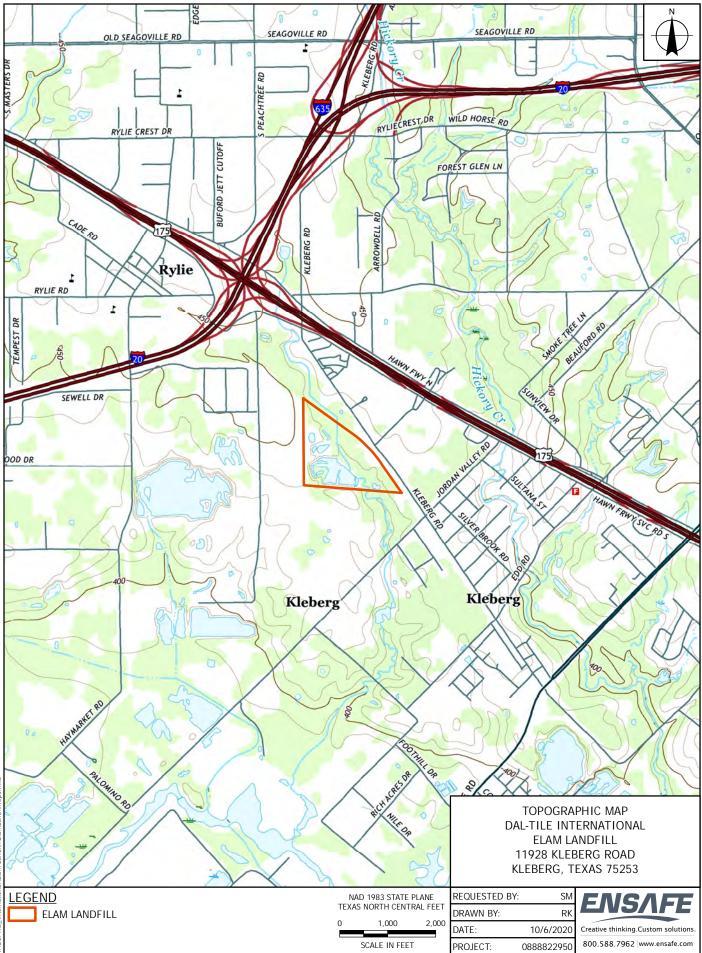
1. Permitted Unit No. and NOR No. cannot be reassigned to new units or used more than once and all units that were in the Attachment D of a previously issued permit must be listed.

2. Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.

3. If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column of Table V.A.



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:\Dal-Tile_International\Elam Landfill\ElamLan

Source: U.S. Geological Survey. Hutchins, Seagoville Quadrangles, Texas [Map]. Photorevised 2019. 1:24,000. 7.5 Minute Series.

Appendix V.G Landfills The Elam landfill was previously constructed and closed in accordance with plans and specifications approved by the TCEQ and predecessor agencies through the terms of the Agreed Order. The land fill has been in the post-closure detection monitoring for 20 years. Relevant site maps and engineering drawings are in Appendix V.A. and this appendix, respectively.

Permittee: Dal-Tile Corporation

Permit Unit No.	Landfill	N.O.R. No.	Waste Nos. ¹	Rated Capacity	Dimensions ²	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage Ignitable, Reactive, Incompatible, or F020, F021, F022, F023, F026, and F027 Waste (state all that apply)			
1	Elam Landfill	001	Not applicable	54,509 cubic yards (81,750 tons)	580' x 300' x 30' (approxi mate)	See note below	Not applicable	D008			
						Remove I	Last Row	Add Row			

Table V.G.1. - Landfills

1from Table IV.B, first column

2Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

NOTE: Landfill is keyed into Ozan shale at 30', surrounded by slurry wall and covered with both HDPE and clay caps. Depth to groundwater inside landfill is approximately 30'. Depth to groundwater outside slurry wall and landfill is approximately 14'.

Permittee: Dal-Tile Corporation

Page 1 of 1

Table V.G.3. - Landfill Liner System

Permit Unit No.*	Landfill		Primary Liner		Secondary Liner			Clay Liner		
		Material	Permeability (cm/sec)	Thickness	Material	Permeability (cm/sec)	Thickness	Material	Permeability (cm/sec)	Thickness
Not applicable										
						Remove	Last Row	Add	Row	

* This number should match the Permit Unit No. given on Table V.G.1.

Permittee: Dal-Tile Corporation

Page 1 of 1

	Primary Leachate Collection System					Secondary Leachate Collection System				
Landfill	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material
Not applicable										
							Remove	Last Row	Add	Row

Table V.G.4. Landfill Leachate Collection System

TCEQ Part B Application TCEQ-00376

Revision No.0Revision Date11/30/2020

Permittee: Dal-Tile Corporation

Table V.G.5.- Landfill Material and Construction Specifications

Unit(s): Not applicable

Cell(s)

전 1일 <u>1</u>		
Property/Parameter	Proposed Sampling Frequency ¹	Test Methods
Property/Parameter	Proposed Sampling Frequency ¹	Test Methods
Property/Parameter	Proposed Sampling Frequency ¹	Test Methods
Property/Parameter	Proposed Sampling Frequency ¹	Test Methods
	Soil Liner Specifications	
Laboratory Standard Proctor Density and optimum moisture content ²		ASTM D-698 or an equivalent method
Field density and moisture control tests on constructed soil liners ³		ASTM D-1556, ASTM D-2167, ASTM, D-2922, or an equivalent method
Liquid Limit ⁴		ASTM D-4318 or an equivalent method
Plasticity Index ⁴		ASTM D-4318 or an equivalent method
Percent passing No. 200 sieve ⁵		ASTM D-1140 or an equivalent method
Soil liner thickness and slope determinations ⁶		Instrument Survey Measurements
Hydraulic conductivity measurements expressed in terms of cm/sec ⁷		ASTM-5093, ASTM 2434, Technical Guidance No. 3, or an equivalent method
Leachate C	ollection/Leak Detection Syste	em material
Non-syntheic material sieve analysis tests ⁸		
Hydraulic conductivity measurements expressed in units of cm/sec ⁹		ASTM-5093, ASTM 2434, Technical Guidance No. 3, or an equivalent method
Drainage layer thickness determinations ¹⁰		Instrument Survey Measurements or an equivalent method
Drainage pipe slope determinations ¹¹		Instrument Survey Measurements
	Remove Last Unit	Add Unit

1. NOTE: Construction testing frequencies must meet or exceed minimum requirements for the property or parameter tested listed below:

2. At a minimum frequency of at least one (1) representative sample from each 5000 cubic yards of soil.

3. At a minimum frequency of at least one (1) per every 10,000 square feet of each lift placed.

4. At a minimum frequency of at least one (1) per 1,000 cubic yards of soils for a minimum of two (2) tests per layer per cell.

5. At a minimum frequency of at least one of at least one (1) per every 1,000 cubic yards of soil and a minimum

TCEQ Part B Application TCEQ-00376

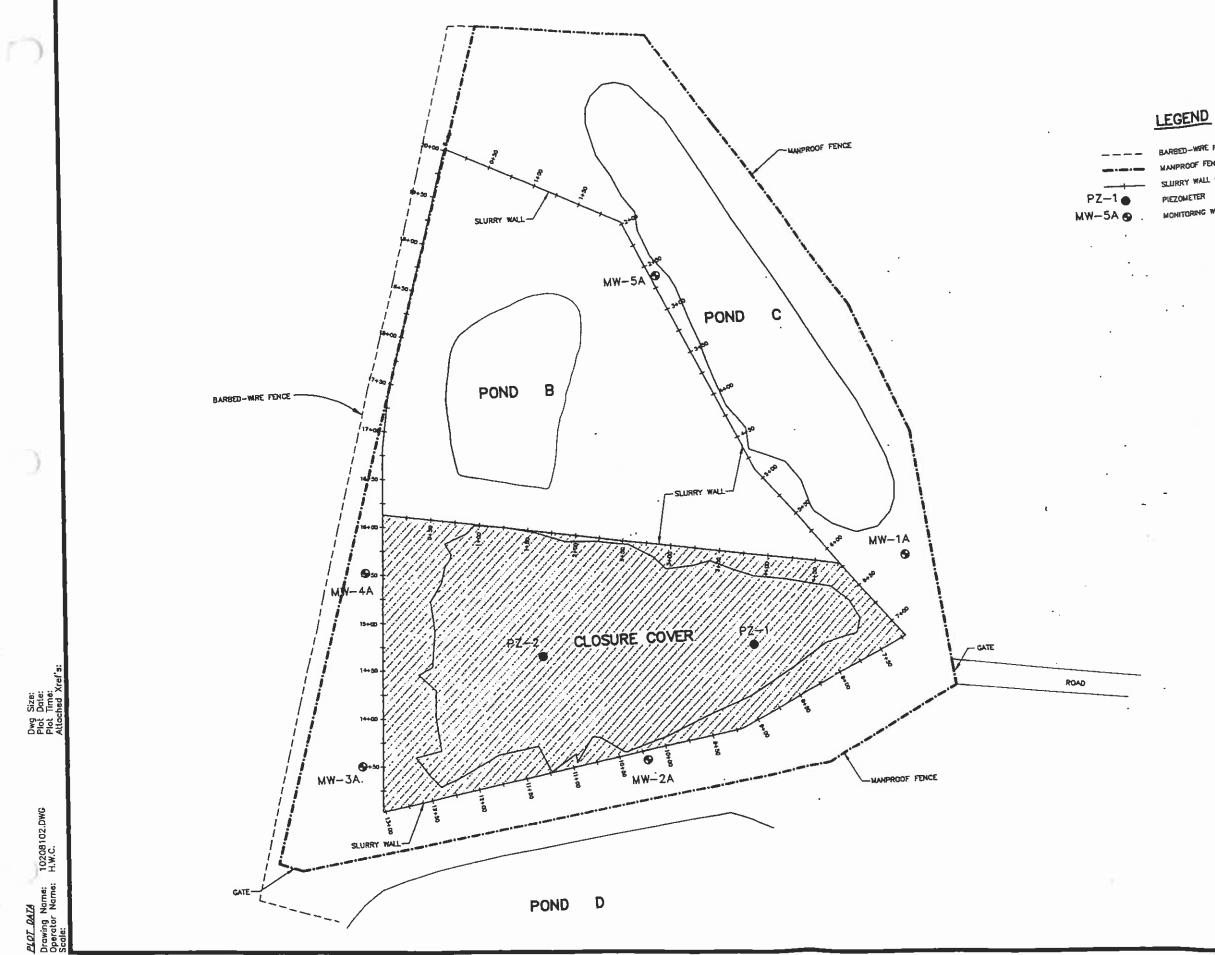
Revision No. 0

Revision Date 11/30/2020

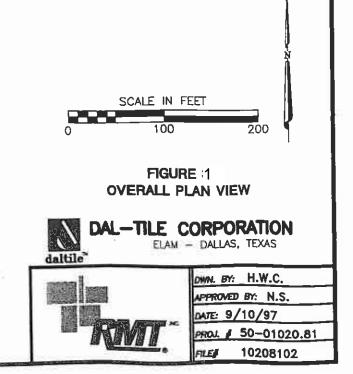
Permittee: Dal-Tile Corporation

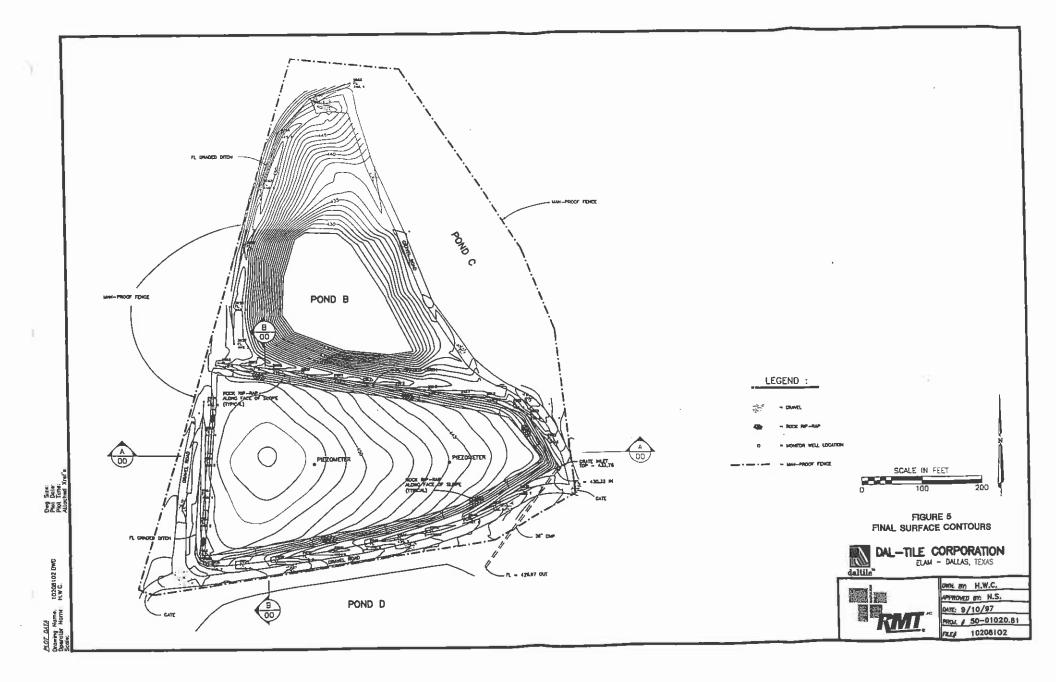
of two (2) testers per layer per cell

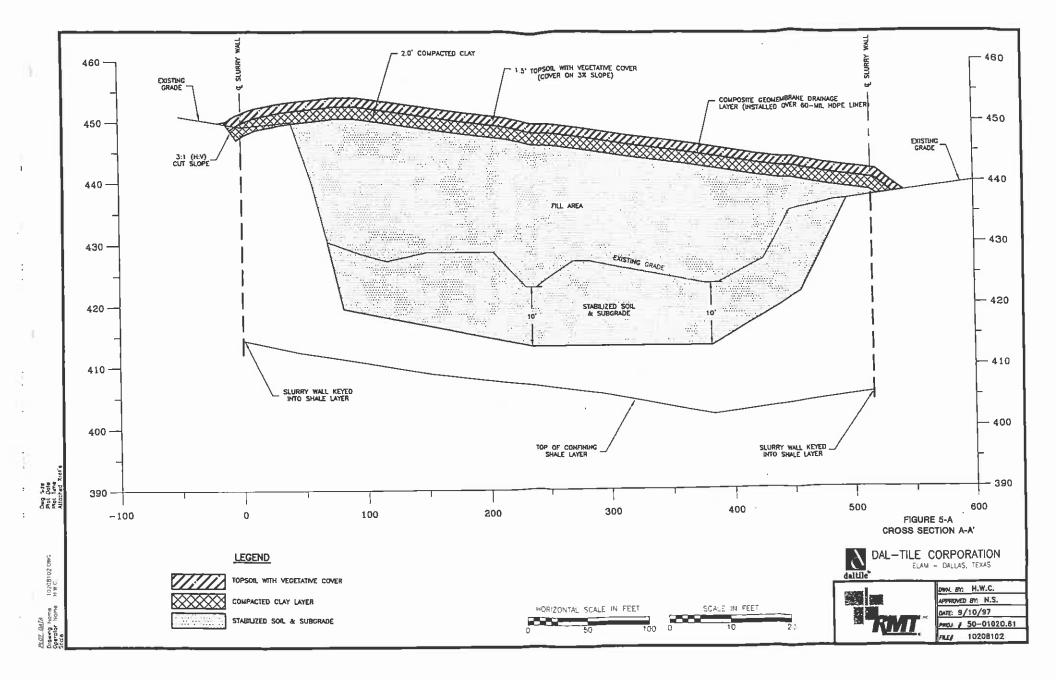
- 6. At a minimum frequency of at least one (1) determination by appropriate surveying techniques per every 10,000 square feet of soil liner installed.
- 7. At a minimum frequency of one per acre per lift.
- 8. At a minimum frequency of one (1) per 400 cubic yards
 9. At a minimum frequency of four (4) representative samples collected from each compacted drainage layer
- 10. At a minimum frequency of at least one (1) per 10,000 square feet of drainage layer installed.
- 11. At a minimum frequency one (1) per twenty (20) feet of drainage pipe

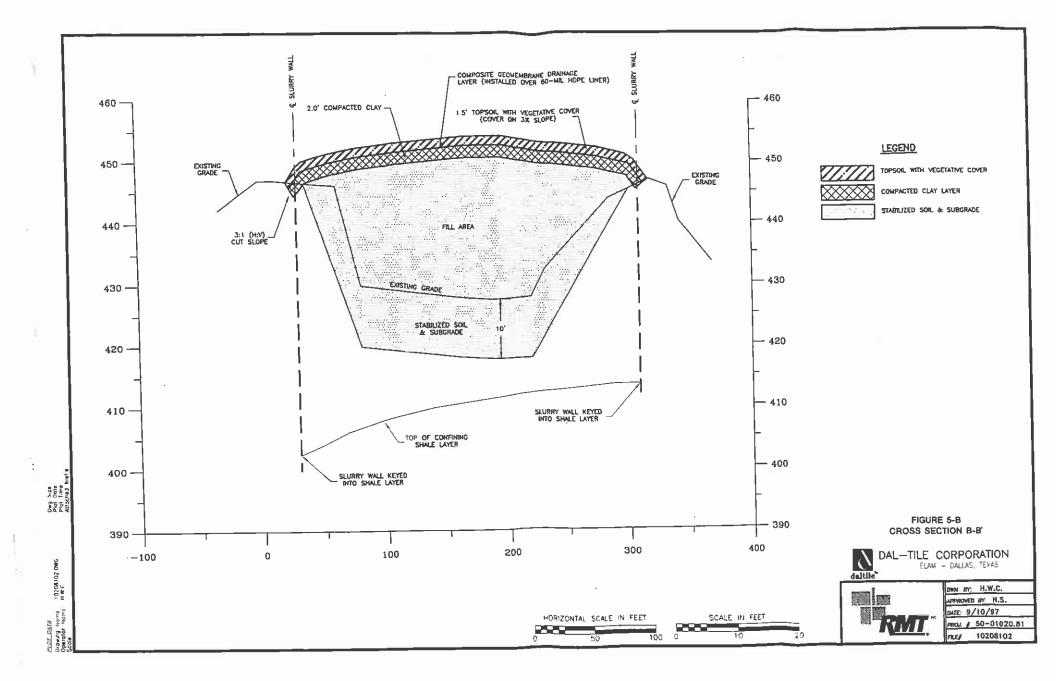


BARGED-WORE FENCE MANPROOF FENCE SLURRY WALL CENTERLINE MONITORING WELL









VI. Geology Report

Provide all Part B responsive information in Appendix VI. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

This portion of the application applies to owners or operators of new hazardous waste management facilities; areal and/or capacity expansions of existing hazardous waste management facilities; and existing industrial solid waste facilities that store, process or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles (except those waste piles that meet the requirements of Section V.E.10.b. of this application), and tanks or drip pads which require a contingent post-closure plan.

For a new Compliance Plan or modification/amendment to an existing Compliance Plan of Section XI of this application, submit a Geology Report which contains updated site geologic information derived from on-going investigations since submittal of the last Permit modification/amendment application.

Submit a Geology Report which includes at a minimum the following information. This report and all specifications, details, calculations/estimates and each original sheet of plans, drawings, maps, cross-sections, other graphics, such as limits of contamination maps, etc. or any other geoscientific work must be signed and sealed by a Professional Geoscientist licensed in the State of Texas under the Professional Geoscientists Practice Act.

- A. Geology and Topography
 - 1. Active Geologic Processes

Provide a description and interpretation of the active geologic processes in the vicinity of the facility. This description should include:

a. An identification of any faults (active or otherwise) in the area of the facility. The preparer should determine which Holocene sediments or man-made structures have been displaced. The report should contain a description of the investigation techniques used to identify faults and should assess the degree, if any, to which a particular fault increases the long-term potential for waste migration. The clearance required from active faults to ensure that liner systems will not be disrupted will be based upon site specific factors such as the zone of significant surface deformation, uncertainty in locating the fault, activity of the fault, and a distance to provide a reasonable margin of safety. These issues should be addressed when discussing the offset of an industrial solid waste facility unit from an active fault.

To satisfy the requirements of 30 TAC 305.50(a)(4)(D) and 305.50(a)(10)(E), for a proposed hazardous waste management facility or a modification or amendment of a permit which includes a capacity expansion of an existing hazardous waste management facility, submit the following.

- (1) A geologic literature review should be conducted, from which useful information on the possibility of faulting at a given site may be revealed. This includes, but is not limited to, maps of surface faults, subsurface structure, and field investigations by the author(s).
- (2) Descriptions and maps of faulting, fracturing, and lineations in the area are necessary. An aerial photo with lineation interpretations is suggested.

- (3) The maps and cross-sections are to be constructed using an amount of data necessary to adequately describe the geology of the area. Surface data, including data regarding known surface expressions, such as surface faults, gas seeps, lineations, etc., should be accounted for in the subsurface interpretations. A surface structure map should be prepared, incorporating all of the subsurface data as well as known surface features.
- (4) A minimum of two structural cross-sections, utilizing available oil field and/or water well electric log data, shall be made perpendicular to each other, crossing at the proposed surface unit location. These cross-sections should define geologic units, indicating especially Holocene sediments and Underground Sources of Drinking Water (USDWs), as well as lithology. The cross-sections should be constructed from the surface, down through the shallowest major structure or the base of the Holocene, whichever is deeper. These cross-sections need to be on a scale necessary to depict the local geology (3000' radius from the site location minimum). If needed to adequately describe the local geology, then a larger radius or deeper area of review may be necessary.
- (5) A minimum of two structural subsurface maps need to be prepared. One map should be made on the shallowest mappable subsurface marker, the other on a deeper horizon that shows the underlying major structure. Additional maps may be necessary.
- (6) Field surveillance will be necessary to check the area of the facility for surface features, such as lineations, and to investigate potential surface faults as indicated by, but not limited to, aerial photos, topographic maps, and seismic and subsurface structural maps.
- (7) The above requirements do not limit the use of any additional information, such as seismic data, isopach maps, or potentiometric maps, that may help in defining the geology of the area of review.
- (8) If faulting exists within 3000 feet of the surface unit, it must be demonstrated that the fault has not had displacement within Holocene time. If such a fault does exist, it cannot pass within 200 feet of the surface unit.
- (9) If a fault that has been active within the Holocene is located within 3000 feet of the surface unit, it must be demonstrated that, a.) the fault is not transmissive, i.e., it will not provide for groundwater movement that would result in endangerment to human health or the environment, and b.) there is no actual and/ or potential problem of subsidence, which could endanger the stability of the surface unit.
- b. A discussion of the extent of land surface subsidence in the vicinity of the facility including total recorded subsidence and past and projected rates of subsidence. For facilities located at low elevations along the coast which have experienced appreciable rates of subsidence, the potential for future submergence beneath Gulf water should be addressed.

- c. A discussion of the degree to which the facility is subject to erosion. The potential for erosion due to surface water processes such as overland flow, channeling, gullying, and fluvial processes such as meandering streams and undercut banks should be evaluated. If the facility is located in a low-lying coastal area, historical rates of shoreline erosion should also be provided.
- d. Complete Table VI.A.1. Major Geologic Formations
- 2. Applicable to Land Based Units Only. Regional Physiography and Topography (applicable only to owners or operators of facilities that store, process, or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, except waste piles exempt from groundwater monitoring requirements, and tanks which require a contingent post-closure plan)
 - a. Distance and direction to nearest surface water body
 - b. Slope of land surface
 - c. Direction of slope
 - d. Maximum elevation of facility
 - e. Minimum elevation of facility
- **3. Applicable to Land Based Units Only.** Regional Geology (applicable only to owners or operators of facilities that store, process, or dispose of hazardous waste in surface impoundments, landfills, land treatment units, waste piles, except waste piles exempt from groundwater monitoring requirements, and tanks which require a contingent post-closure plan)

Provide a description of the regional geology of the area. This section should include:

- a. A geologic map of the region with text describing the stratigraphic and lithologic properties of the map units. An appropriate section of a published map series such as the Geologic Atlas of Texas prepared by the Bureau of Economic Geology is acceptable.
- b. A description of the generalized stratigraphic column in the facility area from the base of the lowermost aquifer capable of providing usable groundwater to the land surface. At least the uppermost 1,000 feet of section below the facility should be described. The geologic age, lithology, variation in lithology, thickness, depth, geometry, hydraulic conductivity, and depositional history of each geologic unit should be described based upon available geologic information. Regional stratigraphic cross sections should be provided, where available.

4. Subsurface Soils Investigation Report (Applicable to land based units or units requiring contingent closure and post-closure).

This section should contain the results of an investigation of subsurface conditions for each land based unit and/or unit which requires contingent closure and post-closure care. If several units are in close proximity, a single investigation for the area will suffice. This report should include:

- a. The logs of borings performed at the waste management area. All borings must be conducted in accordance with established field exploration methods. Investigation procedures should be discussed in the report. A sufficient number of borings should be performed to establish subsurface stratigraphy and to identify and allow assessment of potential pathways for pollution migration. Borings must be sufficiently deep to allow identification of the uppermost aquifer and underlying hydraulically interconnected aquifers. Borings should penetrate through the uppermost aquifer and all deeper hydraulically interconnected aquifers, deep enough to identify the aquiclude at the lower boundary. Borings should be completed to a depth at least 30 feet below the deepest excavation planned at the waste management area.
- b. A text which describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. If appropriate, soils may be assigned to generalized strata to aid in the discussion.
- c. A text which describes the investigator's interpretations of the subsurface stratigraphy based upon the field investigation. If appropriate, soils may be assigned to generalized strata to aid in the discussion.
- d. Complete Table VI.A.4. Waste Management Area Subsurface Conditions and provide in the report data which describes the geotechnical properties of the subsurface soil materials. All laboratory and field tests must be performed in accordance with recognized procedures. A brief discussion of test procedures should be included. All major strata encountered during the field investigation phase should be characterized with regard to: Unified Soil Classification, moisture content, percent less than number 200 sieve, Atterberg limits (liquid limit, plastic limit, and plasticity index), and coefficient of permeability. Field permeability tests should be used to determine the coefficient of permeability of sand or silt units and should also be used to supplement laboratory tests for more clay-rich soils. In addition, particle size distribution and relative density based upon penetration resistance should be determined for coarse-grained soils. For fine-grained soils the following parameters should also be determined: cohesive shear strength based upon either penetrometer or unconfined compression tests, dry unit weight, and degree of saturation(s). For the major soil strata encountered, the maximum, minimum, and average for each of these variables should be compiled.
- e. For land treatment units, provide a description of the surficial soils at the site which includes:

- (1) The name and description of the soil series at the site;
- (2) Important physical properties of the series such as depth, permeability, available water capacity, soil pH, and erosion factors;
- (3) Engineering properties and classifications such as USDA texture, Unified Soil Classification, size gradation, and Atterberg limits (liquid limit, plastic limit, and plasticity index); and
- (4) The cation exchange capacity (CEC) of the soil(s) expressed in units of meq/100g.

Much of this information may be obtained by consulting the county soil survey published by the United States Department of Agriculture, Soil Conservation Service. If available, a copy of an aerial photograph showing soil series units on the land treatment area should be provided.

If an aerial photograph is not available, include a soil series map as an attachment to this subsurface soils investigation report.

B. Facility Groundwater

If past monitoring has shown the presence of hazardous constituents in the groundwater, the owner or operator must submit a Compliance Plan Application with this application. The Compliance Plan Application and instructions can be found in Section XI of this application form.

1. Regional Aquifers

Provide a description of the regional aquifers in the vicinity of the facility based upon available geologic references. The section should provide:

- a. Aquifer names and their association with geologic units described in Section VI.A.3.b.;
- b. A description of the constituent materials of the aquifer(s);
- c. A description of the water-bearing and transmitting properties of the aquifer(s);
- d. Whether the aquifers are under water table or artesian conditions;
- e. Whether the aquifers are hydraulically connected;
- f. A regional water table contour map or potentiometric surface map for each aquifer, if available, from published references;
- g. An estimate of the rate of groundwater flow in units of ft/yr;
- h. Values for total dissolved solids content of groundwater from the aquifers;
- i. Identification of areas of recharge to the aquifers; and

Note: An application for a new hazardous waste surface impoundment, waste pile, land treatment unit, or landfill, which is to be located in the apparent recharge zone of a major or minor aquifer, as designated by the Texas Water Development Board, must include a hydrogeologic report documenting the potential effects, if any, on the regional aquifer in the event of a release from the waste containment system. See the publication entitled Water for Texas, Today and Tomorrow (1990) or subsequent revision (Available at http://www.twdb.texas.gov/waterplanning/swp/1990/index.asp) for more information [30 TAC 305.50(6)]

j. The present use of groundwater withdrawn from aquifers in the vicinity of the facility.

The preparer should update Section III.C.1.e. of the Part A permit application to ensure that all water wells within 1 mile of the property boundaries of the facility have been located. The aquifer(s) yielding water should be identified for each well.

- 2. Provide groundwater conditions for each land based unit or unit which requires post closure care which includes all the information specified in 30 TAC 335.156-335.167. This discussion should also include:
 - a. Records of water level measurements in borings. The boring logs prepared in response to Section VI.A.4.a. should be annotated to note the level at which groundwater is first encountered and the level of groundwater after equilibration. Normally a 24-hour period is adequate for equilibration of groundwater but an extended period may be required for saturated clay deposits. This information should also be presented on the cross-sections required in Section VI.A.4.b. and recorded and retained in the facility groundwater monitoring record.
 - b. Records of historical maximum and minimum static water level measurements in monitor wells. Historic water level measurements made during any previous groundwater monitoring should be presented in a table for each well.
 - c. Upper and lower limits of the uppermost aquifer and deeper aquifers which are hydraulically interconnected to it beneath the facility boundary. In most cases this identification would include surface contour maps of the top and bottom surfaces. Indicate the typical depth at which groundwater is first encountered.
 - d. A site specific water table contour map or potentiometric surface map for the uppermost aquifer, and the basis for such identification (the information obtained from hydrogeologic investigations of the facility area). The predicted groundwater flow direction and rate should be indicated.
 - e. A discussion of the variation of hydraulic gradient across the site, including vertical gradient. Calculations for the maximum, minimum, and average groundwater flow velocities for each aquifer identified should also be provided, including pump test data where appropriate.
 - f. An analysis of the most likely pathway(s) for pollutant migration in the event that the primary barrier liner system is penetrated.
- 3. Description of the Detection Monitoring Program

It is important to note that even if the proposed program may use the same well system as the present program, the sampling parameters may be different.

- a. Include in the design report a description of the proposed detection monitoring program. This description should contain all requirements of 30 TAC 335.163-335.164.
- b. Provide a justification for the selected suite of waste specific parameters specified in Table VI.B.3.c. Groundwater Sample Analysis based on toxicity, mobility, persistence, and concentrations in light and dense non-aqueous phase components of the waste.
- c. (Sampling and Analysis Plan) Describe the proposed sampling and analysis methods, as well as statistical comparison procedures to be utilized in evaluating groundwater monitoring data. Note: Methods listed for use in groundwater programs may provide flexibility allowing for updates of the base method. For methods other than the standard acceptable methods, applicant must provide a demonstration that the proposed methods are appropriate for groundwater analysis per 30 TAC 335.163(5).
- d. Specify the statistical method and process for determining whether constituent concentrations in groundwater are above background, in accordance with 30 TAC 335.163. Refer to the EPA guidance document entitled Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Unified Guidance (March 2009) (document # EPA 530-F-09-020) for recommended methods.

All data submitted to the TCEQ shall be in a manner consistent with the latest version of the "*Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation Recovery Act and Underground Injection Control*" (TCEQ QAPP) which a can be found on the agency's website.

Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from *Ground Water, Volume II: Methodology*, (document # EPA/625/6-90/016b) or an equivalent method approved by the Executive Director of the TCEQ. Laboratory methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846*, 1987, as revised; *Standard Methods for the Examination of Water and Wastewater, Fifteenth Edition*, 1980, and 1981 supplement, or current adopted edition; *RCRA Ground-Water Monitoring: Draft Technical Guidance*, 1992, *OSWER Directive 9950.1*, or an equivalent method approved in writing prior to use by the Executive Director. [30 TAC Section 305.125(11)(A)]

- e. For inclusion into a permit, complete Table VI.B.3.b. Unit Groundwater Detection Monitoring System to specify the proposed well system for each unit or waste management area which requires groundwater monitoring.
- f. For inclusion into a permit, complete Table VI.B.3.c to specify:

- (1) the suite of waste specific parameters (indicator parameters, waste constituents, or reaction products) which will be analyzed at each sampling event for each well or group of wells. These parameters must provide a reliable indication of the presence of hazardous constituents in the groundwater;
- (2) the sampling frequencies and calendar intervals (e.g., monthly; quarterly within the second 30 days of each quarter; semiannually within the first 30 days of the 2nd and 4th quarters, etc.);
- (3) the analytical method and the laboratory predicted detection limit and predicted Practical Quantification Limit (PQL) of the sample preparation and analysis methods for the selected parameters. This detection limit will represent the capability of the sampling and analysis to reliably and accurately determine the presence of the selected parameters in the sample; and
- (4) the concentration limit which will be the basis for determining whether a release has occurred from the waste management unit/ area. Concentration limits shall be based on background values for the waste management unit/area, or PQL values developed through laboratory data obtained using practices consistent with the latest version of the TCEQ QAPP. If background values are lower than PQLs, the applicant may choose respective PQLs as concentration limits for hazardous constituents.
- g. Submit drawings depicting the monitoring well design, current and proposed.
- h. Submit at least one map of the entire facility and additional maps or drawings if necessary on one or more 8.5" x 11" sheets of sufficient scale to show the following in adequate detail:
 - (1) Monitoring well locations, current and proposed;
 - (2) Soil-pore liquid and core sampling points, current and proposed;
 - (3) Waste management unit(s)/area;
 - (4) Property boundary;
 - (5) Point of compliance;
 - (6) Direction of groundwater flow; and
 - (7) Extent of any known plume of contamination
- i. For the description of site-specific groundwater for inclusion in permit summary documents, please complete the following brief description:

Groundwater is typically encountered approximately [###] feet below grade ([###] feet [above/below] Mean Sea Level) in the uppermost aquifer. The uppermost aquifer is part of the [Name] Formation and consists of [brief lithological description] ranging in thickness from [### to ###] feet. Groundwater flow is generally toward the [north/east/south/west].

C. Exemption from Groundwater Monitoring for an Entire Facility

In accordance with 30 TAC 335.156(b)(4), a waste management facility may be exempt from groundwater monitoring if the owner or operator can demonstrate that there is no potential for migration of liquid from any regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and post-

closure care period. This demonstration must be submitted with the permit application, and must be certified by a qualified geologist or geotechnical engineer.

This exemption does not apply to Unsaturated Zone Monitoring. Owners and operators of Land Treatment Units must monitor the unsaturated zone under all circumstances.

The following areas should be addressed in the demonstration, and any predictions must be made on assumptions that maximize the rate of liquid migration:

- 1. Thickness of soil between the base of the unit and saturated zone;
- 2. Thickness of saturated zone;
- 3. Head pressure of the fluids;
- 4. Properties of the saturated and unsaturated zone (including permeability, effective porosity, and homogeneity), and
- 5. Total life of facility

The criteria used for the evaluation of this demonstration are more stringent than those used for evaluations of demonstrations submitted prior to permitting. Thus it is necessary for an owner or operator to submit another demonstration even if one was submitted and approved previously.

This type of exemption differs from the exemptions described in Sections V.D. (Surface Impoundments), V.E. (Waste Piles), and V.G. (Landfills). An owner or operator may pursue a facility-wide exemption as well as an exemption for a particular unit, if the owner or operator wishes.

D. Unsaturated Zone Monitoring -RESERVED

Appendix VI

Geology Report

A geology report is contained within the Closure Report for Elam Site, dated April 1997. Additional geologic information is provided in the Updated Post-Closure Care report, dated September 2009. Both documents are included in on a Compact Disk with this application submittal. This section provides a summary of the geologic and hydrologic conditions of the site with few updates having occurred since 2009. Appendix VI.A

Geology and Topography

1. Active Geologic Processes

There are no active faults in the area of the Elam landfill, as determined from review of "Structural Features in the Dallas County, Texas Region" from Texas Water Development Board, Report 318 and geologic cross-sections of the landfill site, both of which are included in this appendix.

The landfill property is not subject to subsidence.

The engineered cap of the landfill was designed and installed in such a way to minimize erosion, which is checked during every landfill inspection.

2. Regional Physiography and Topography

The Dal-Tile Elam Landfill is in Dallas County, Texas within the Black Prairie Physiographic Province. This region is characterized by a relatively flat to gently undulating topographic surface that slopes to the east-southeast toward the Trinity River, as illustrated on the United States Geological Survey topographic map. Actual site topography was modified as a result of closure activities; a map of the final landfill contours is included in Appendix VII.A. A topographic survey of the Site (map included in this appendix) shows that the elevation in the vicinity of Pleasant Run ranges from about 420 feet above mean sea level (msl) to about 445 feet msl.

3. Regional Geology

The Geologic Atlas of Texas, Dallas Sheet reveals that the Elam Site is situated on an outcrop of Quaternary river terrace deposits associated with the drainage system of the Trinity River. The Geologic Atlas of Texas, Dallas Sheet describes these sediments as being comprised of gravel, sand, silt, and clay.

There have been numerous preliminary studies conducted at the Elam Site in order to characterize the shallow stratigraphy and the properties of the uppermost aquifer as well as to identify areas of potential contamination at the Site. The data obtained during these investigations provide substantial control regarding the Site's physical conditions.

The Dal-Tile Elam site geologic, stratigraphic, and lithologic properties are depicted on the Geological Atlas of Texas, Dallas Sheet, included in this appendix. The property lies on Quaternary fluvial terrace deposits which consist of gravel, sand, silt, and clay. Underlying the terrace deposits at a depth of approximately 75 feet bgs is the Ozan Formation, a Cretaceous-age sand, silt, and clay unit with a thickness of approximately 750 feet in the vicinity of the Elam Site. Underlying the Ozan Formation is the Austin Chalk, which consists of chalk, limestone, and marl and is approximately 300 feet thick in this area. The Austin Chalk is underlain by the Eagle Ford Formation, a shale unit with thin beds of sandstone and limestone. This formation is approximately 450 feet thick and yields small quantities of water to shallow wells. Underlying the Eagle Ford Formation is the Woodbine Formation, which consists of medium- to coarse-grained iron sand, sandstone, clay, and some lignite.

The Geologic Atlas of Texas map, stratigraphic column, and copies of soil boring logs and geologic cross-sections are included in this appendix. Copies of soil boring logs (previously submitted) are included in the Final Closure Plan (1995) and Closure Report (1997) for the Elam site, on the CD included with this application submittal.

4. Surficial Soils

The natural properties of soil at the Elam Site have been significantly altered from waste disposal and closure activities. Prior to these activities, the soil properties could be described by the U.S. Department of Agriculture, Soil Conservation Service's Survey of Dallas County. According to this survey, the following describes the surficial soils at the Elam landfill:

• <u>Arents, loamy, hilly</u>: This soil type is composed of discarded overburden (spoil material) resulting from sand and gravel mining activities. The areas are generally lower than the surrounding landscape. The spoil material has been left in mounds and ridges in the gravel pits. The mined pits generally contain water and constitute 5-25% of the mapped unit.

Typically, the soil (to a depth of 80 inches) is moderately alkaline, light yellowish brown, gravelly, sandy, clay loam. There are fragments of soil layers throughout the unit. Permeability is moderate in these soils, and the available water capacity is medium. Runoff is rapid and the hazard of erosion is described as severe.

 <u>Silstid loamy find sand (0-3% slopes)</u>: This soil is described as a deep, well-drained, nearly level to gently sloping soil found on upland areas. Typically, the surface layer is neutral, light yellowish brown, loamy, fine sand. Below this (to a depth of 44 inches) it is slightly acid to medium acid, yellowish brown, sandy clay loam. Below that (to a depth of 80 inches) the soil is strongly acid, reddish yellow, loamy fine sand.

Permeability is described as moderate, and the available water capacity is low. Runoff is described as slow and water erosion is described as a slight hazard. Wind erosion is described as a severe hazard if the ground surface is bare.

The generalized soil map of Dallas County, Texas describes the soils in the vicinity of the Elam landfill as being part of the Silawa-Silstid-Bastsil soil association. These soils are described as being deep, nearly level to sloping, loamy, and sandy soils on stream terraces. The generalized soil map of Dallas

County, Texas and typical pattern of soil type distribution and parent material in the Silawa-Silstid-Bastsil map unit are included in this appendix.

Surface water drainage from the vicinity of the Elam landfill flows naturally to the east. From the eastern property boundary surface water would flow in a southeasterly direction toward an unnamed creek, eventually flowing in a westerly direction to an unnamed strip-mining area, as shown on the site topographic map included in this appendix.

Permittee: Dal-Tile Elam

Page 1 of 1

Table VI.A.1.	- Major Geologic Formati	ons
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Names Of Major Geologic Formation(s) Beneath The Facility	Lithology Of The Major Geologic Formation	Formation Thickness (Feet)	Depth To Top Of Formation	
			Feet/MSL ⁽¹⁾	Feet/BGS ⁽²⁾
Qt (Quaternary Fluviatile Terrace Deposits)	Sand, silt, and gravel	Approx. 75 feet regionally	Approx. 415	Approx. 0-1 foot bgs
Ko (Ozan Formation)	Shale	750 feet	Approx. 451	Approx. 37-45 bgs
Cretaceous Austin Chalk	Limestone	Approx. 300'-500'		Unknown, not encountered
Cretaceous Eagle Ford Formation	Shale, sandstone, and limestone	Approx. 200'-300'		Unknown, not encountered
Cretaceous Woodbine Formation	Sandstone, some clay, some shale	Approx. 175'-250'		Approx. 1,300'; not encountered
Cretaceous Trinity Group	Sandstone, some clay, some shale	Approx. 100'-300'		Approx. 2,300'; not encountered

(1) MSL: Mean Sea LevelMLGL: Mean Low-tide Gulf Level(2) BGS: Below Grade Surface

Permittee: Dal-Tile Corporatioin

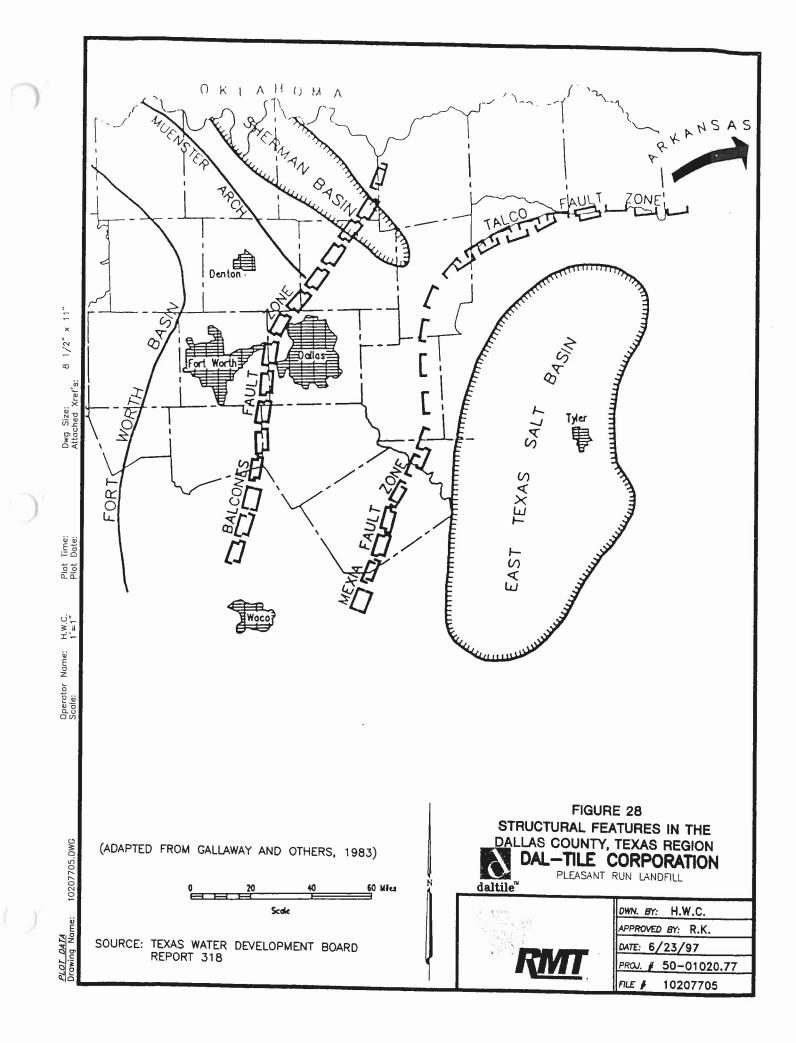
Table VI.A.4 - W	Vaste Management Ar	rea Subsurface Conditions
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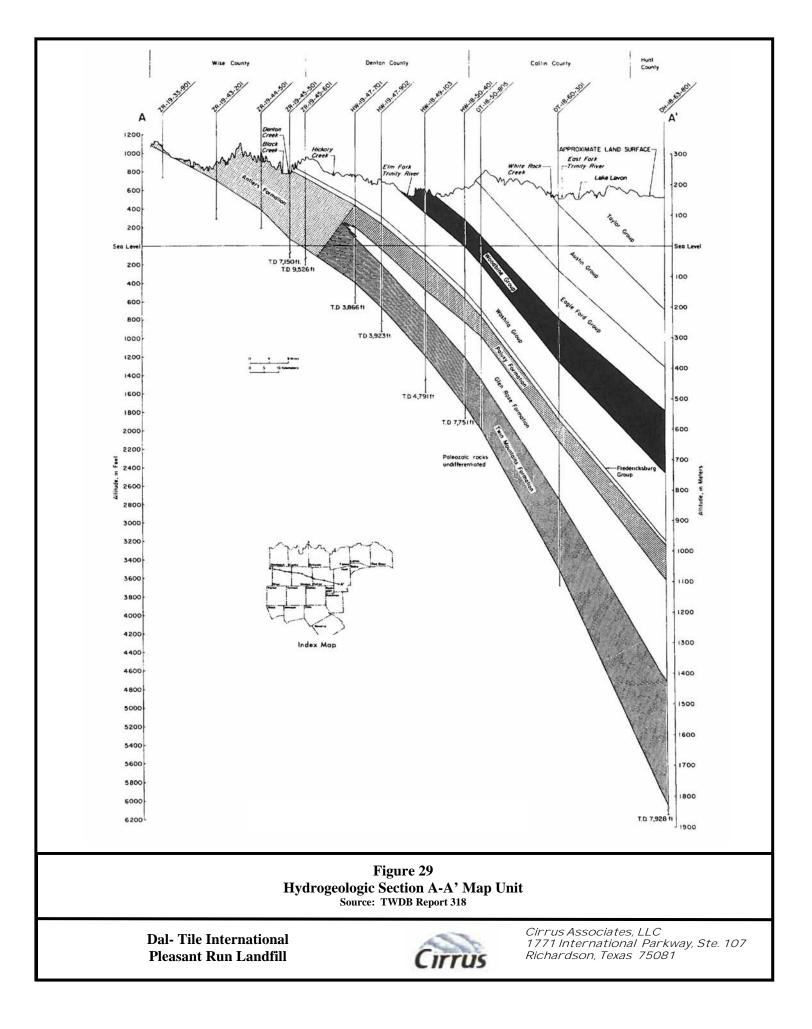
Boring Number	Depth Below Grade	Stratum	USC Symbol	Liquid Limit*	Plasticity Index*	Percent Passing#200 Sieve	Permeability*	Percent Porosity*
Not applicable								

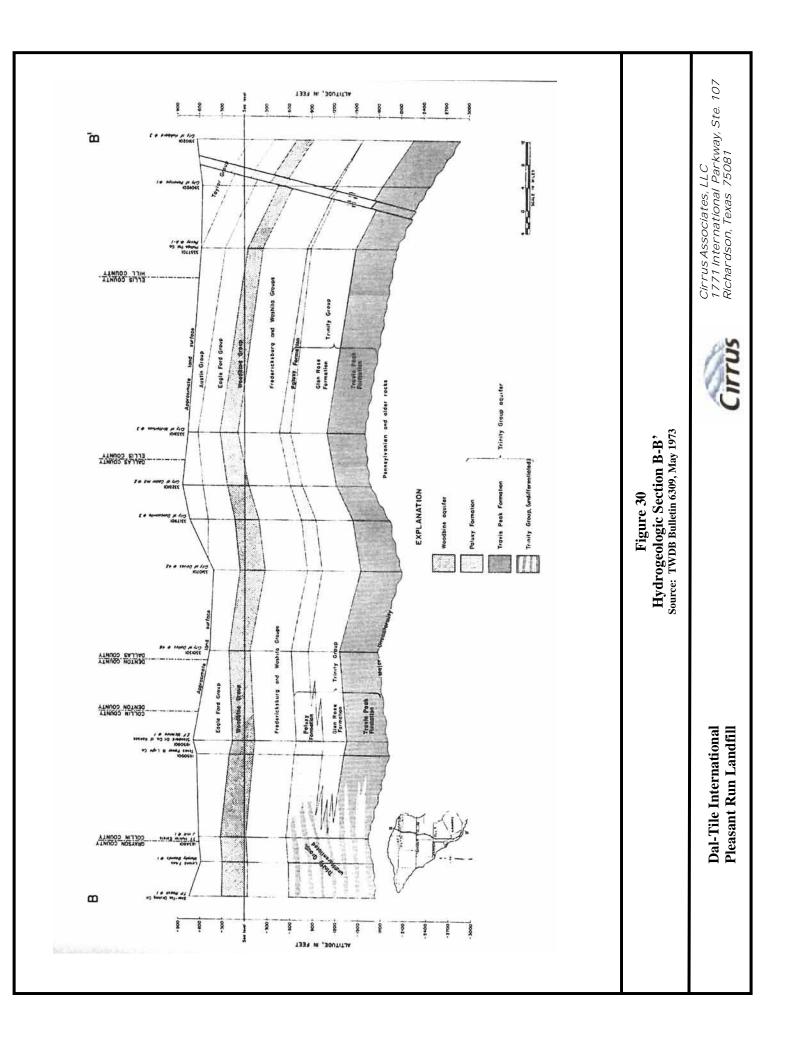
Maximum depth: _______feet below grade

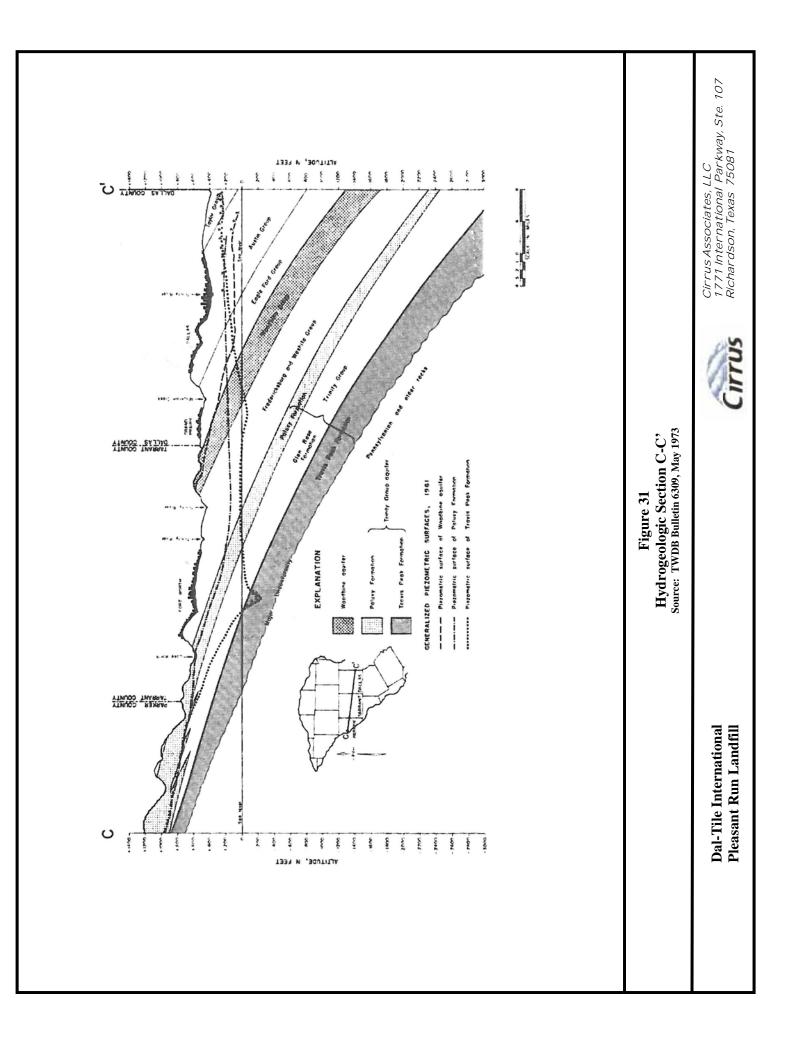
feet above MSL

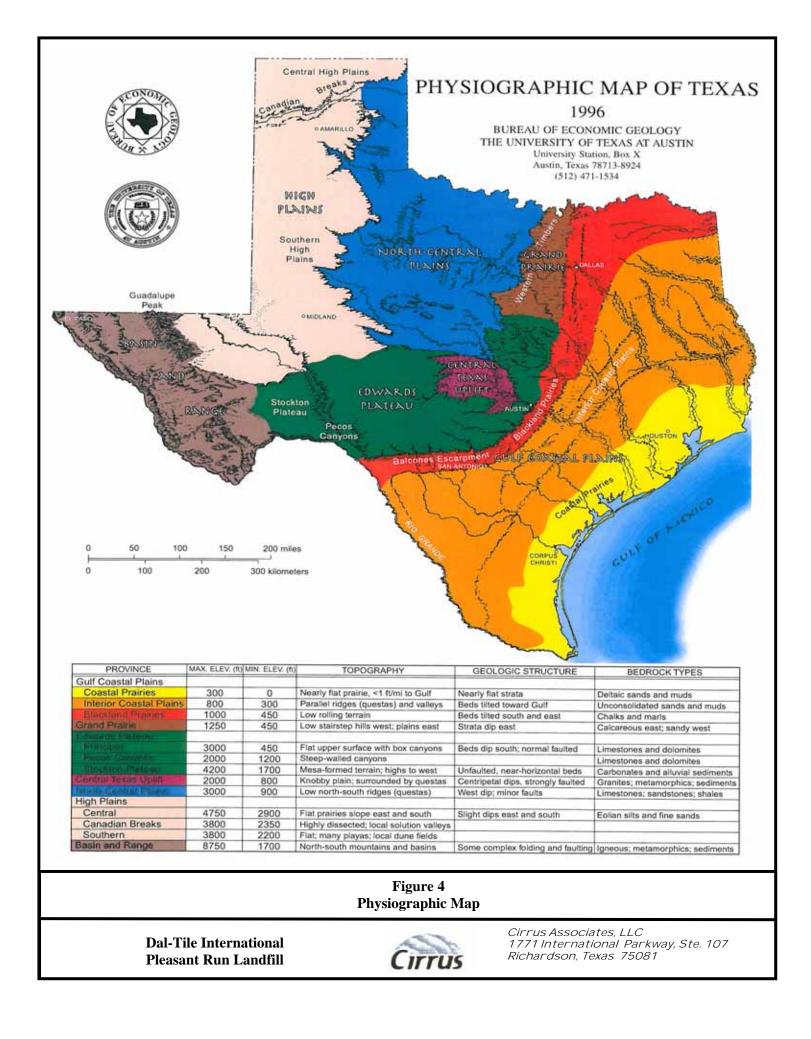
*For the major soil strata encountered, record the minimum, maximum, and average values of these parameters as applicable.

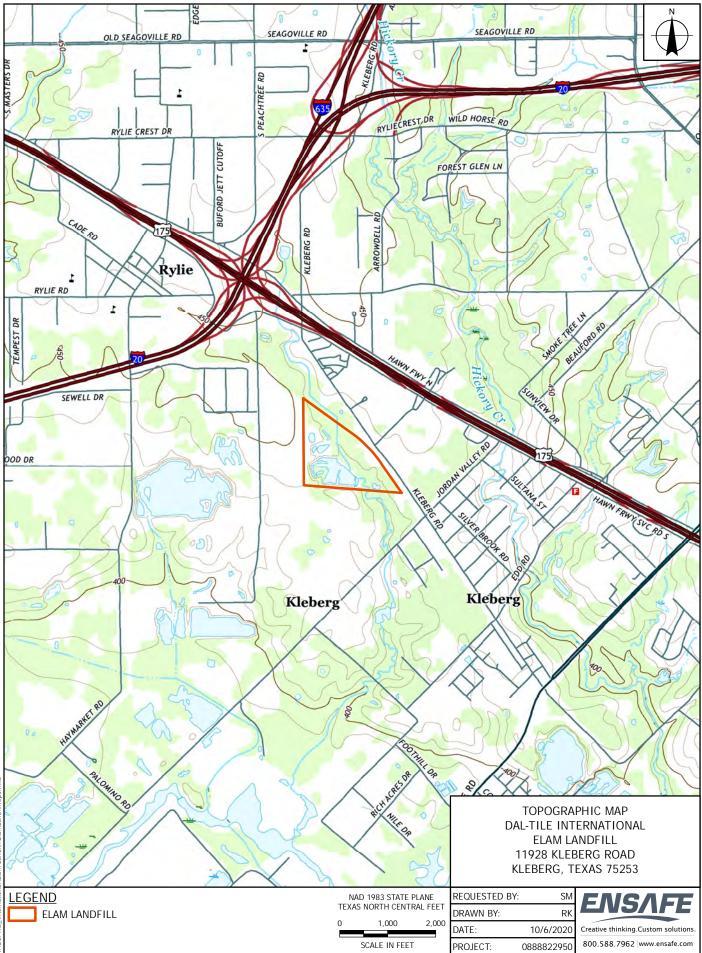






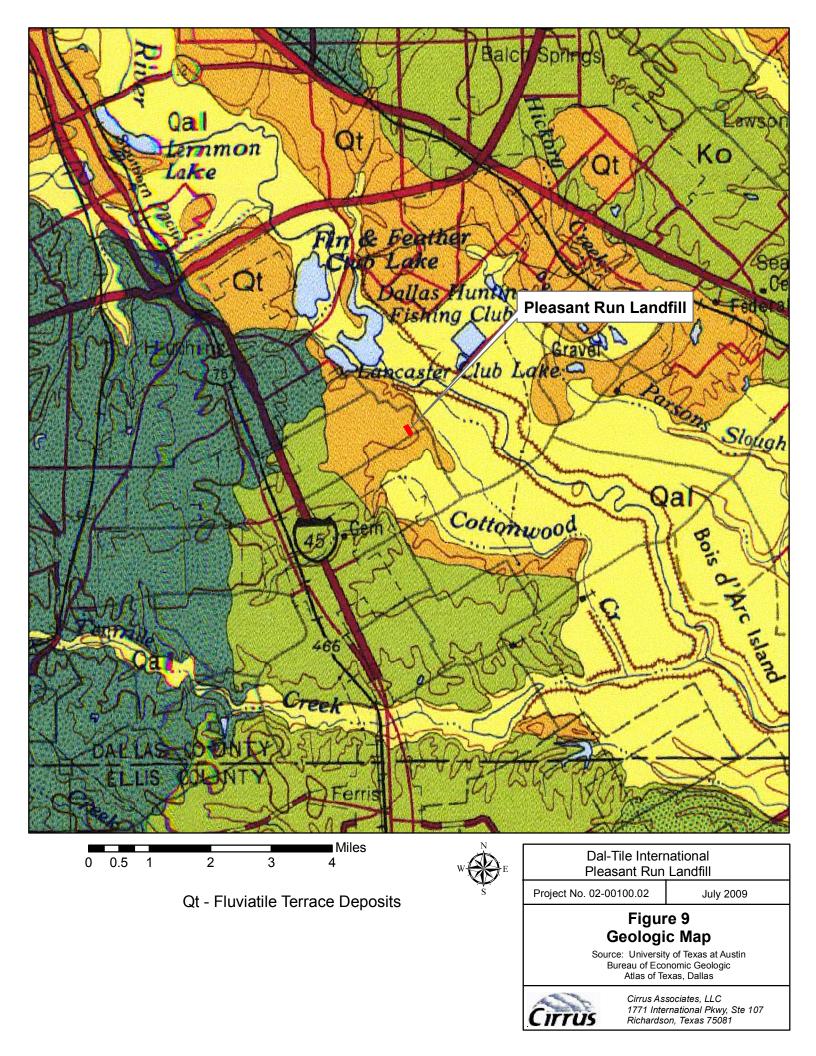






:\Dal-Tile_International\Elam Landfill\ElamLan

Source: U.S. Geological Survey. Hutchins, Seagoville Quadrangles, Texas [Map]. Photorevised 2019. 1:24,000. 7.5 Minute Series.



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Water-bearing characteristics*	Yields small to large amounts of fresh water to wells along the	Upper members are not known to yield water to wells in area; lower member yields an all to moderate quantities of frush to slightly saline water near the outcrop.	Yields small quantities of water to shallow wells.	Yields small to moderate quantities of fresh to moderately saline water to wells in the northeastern part of the area; very limited as an aquifer.	Yields small quantities of water to shallow wells.	Yields moderate to large quantities of fresh to alightly saline water to municipal, industrial and irrigation wells.	Yielda amall quantities of water to shallow wells.	Yielda small quantities of water to shallow wella.	Yields small to moderate quantities of fresh to slightly saline water to wella. Yields small quantities of water in localized areas.	Yields moderate to large quantities of fresh to slightly saline water to wells.	Yields small quantities of water in the western part of the area.	– 100 to 1,000 gpm; Large — More than 1,000 gpm Saline — 1,000 to 3,000 mg/L 0,000 to 35,000 mg/L; Brine — More than 35,000 mg/L		Cirrus Associates, LLC 1771 International Parkway, Ste. 107 Richardson, Texas 75081
Character of rocks	Sand, milt, clay and gravel.	Fossiliferous clay and hard limy mari; fine sand, fossilferous.	Clay, marl, mudstone, and chalk.	Chalk, limestone and marl; fine to medium sand, fossilferous.	Shale with thin beds of sandstone and limestone.	Medium to coarse iron sand, sandstone, day and some lignite.	Fossilferous limestone, marl, and clay, some sand near top.	Limestone, clay, marl, shale, and ahell aggiomerates.	Fine sandy shale, and shale. Lisnestone, marl, shale, and	S anynyartte Fine-to-coarte sand, ahale, clay, basal gravel, and congtonerate	Sandatone, limeatone, ahale and conglomerate	— 100 to 1,000 gpm; Large — y Saline — 1,000 to 3,000 mg/L	ment Board 11 (04/82)	Cirrus
Approximate maximum thickness (feet)	75	800	1,500	700	660	700	1,000	250	400 1,500	1,000			Figure 1 Stratigraphic Map cas Water Developi 9, Volume 1, Page	
Btratigraphic units	Alluvium Ruciatila farman damaira	Kemp Clay Consicana Marl Nacatoch Sand	Marlbrook Marl Peenn Gap Chalk Wolfe Sity - Ozan Formations	Gober Chalk Brownstown Marl Blossom Sand Bonham Formation					Palung Formation		Paleosoic rocks undifferentiated	- Less than 100 gallons per minute (gpm); Moderate — 100 tc - Less than 1,000 milligrams per liter (mg/L); Slightly Saline - tely Saline — 3,000 to 10,000 mg/L; Very Saline — 10,000 t	Figure 1 Stratigraphic Map Source: Texas Water Development Board Report 269, Volume 1, Page 11 (04/82)	
Group		Navarro	Taylor	Austin	Eagle Ford	Woodbine	Waahita	Frederichsburg	Trinity		L.C.			ernational n Landfill
Barries	Holocena	Galf				Comanche						Dal-Tile International Pleasant Run Landfill		
Byntem	Quaternary	Crataceous Vells:						Yields of Wells: Chemical Quality of Water:		Ü Id				
ł	Cenosaic		Mesocutic Palsecutic Yields of V						Yields of Wells: Chemical Qualit					

Appendix VI.B

Facility Groundwater

1. Regional Aquifers

The most prominent stratigraphic unit that supplies fresh to slightly saline water to wells in the vicinity of the Elam Site, is an alluvium of Holocene series of the Quaternary system. This unit consists of sand, silt, clay, and gravel, and has a thickness of approximately 75 feet in this area (Table VI.A.1).

Other stratigraphic units in the vicinity of the Elam landfill with water-bearing properties include the following:

- The Austin Group, which underlies the alluvium, consists of chalk, limestone, and marl, fine- to medium-grained sand, is fossiliferous, and has a thickness of approximately 450 feet.
- The Eagle Ford Group, which underlies the Austin Group, consists of shale with thin beds of sandstone and limestone, and has a thickness of approximately 400 feet.
- Underlying the Eagle Ford Group is the Woodbine Formation, which consists of medium- to coarse-grained iron sand, clay, and small amounts of lignite. The Woodbine is approximately 300 feet thick in this area.
- The Washita-Fredericksburg Group underlies the Woodbine, and consists of fossiliferous limestone, marl and clay, with sand and shell aggregate near the top of the unit. This unit has a thickness of approximately 700 feet.
- The Trinity Group, which consists of the Paluxy Formation (fine sand, sandy shale, and shale), the Glen Rose Formation (limestone, marl, shale, and anhydrite), and the Twin Mountains Formation (find- to coarsegrained sand, shale, clay, basal gravel, and conglomerate), underlies the Washita-Fredericksburg Group and contains the largest and most prolific aquifer in the region. The Trinity Group is approximately 1,100 feet thick.

The primary source of recharge to all the above-described aquifers is infiltration of precipitation in areas of outcrop that are in counties to the east of Dallas County, Texas. Discharge from these aquifers occurs naturally through springs and evapotranspiration, and artificially from pumping (Texas Water Development Board, Report 318).

The aquifer in which the site wells and nearby domestic/irrigation wells are cased is a shallow, surficial, localized aquifer with variable flow rates that are dependent on the local composition of the aquifer and its proximity to local drainage features. Therefore, an attempt to determine the regional flow rate is not appropriate.

1.j. Water use within 1 mile of the landfill

The complete Water Well Report is provided in Part A, Attachment C. Two water wells were identified within one mile of the property boundary, both are completed in water-bearing alluvium (Trinity Group).

- Map ID 1 State Well ID No. TX196678 irrigation
- Map ID 2 State Well ID No. TX196675 domestic

In addition, an historical record search located a document dating to1990 that indicated eight unregistered wells in the vicinity of the Elam landfill. A map showing the locations of these wells are provided in this appendix. No additional information was available as to the use, status, or ownership of these wells.

Nine monitoring wells and two piezometers have been constructed within the property boundaries of the Elam landfill. Monitoring well MW-8A was plugged and replaced with MW-8AR in 2006. Piezometer PZ-2 was replaced with PZ-2R in 2012. Historic water levels in these wells are reported from closure through 2009 in the Post-Closure Care reports on the CD included with this application submittal. Measured water levels from 2009 through December 2019 are included in this appendix.

- 2. Site Groundwater Conditions
 - a. Boring logs included in the soil borings logs (in the Final Closure Report included ion CD with this application submittal) shows the depth at which groundwater was first encountered.
 - b. Historic water level measurements (from closure through 2009) are provided in the Post-Closure documents on CD included with this application submittal. Post-2009 water level measurements are provided in this appendix.
 - c. Historic potentiometric surface maps (from closure through 2009) are provided in the Post-Closure documents on CD included with this application submittal. Post-2009 potentiometric surface maps are provided in this appendix.
 - e/f. The uppermost aquifer beneath the Elam landfill is unconfined and has a hydraulic gradient that appears to flow in a southwesterly direction. Water levels collected twice per year since the completion of Site closure indicate that the constructed slurry walls preclude offsite migration of contaminants. Water level measurements that were presented in the 1998 Permit Application were recorded for each well during April 1990, November 1991, March 1992, June 1992, February 1995 and January 1997. Potentiometric maps for each water level measuring event between 1998 and December 2019 are included in this appendix.
 - As calculated from the June 2019 information presented on the potentiometric maps, the hydraulic gradient at the site appears to slope at a rate approximately 0.002 feet per foot (ft/ft) to the southeast from MW-1. the installation of the final cap and cover limits the amount of infiltration into the subsurface, and the slurry wall serves as a barrier for contaminants

migration into groundwater pathway.

The current detection monitoring system consists of nine monitoring wells and two piezometers that are monitoring on a semi-annual basis. There have been no detects in the point-of-compliance wells that indicate any groundwater migration has occurred from the landfill. The most recent copy of the Sampling and Analysis Plan (prepared by EnSafe) is included in this appendix.

Stratigraphic cross-sections depicting subsurface conditions are included in this Appendix VI.A.

3. Detection Monitoring Program

A total of 9 monitoring wells have been installed in and around the periphery of the slurry wall system. The detection monitoring system includes:

- Two background wells (MW-1A and MW-5A)
- Point-of-compliance wells (MW-2A, MW-3A, MW-4A and MW-8A)
- Observation wells (MW-6A, MW-7A, MW-9A, PZ-1 and PZ-2R)

Logs of soil borings for these wells and well completion logs are included in the Post-Closure Plan (1995) on the CD included with this application submittal. All wells are completed in the water-bearing Quaternary alluvium. In the vicinity of the Elam landfill, this stratigraphic unit consists of clayey sand underlain by a thin discontinuous layer of gravelly sand ranging in thickness from 0 to 45 feet.

Potentiometric surface maps, which show the locations of the monitoring wells and piezometers, waste management areas, property boundary, location of the slurry wall, and direction of groundwater flow, are included in this appendix. Groundwater is typically encountered approximately 420 feet above mean sea level in the uppermost aquifer and groundwater flow is generally toward the southwest.

An up-to-date Sampling and Analysis Plan for the detection monitoring program is included on the CD included with this application submittal.

There have been no detections of lead in groundwater above 0.015 mg/L in any of the monitoring wells since their installation. The average lead concentration for all wells at the site over the past 10 years of monitoring is 0.0037 mg/L. It is believed that the Ozan Formation (shale) acts as a confining layer beneath the landfill and prevents vertical migration of contaminants. Permit No. 50377

Permittee: Dal-Tile Corporation

Table VI.B.3.c. Groundwater Detection Monitoring Parameters

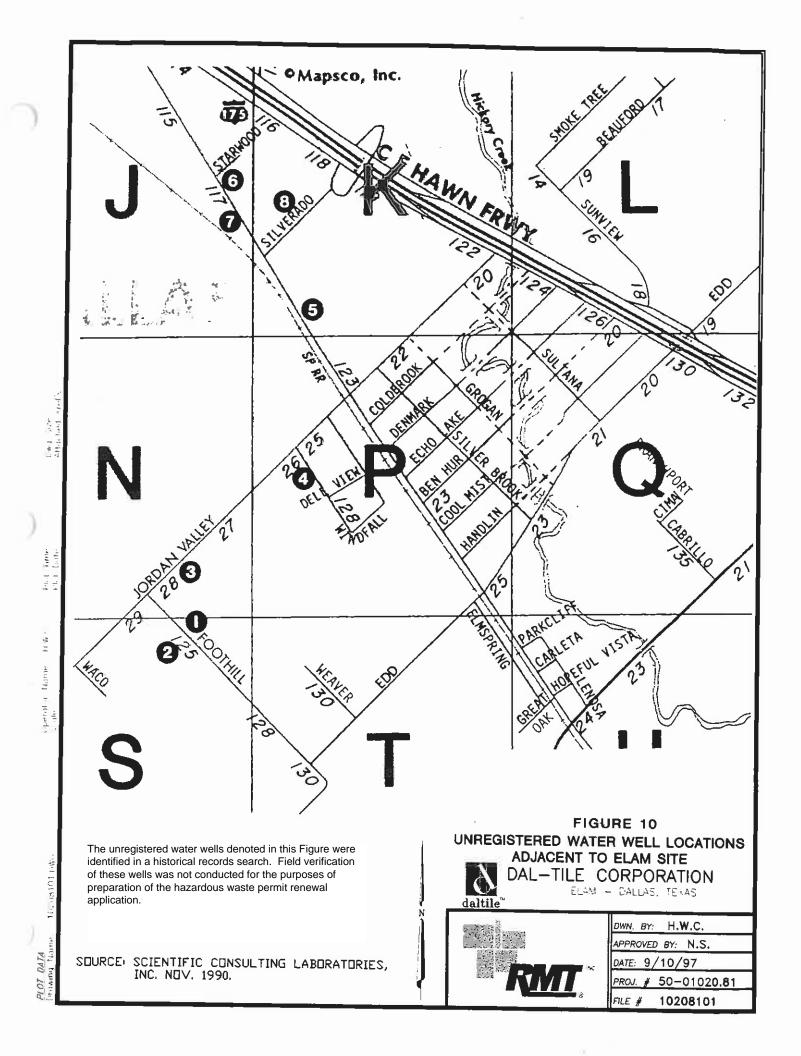
Unit/Waste Management Area NA

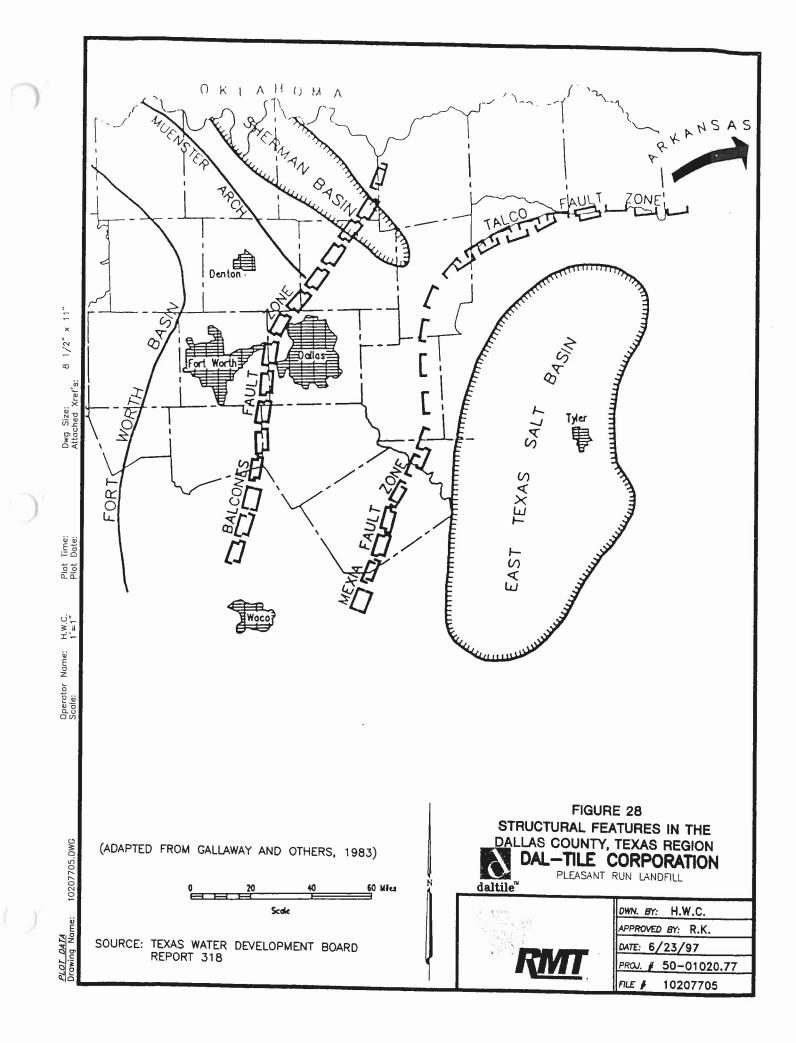
Well No(s): MW-1 through MW-5

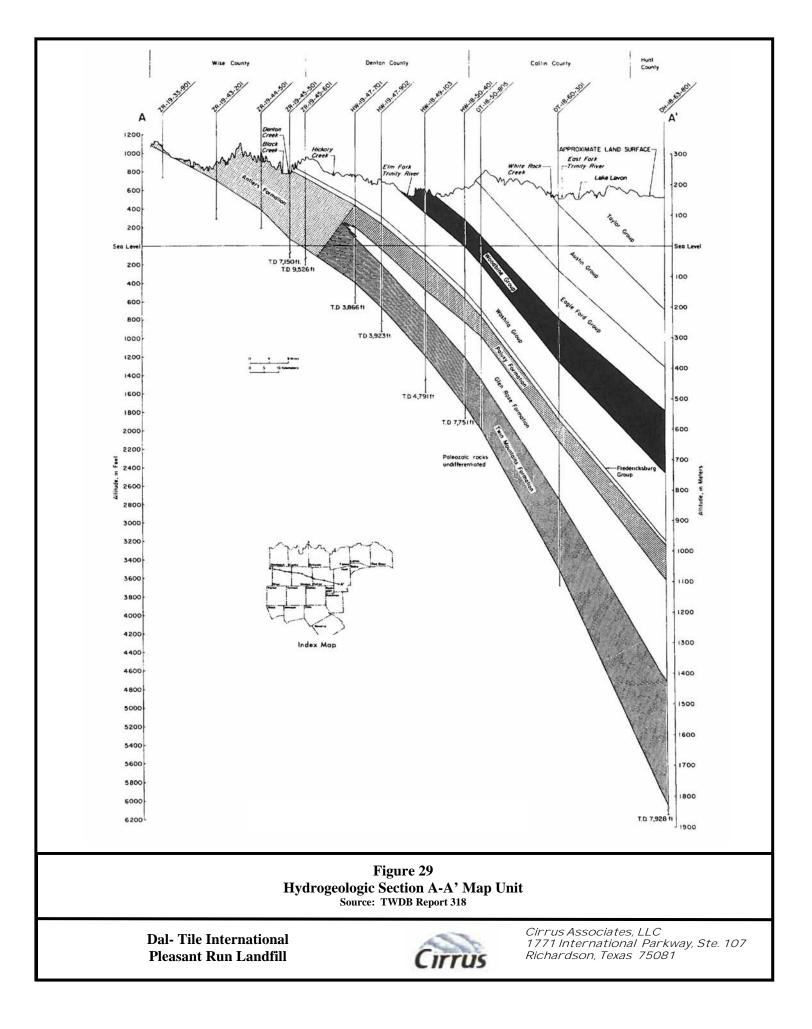
Parameter	Sampling Frequency	Analytical Method	Method Detection Limit (MDL) or Method Quantification Limit (MQL) Value, (units), MDL or MQL ²	Concentration Limit ¹	
Total Lead	Semi-annual	EPA Method 6020	MQL = 0.005 or 0.003	0.015 mg/L	

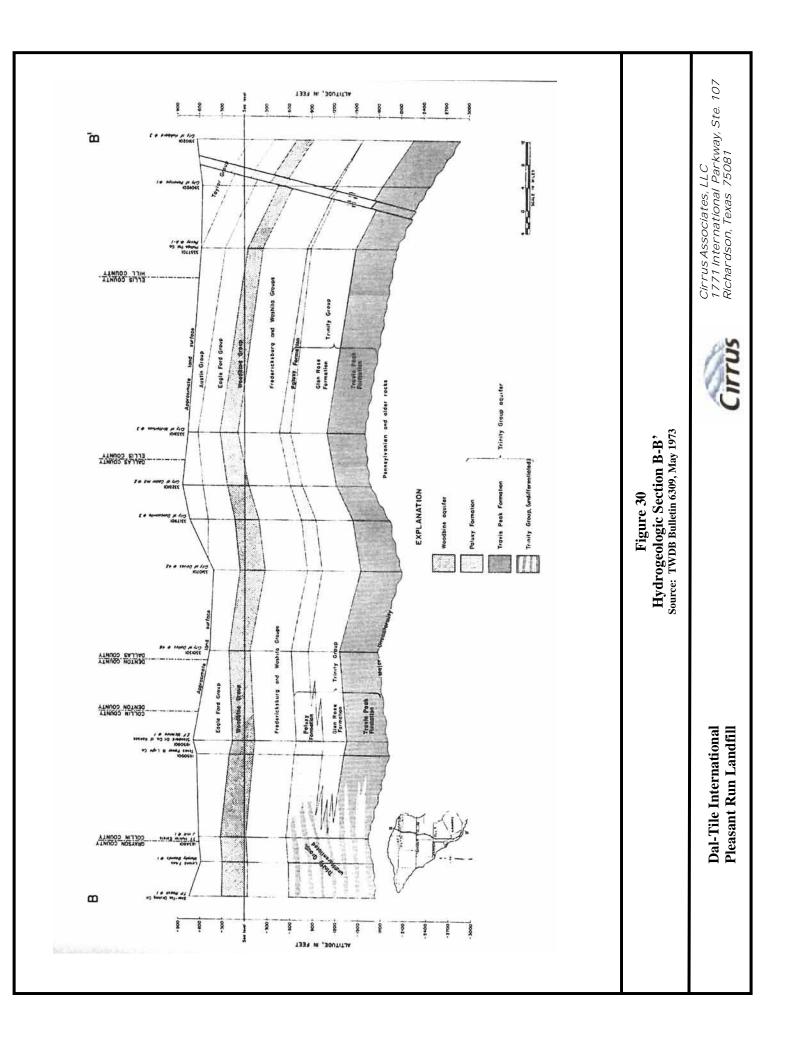
- 1. The concentration limit is the basis for determining whether a release has occurred from the waste management unit/area.
- 2. a. Enter the laboratory expected *Method Detection Limit* if determination of *Statistically Significant Increase* (SSI) occurrence is based on detection of the presence of the constituent of concern in the sample.
- 3. b. Enter the laboratory expected Method Quantification Limit if determination of SSI is based on statistical analysis of detection monitoring data or direct comparison to a limit value.

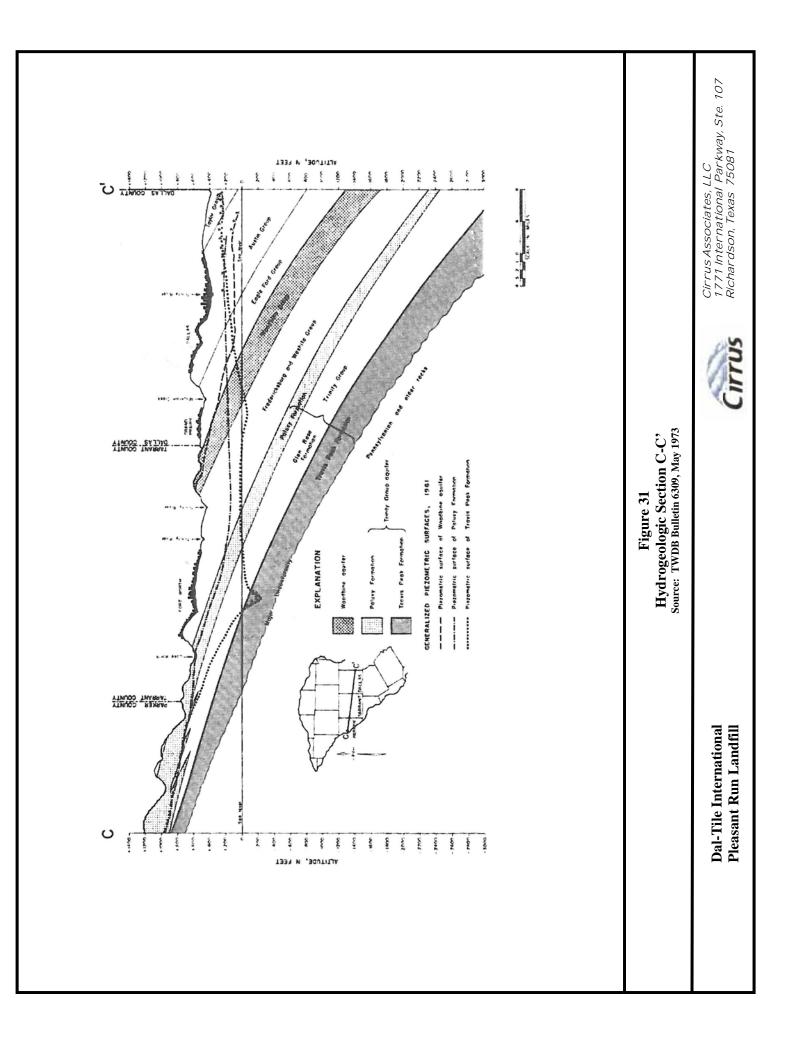
This should be based on the laboratory's minimum expected level of performance. Please designate which type of limit has been entered for each constituent, with its value and units.











Appendix VI.C Exemption from Groundwater Monitoring for an Entire Facility *Not applicable*

and

Appendix VI.D Unsaturated Zone Monitoring *Not applicable*

VII. Closure and Post-Closure Plans

Provide all Part B responsive information in Appendix VII. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

For multiple units provide an include all Part B responsive information in a separate Appendix for each unit.

Submit a full closure plan and post-closure plan, if applicable, which contains all the information required by 30 TAC 335.8, 335.169, 335.172, 335.174, 335.177, 335.178, 335.551-335.569, 30 TAC Chapter 350, 40 CFR 264.112, 264.118, 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.575, 264.601, 264.603, 264.1102, 270.14(b)(13), 270.17(f), 270.18(h), 270.20(f), 270.21(e), 270.23(a)(2) & (3), and 270.26(c)(16) where applicable. The owner of property on which an existing disposal facility is located must also submit documentation that a notation has been placed in the deed to the facility that will in perpetuity notify any potential purchasers of the property that the land has been used to manage hazardous wastes and its use is restricted (see 30 TAC 335.5). For hazardous waste disposal units that were closed before submission of the application, the applicant should submit documentation to show that plats and notices required under 40 CFR 264.116 and 264.119 have been filed.

- A. Closure -RESERVED
- B. Closure Cost Estimate (including contingent closure) [30 TAC 335.178, 40 CFR 264.142] RESERVED
- C. Post-closure

This section applies to owners or operators of all hazardous waste disposal facilities. This section also applies to certain waste piles, tanks and surface impoundments from which the owner or operator intends to remove wastes at closure but which are required to have contingent post-closure plans.

For Landfills, and Waste Piles, Surface Impoundments, and Tanks Closed as a Landfill

- 1. Provide as-built plans and specifications for the final cover system, individually for each unit that is sealed, signed and dated by a licensed professional engineer with current Texas registration along with the Registered Engineering Firm's name and Registration Number would satisfy this requirement; Other as-built plans and specifications for the unit may be submitted upon request.
- 2. Complete the following tables, as applicable:

a. Complete Table V.G.1 - Landfills and list the landfills (and number of cells, if applicable) covered by this application. List the waste(s) managed in each unit and the rated capacity or size of the unit. If wastes are segregated in some manner, list the cell number in which wastes are placed next to each waste type.

b. Table V.G.3. - Landfill Liner System and specify the type of liner used for the landfill.

c. Table V.G.4. - Landfill Leachate Collection System used for the landfill.

d. Table V.E.1 - Waste Piles and list the waste piles covered by this application. List the waste managed in each unit and the rated capacity or size of the unit.

e. Table V.E. 3 - Waste Pile Liner System and specify the type of containment/liner

system.

f. Table V.D.1 - Surface Impoundments and list the surface impoundments, covered by this application, to be permitted. List the waste(s) managed in each unit and the rated capacity or size of each unit.

g. Table V.D. 6. - Surface Impoundment Liner System for each surface impoundment to be permitted.

h. Table V.C. Tanks and Tank Systems.

Post-closure care of each hazardous waste management unit must continue for 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems in addition to the maintenance and monitoring of waste containment systems. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which hazardous waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information.

- 1. The post-closure care plan for a landfill or of a surface impoundment, waste pile, miscellaneous unit, or tank system closed with wastes or waste constituents left in place, or closed under a contingent closure plan, must demonstrate compliance with 30 TAC 335.174(b).
- 2. The name, address, and phone number of the person or office to contact about the disposal facility during the post-closure period; and
- 3. A discussion of the future use of the land associated with each unit.
- 4. For landfills, surface impoundments, waste piles, and land treatment areas closed under interim status, submit the required documentation of 40 CFR 270.14(b)(14).
- 5. Landfills, surface impoundments, waste piles and land treatment areas that received hazardous wastes after July 26, 1982 or for which closure was certified after January 26, 1983 must be included in post-closure care plans unless they have been determined to have closed by removal equivalent to the closure standards in 40 CFR 264 Subpart G. If such a demonstration has been made pursuant to 40 CFR 270.1(c)(5), but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made pursuant to 40 CFR 270.1(c)(6), applicant should submit a copy of the determination. Complete Table VII.C.5. Land-Based Units Closed Under Interim Status for all land based units closed under interim status.
- D. Post-closure Cost Estimate [40 CFR 264.144]

This section regarding post-closure cost estimate applies to owners or operators of all hazardous waste disposal facilities, except state and federal agencies, and certain waste piles, tank systems, and surface impoundments from which the owner or operator intends to remove wastes at closure, but which are required to have contingent closure and post-closure plans. A detailed estimate, in current dollars, of the annual cost of monitoring and maintenance of the facility in accordance with the applicable post-closure regulations must be included in the report. The TCEQ has published Technical Guideline No. 10 for calculating post-closure costs, which should be consulted. Costs should be developed in detail for 30 years of post-closure care activities to be conducted by a third party, for each applicable unit.

- 1. The applicant should submit details of item costs and number of each item for off-site disposal of leachate and bailed monitor well water, labor and supervision, monitor well sampling and analyses, inspection and repair of the cap(s), mowing and re-seeding of the vegetative cover, maintaining site security, etc. Provide an itemized cost estimate on Table VII.D. Unit Post-Closure Cost Estimate for complete, third party permitted facility post-closure care.
- 2. As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.
- 3. Total annual cost of post-closure care for the facility including costs of contingent post-closure care should be multiplied by 30 years.
- E. Closure and Post-Closure Cost Summary

Please Complete <u>Table VII.E.2. - Permitted Unit Post-Closure Cost Summary</u>

Appendix VII Closure and Post-Closure Plans Appendix VII.C Post-Closure Closure activities were completed at the Elam landfill site from 1994 through 1997. A Closure Report for the Elam Site (1997), Final Post-Closure Care Plan (1998), and Updated Post-Closure Care documentation (2009) were previously submitted and approved by TCEQ, and are included on a CD with this permit renewal application.

Since 2009, Dal-Tile replace piezometer PZ-2 with PZ-2R. In 2016, Dal-Tile updated Table VI.C.3.b to include accurate well data for which TCEQ made a typographical error. Table VI.C.3.b in this permit application includes the most recent information for all wells and piezometers at the Elam landfill site.

Appendix VII.D

Post-Closure Cost Estimate

and

Appendix VII.E

Closure and Post-Closure Cost Summary

Table VII.E. provides a cost breakdown for a third party to conduct post-closure care activities. This table has been revised from the original that was submitted with the Post-Closure Care application in February 1998 and Post-Closure permit renewal in 2009.

Post-closure care activities have been occurring for 20 years. The original post-closure period was for 30 years and detection monitoring has been conducted for 20 years; subsequently, Table VII.E has been revised from the 2009 permit renewal application to include the remaining costs to continue monitoring for an additional 10 years.

:

Existing Unit Closure Cost Estimate							
Unit	Cost						
10	\$21,136.00						
Total Existing Unit Closure Cost Estimate 1							
Remove Last Row from Closure Estimate	Closure Estimate						
Proposed Unit Closure Cost Estimate							
Unit	Cost						
10	\$21,136.00						
Remove Last Row from Closure Estimate	r Closure Estimate						

Table VII.E.2. - Permitted Unit Post-Closure Cost Summary

1. As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

Item	Units	Unit Cos	t	Subtotal	Total
Observations and Inspections	10	\$105		\$1,050	
Maintenance					
Routine Erosion Repair (SY)	50	\$15		\$750	
Repair of Ponding (hrs)	8	\$105		\$840	
Reseeding and Watering (hrs)	8	\$105		\$840	
Mowing (6 events)	6	\$125		\$750	
Fence Repair (LF)	10	\$40		\$400	
Monitor Well Component Repair (HRS)	8	\$200		\$1,600	
Monument Repair (HRS)	8	\$200		\$1,600	
Monitoring System					
Sampling (HRS)	30	\$105		\$3,150	
Analysis of Groundwater Samples	26	\$60		\$1,560	
Monitor Well Development, Water Disposal					
Transportation and disposal of 500 gallons non-					
hazardous well development water	1	\$3,000		\$3,000	
Annual Reporting					
Data Reporting - HRS	35	\$105		\$3,675	
· · ·			subtotal	\$19,215	
			Contingency (10%)	\$1,922	
TOTAL UNIT POST-CLOSURE CARE COSTS (YEA	RS)	10			\$211,30

 Table 8-1

 Estimated Post-Closure Care Costs for Elam Landfill (2020 renewal)

VIII. Financial Assurance

Provide all Part B responsive information in Appendix VI. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

- A. Financial Assurance Information Requirements for all Applicants (30 TAC Chapter 37, Subchapter P, 305.50(a)(4)(A-E), 335.152(a)(6) and 335.179)
 - 1. Financial Assurance for Closure RESERVED
 - 2. Financial Assurance for Post-Closure Care (applicable to disposal facilities and contingent post-closure care facilities only)

An owner or operator subject to post-closure monitoring or maintenance requirements must establish financial assurance for the post-closure care of the facility no later than 60 days prior to the first receipt of waste [30 TAC Section 37.31(a)]. Please refer to 30 TAC Chapter 37, Subchapter P for the financial assurance requirements for post-closure and provide a signed statement from an authorized signatory per 30 TAC 305.44 regarding how the owner or operator will comply with this provision.

If a financial mechanism has been obtained, provide a copy of the mechanism.

For applications involving a permit transfer, the new owner or operator must provide a financial assurance mechanism (in original form) satisfactory to the TCEQ executive director. Prior to the executive director issuing the permit modification transferring the permit, the new owner or operator must provide proof of financial assurance in compliance with 30 TAC Section 305.64 (g) and Chapter 37, Subchapter P.

- 3. Financial Assurance for Corrective Action RESERVED
- 4. Liability Requirements (not required for post-closure care) -RESERVED
- B. Applicant Financial Disclosure Statements for a new permit, permit amendment, or permit modification, or permit renewal (30 TAC 305.50(a)(4))

Refer to the Supplemental Technical Information Guidance for Applicants Subject to Financial Capability Requirements, included in Section VIII.B., and the requirements listed below as you complete this section.

- 1. Provide information required in 30 TAC 305.50(a)(4), as applicable to the application request.
- 2. Complete Table VIII.B. if requesting capacity expansion or new construction.
- 3. For new commercial hazardous waste management facility applications, a written statement signed by an authorized signatory per 30 TAC 305.44 explaining how the applicant intends to provide emergency response financial assurance per 30 TAC 305.50(a)(12)(C) or (D).

RESERVED

4. For renewal applications with no capacity expansion, please complete and submit the attached Financial Disclosure Letter.

Information for Applicants Subject to Financial Capability Requirements

Certain applications involving Hazardous Waste facilities are subject to review of the applicant's financial ability to construct, operate, and/or close the facility, perform postclosure care and corrective action at the facility in accordance with State law as specified in Section 361.085 of the Texas Health and Safety Code. TCEQ refers to these reviews as financial capability reviews. This document summarizes and clarifies the information required in an application to meet the TCEQ requirements of 30 Texas Administrative Code (TAC) 305.50.

Information requirements vary depending on the type of financial information available to applicants, primarily whether audited financial statements are available as well as the type of application submitted. For each scenario described below, financial information must be provided for the specific applicant.

I. New Facilities, Facility Expansions and Permit Transfers

- A. Publicly traded Entities
 - 1. Securities and Exchange Commission (SEC) Form 10-Ks

This portion of the requirement calls for the two most recent 10-K reports filed.

2. SEC Form 10-Q

This portion of the requirement calls for a copy of the most recent quarterly report.

3. Explanation statement

This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met. (ie. which financial assurance mechanism is or will be used).

4. Construction capital cost estimates

This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

B. Privately held entities with audited financial statements

1. Audited financial statements

This portion of the requirement calls for complete copies of the audited financial statements for each of the most recent two fiscal years. If an audit has not been completed for one of the previous two years, a complete copy of the fiscal year end financial statement and federal tax return may be substituted in lieu of the audit not performed. The tax return must be certified by original signature of an authorized signatory as being a "true and correct copy of the return filed with the Internal Revenue Service." Financial statements must be prepared consistent with generally accepted accounting principles and include a balance sheet, income statement, cash flow statement, notes to the financial statement, and an accountant's opinion letter.

2. Quarterly financial statement

This portion of the requirement calls for a complete copy of the most current quarterly financial statement prepared consistent with generally accepted accounting principles. Internally prepared statements are satisfactory.

3. Supplementary information statement

This portion of the requirement calls for a written statement detailing the information that would normally be found in SEC's Form 10-K including descriptions of the business and its operations; identification of any affiliated relationships; credit agreements and terms; any legal proceedings involving the applicant; contingent liabilities; and significant accounting policies.

4. Construction capital cost estimates

This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

5. Explanation statement

This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

C. Entities without audited financial statements or entities choosing not to provide the information listed above

1. Financial Plan

This portion of the requirement calls for a financial plan (including balance sheets listing assets, liabilities and capital accounts) sufficiently detailed to clearly demonstrate that the applicant will be in a position to readily secure financing for construction, operation, and closure, post-closure, and corrective action if the permit is issued. At least 3 balance sheets should be included as of: a) approximately the date of the permit application, b) 12 months after any construction is completed (or assumption of operational control for a permit transfer), and c) 24 months after any construction is completed (or assumption of operational control for a permit transfer).

2. Letters of opinion

The submitted financial plan must be accompanied by original letters of opinion from two financial experts, not otherwise employed by the applicant, who have the demonstrated ability to either finance the facility or place the required financing. If the permit action sought involves construction of a new facility or expansion of an existing facility, the opinion letters must certify that financing is obtainable within 180 days of permit approval and include the time schedule contingent upon permit finality for securing the financing as well as certify the financial plan is reasonable. Even if the application does not involve a facility or capacity expansion, the opinion letters must certify that the financial plan is reasonable. Only one opinion letter from a financial expert, not otherwise employed by the applicant, is required if the letter renders a firm commitment to provide all the necessary financing.

Letters of opinion are usually issued by investment or commercial bankers but there could be additional sources. Applicants are encouraged to verify the adequacy of the credentials of their chosen financial expert with TCEQ's financial assurance unit prior to a formal engagement. Financial experts should describe their qualifications and disclose their independence from the applicant and/or any entity or person affiliated with the applicant.

3. Operating and cash flow statement

This portion of the requirement calls for a written detail of the annual operating costs of the facility and a projected cash flow statement including the period of construction and first two years of operation. The cash flow statement must demonstrate the financial resources to meet operating costs, debt service, and provide financial assurance for closure, post-closure care, and liability coverage requirements. A list of the assumptions made to forecast cash flow must also be provided.

4. Explanation statement

This portion of the requirement calls for a statement addressing how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

5. Construction capital cost estimates

This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

- D. Entities with a resolution from a governing body approving or agreeing to approve the issuance of bonds to satisfy financial assurance requirements (e.g. a city or county)
 - 1. Explanation statement

This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC30 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (ie. which financial assurance mechanism is or will be used).

- 2. Certified copy of the resolution from the governing body.
- 3. Certification by the governing body of passage of the resolution.

II. Permit Renewals

Complete the **Financial Disclosure Letter** letter with applicable information inserted into the parentheses. *Note that additional information must be provided if requested by TCEQ.*

Appendix VIII Financial Assurance

Appendix VIII.A

Financial Assurance Information Requirements for All Applicants

Permittee: Dal-Tile Corporation

Task	Cost
Site preparation, fencing, paving, curbing, lighting, roadways	Not applicable
Foundations, buildings, other structures, utilities and connections, drainage system, HVAC system, electrical system, wastewater system	
Process and control equipment	
Auxiliary equipment, including but not limited to exhaust hoods fans, ducting, pumps, piping, conveyors, stacks, storage tanks, process tanks, waste disposal facilities, pollution control equipment, and fire protection system	
Process integration and instrumentation	
Emergency response equipment	
Transportation equipment	
Office equipment	\$0.00
Engineering design, supervision, overhead	
Construction expenses including permits, insurance, temporary facilities, and clean-up	
Contractor's fees and overhead	
Contingency	
Total Unit Closure Cost	\$0.00

Table VIII.B. - Estimated Capital Costs

Appendix VIII.B

Applicant Financial Disclosure Statements



October 29, 2020

Ms. Cynthia Scoggins Industrial and Hazardous Waste Permits Section Texas Commission on Environmental Quality Building F, MC 130 12100 Park 35 Circle Austin, Texas 78753

Re: Financial Disclosure Letter for Dal Tile Corporation Permit Renewal Elam Landfill Hazardous Waste Permit No. 50377 Industrial Solid Waste Registration No. 52013 EPA ID No. TXD988032751 RN 103858163 CN 600128797

Dear Ms. Scoggins:

This letter is furnished to you in response to financial disclosure requirements as applicable under Texas Health and Safety Code Section 361.085 and Title 30, Texas Administrative Code (30 TAC), Section 305.50 to provide assurance that Dal Tile Corporation has sufficient financial resources.

In keeping with the above law and rule requirements, I hereby certify that Dal Tile Corporation is adequately capitalized and has sufficient financial resources to operate, close, provide post-closure care for and perform corrective action for the above-referenced facility in a safe manner, and in compliance with the permit and all applicable rules.

Dal Tile Corporation currently provides, as financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet Dal Tile Corporation's financial assurance obligations the following:

Standby Regulatory Trust

I am authorized to make these statements on behalf of Dal Tile Corporation. I understand that the TCEQ may request additional information as part of their review.

Sincerely,

Elizabeth Hanlon Deputy General Counsel, Hard Surfaces Mohawk Industries, Inc. 160 S. Industrial Boulevard (30701) Calhoun, Georgia beth_hanlon@mohawkind.com

MohawkFlooring.com | 1-877-ASK-MOHAWK (275-6642) 160 South Industrial Blvd., Calhoun, GA 30701 From TAC Chapter 305.44

All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

cc: Robert Hurt

IX. Releases from Solid Waste Units and Corrective Action

Provide all Part B responsive information in Appendix IX. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> <u>and Instructions</u>.

The Texas Solid Waste Disposal Act, 30 TAC 335.167, 40 CFR 270.14(d) and Section 3004(u) of the Hazardous and Solid Waste Amendments of 1984 (HSWA) require that each hazardous waste management permit application review shall address corrective action for all releases of hazardous waste and hazardous constituents listed in 40 CFR 261, Appendix VIII, 40 CFR Part 264, Appendix IX, and/or other constituents of concern from any solid waste management unit (SWMU) and/ or Areas of Concern (AOCs) at a facility, regardless of the time at which waste was placed in such unit². For the purposes of HSWA Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks). Current EPA interpretation of this requirement has resulted in a Corrective Action process that begins with a RCRA Facility Assessment (RFA) to determine if corrective action is necessary.

²For the purposes of HSWA Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks).

The first step in the RFA is the development of a Preliminary Review (PR) from all available documentation for a facility (including but not limited to all facility documents, Part A, and Part B of the permit application, TCEQ correspondence files and inspection reports, etc.). The PR compiles available information on every SWMU and/or AOC that has ever existed at the facility. A unit checklist is completed for each SWMU and/ or AOC. On a unit-by-unit basis, the PR may recommend no further action for:

- well-designed and well-managed units
- units that have not managed hazardous wastes or wastes containing hazardous constituents;
- units already under corrective action by enforcement order; or
- units scheduled to be addressed in a compliance plan.

In addition, the unit checklists are summarized in a *Facility Checklist*. If there is a known release or potential for a release of hazardous waste or hazardous constituents from a unit/area, the PR may recommend a *RCRA Facility Investigation* (RFI), or an *Affected Property Assessment* (APA), if 30 TAC Chapter 350, Texas Risk Reduction Program (TRRP) applies, to determine the extent of the release for future corrective action, or stabilization as an appropriate and immediate corrective action.

The second step is a *Visual Site Inspection* (VSI) of the entire facility. The RFA is the combination of the PR and VSI documentation and any sample results. The RFA process should be scheduled so as to be completed during the latter stages of the Technical Review process or no later than one month in advance of the preparation of an initial draft permit for the facility. The RFA includes recommendations for whether further investigation or corrective action is warranted.

The requirements for an RFI or any other corrective action will be included in the permit, in the associated compliance plan which is mandatory for facilities with known groundwater contamination, or pursuant to 40 CFR 270.14(d)(3), the applicant may be required to start the RFI or other corrective action before the permit is issued. The RFI shall comply with all the applicable items contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994, unless an alternate investigation approach is approved by the Executive Director. An RFI workplan may typically include a soil boring program, installation of monitoring wells, and sampling and analysis for 40 CFR 261 Appendix VIII and 40 CFR 264 Appendix IX hazardous constituents for surface soils, subsurface strata, surface water, groundwater, and/or air.

The permittee shall perform the RFI or APA and report the results. Corrective Action under 30 TAC Chapter 350 consists of an APA, determination of protective concentration levels, selection of a remedy standard (if necessary), development and implementation of a response action (if necessary), and submittal of required report according to 30 TAC Chapter 350.

If the RFI report indicates releases of hazardous waste or hazardous constituents for SWMUs and/or AOCs that have been grandfathered under 30 TAC Chapter 335 Subchapters A and S, Corrective Action shall consists of, if necessary, Interim Corrective Measures, *Baseline Risk Assessment* (BLRA)/*Corrective Measures Study* (CMS) Report, and *Corrective Measures Implementation* (CMI).

For grandfathered SWMUs and/or AOCs, the permittee may continue to complete the Corrective Action requirements under 30 TAC Chapter 335, Subchapter A and S, provided the permittee complies with the notification and schedule requirements pursuant to 30 TAC 335.8 and 350.(2)(m).

This report shall evaluate the risk, identify and evaluate corrective measure alternatives, and recommend appropriate corrective measure(s) to protect human health and the environment. The BLRA/CMS Report shall address all of the applicable items in 30 TAC 350, 30 TAC 335 Subchapter S, and the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994.

Upon approval of the BLRA/CMS Report by the TCEQ, the permittee shall submit a CMI Workplan to address all of the items for CMI Workplan contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. For projects conducted under TRRP, the risk assessment process shall be addressed in the *Affected Property Assessment Report* (APAR), and the evaluation of corrective measures shall be

TCEQ Part B Application TCEQ-00376 (Revised 10-31-2019) Page 53 of 61 conducted as part of the remedy standard selection process provided in the *Response Action Plan* (RAP). If the CMI or RAP does not propose a permanent remedy, then a CMI Workplan or RAP shall be submitted as part of a new compliance plan application or as a modification/ amendment application to an existing compliance plan. The workplan or RAP shall contain detailed final engineering design, monitoring plans, and schedules necessary to implement the selected remedy. Implementation of the corrective measures shall be addressed through a new and/or a modified/amended compliance plan. Upon installation of a corrective action system based upon the approved CMI Workplan or RAP, the permittee shall submit a CMI Report or RAP which includes as-built drawings of the corrective action system. To report the progress of the corrective measures, the permittee shall submit periodic CMI Progress Reports or Response Action Effectiveness Reports to the TCEQ in accordance with the schedule specified in the compliance plan. Upon completion of the corrective action requirements, the permittee shall submit CMI Report or Response Action Completion Reports for review and approval.

Please note that the applicant/permittee may perform voluntary corrective action, stabilization, or "interim measures" at any time prior to or during the RFA/RFI/CMS/CMI or the APAR/RAP process without prior TCEQ approval. The TCEQ strongly supports these actions when undertaken to mitigate releases or reduce or minimize exposure and releases to human health and the environment.

A. Preliminary Review Checklists

For Applications for a New Hazardous Waste Permit:

• For all facility Solid Waste Management Units (SWMUs) and/or Areas of Concern (AOCs), complete the accompanying forms entitled "Preliminary Review Facility Checklist" and "Preliminary Review Unit Checklist". Make additional copies as necessary.

For Applications for a Renewal/Amendment/Modification of an Existing Hazardous Waste Permit:

- Update the Preliminary Review Facility Checklist to include any newly identified SWMUs and/or AOCs that were not incorporated into the previous permit issuance (new, amendment, modification, or renewal), and to update the status of all previously identified SWMUs or AOCs which are incorporated into the existing permit under either Section IX Corrective Action for Solid Waste Management Units, or Section XI Compliance Plan. Status updates should include notes regarding whether the SWMU or AOC has been incorporated into a compliance plan, has received approval of no further action (NFA), has had changes in its corrective action status, or has had other determinations issued by the TCEQ. Include the date of the status change in the updated checklist;
- Complete the Preliminary Review Unit Checklists for any newly identified SWMUs or AOCs that were not incorporated into the previous permit issuance (new, amendment, modification, or renewal);
- Update the status on the Preliminary Review Unit Checklists for all previously identified SWMUs or AOCs that had not yet received TCEQ approval of NFA at the time of the previous permit issuance;
- Provide copies of the letters from the TCEQ approving NFA or other determinations that were issued since the previous permit issuance;
- For previously identified SWMUs and/or AOCs which are incorporated into the existing permit and are included in Section XI Compliance Plan of this application, you may forego filling out the Preliminary Review Unit Checklists for these units. Briefly note on the Preliminary Review Facility Checklist that the SWMUs or AOCs are addressed in

Section XI. Provide the location where the SWMU's and addressed in Section XI.; or

• If all previously identified SWMUs and/or AOCs reached NFA status at or before the last permit issuance you may forego filling out the Preliminary Review Unit Checklists, indicate Not Applicable, and provide a brief explanation of the facts.

Complete Preliminary Review Facility Checklist (located in attachments) Instructions for Preliminary Review Unit Checklist Preliminary Review Facility Checklist Preliminary Review Unit Checklist

Appendix IX

Releases from Solid Waste Units and Corrective Action

X. Air Emission Standards -RESERVED

Appendix X Air Emissions Standards

XI. Compliance Plan -RESERVED

Appendix XI Compliance Plan

XII. Hazardous Waste Permit Application Fee

Provide all Part B responsive information in Appendix XII. When preparing the physical format organize your submittal using the <u>Format of Hazardous Waste permit Application</u> and <u>Instructions</u>.

In accordance with 30 TAC 305.53, complete Tables XII.A. - Hazardous Waste Units (For Application Fee Calculations) and XII.B. - Hazardous Waste Permit Application Fee Worksheet. Use the following information in calculating your fee. The application fee will be nonrefundable once an initial review of the application has been completed. The applicant's fees are subject to evaluation by the technical staff of the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ reserves the right to assess further fees as may be necessary.

- A. The minimum permit application fee for a permit or a permit renewal for each hazardous waste facility to be used for Storage, Processing, Disposal, or Closure/Post-Closure Care (disposal has already occurred) of hazardous waste shall be \$2,000, plus notice fee, and the maximum shall be \$50,000, calculated according to these instructions:
 - 1. Process Analysis \$1,000.00.
 - 2. Management/Facility Analysis \$500.00.
 - 3. A facility unit(s) analysis of \$500 per unit is charged for the following:
 - a. each cell of a landfill (note that multiple cells that are identical in type and use are subject to a single \$500 fee);
 - b. tanks and container storage areas (note that multiple tanks and container storage areas that are identical in type and use are subject to a single \$500 fee)
 - c. identical in type and use means the following:
 - (1) made of the same material and same design;
 - (2) the same size/capacity within + 10%;
 - (3) store the same waste (as identified by USEPA hazardous waste number 40 CFR 261 Subparts C & D); and
 - (4) have the same management characteristics (e.g., storage only).
 - d. Each incinerator, boiler/industrial furnace unit, surface impoundment, waste pile, land treatment unit, drip pad, miscellaneous unit, or containment building.
 - 4. Site Evaluation \$100 per acre of surface used for hazardous waste management up to 300 acres. No additional fee thereafter. This shall be calculated as any acreage which will be permitted to manage hazardous waste. This shall include, for example, the entire area within the secondary containment of a tank farm, the area within a fence that surrounds individual units (other than the facility fence), or the area defined by the toe of the dike surrounding a landfill or impoundment, etc.
 - 5. An applicant shall also include with each initial application a fee of \$50 to be applied toward the cost of providing the required notice. An additional notice

fee of \$15 is required with each application for renewal.

- B. The application fee for a major amendment or a Class 2 or 3 modification to a hazardous waste permit for operation, closure, or post-closure care is subject to the fees listed below:
 - 1. A management/facility analysis fee of \$500.
 - 2. The notice fee is \$50.
 - 3. If a unit is added or a unit area is expanded for any purpose, \$100 per additional acre is assessed, until the total additional acreage reaches 300 acres.
 - 4. If one or more of the following reports are added or are significantly revised, the process analysis fee of \$1000 is assessed:
 - a. waste analysis plan;
 - b. site-specific or regional geology report;
 - c. site-specific or regional geohydrology report;
 - d. groundwater and/or unsaturated zone monitoring;
 - e. closure and/or post-closure care plan; or
 - f. RCRA Facility Assessments (RFAs), or corrective action reports;
 - g. Alternate Concentration Limit (ACL) demonstration or Development of Protective Concentration Limits (PCLs);
 - h. Regulated Unit Facility Assessment, Corrective Action (CA) work plans or reports for Regulated Units; and/or
 - i. RCRA Facility Investigation (RFI)/Affected Property Assessment (APA), Remedy Selection, Corrective Measure Implementation (CMI)/Remedial Action Plan for solid waste management units, and/or areas of concern;
 - j. Facility Operations Area (FOA).
 - 5. A unit analysis fee of \$500 per unit is assessed if any of the following occur:
 - a. if a unit is added (even if identical to units already in place, using the criteria discussed in A.3 above);
 - b. if there are design changes in an existing unit; or
 - c. if a unit status changes from closure to post-closure care;
 - d. Changes in the number, location, depth, or design of wells approved in compliance plan or a permit (unless it is a replacement well);
 - e. Changes in point of compliance and compliance monitoring program;
 - f. Changes in Groundwater Protection Standards, indicator parameters, Alternate Concentration Limits or Protective Concentration Limits; and/or
 - g. Changes in corrective action program.

hazardous waste permit is \$100 plus the notice fee of \$50.

Appendix XII

Hazardous Waste Permit Application Fee

Permittee: Dal-Tile Corporation

Verbal Description of Unit	Rated Capacity	Surface Acreage ¹	# of Unit Types ²	Identical Unit Justification ³
Elam Landfill	Not applicable	9.1	1	
		Total ⁴ ⁹	Total ⁴¹	

Table XII.A. - Hazardous Waste Units (For Application Fee Calculations)

- Number of calculated acres.
 Enter number of units except for units identical in type and use which only count toward a single \$500.00 fee.
 Explain justification for any units claimed as identical in type and use.
 Enter these totals on the worksheet.

Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

Name of Facility: Dal-Tile Corporation - Elam Landfill	
Solid Waste Registration Number: 52013	
1.Process Analysis - \$1,000	\$ 1,000
2.Facility Management Analysis - \$500	\$ 500
3.Unit Analysis units @ \$500 per unit	\$ 500
4.Site Evaluation acres @ \$100 per acre	\$ 910
(Maximum of 300 acres)	
⁵ .Minor amendment, Class 1, or Class 1 ¹ modification - \$100 6.Cost of Providing Notice - \$50 (+ \$15 for a renewal)	\$ \$ 0 \$ <u>65</u>
Pay This Amount	Total \$
Make Checks Payable To:	
Texas Commission on Environmental Quality - Fund 549 (your canceled check will be your receipt)	
Complete And Return With Payment To:	
Texas Commission on Environmental Quality Financial Administration Division - MC 214 P.O. BOX 13088 Austin, Texas 78711-3088	

The applicant's fees are subject to evaluation by the technical staff of the Texas Commission on Environmental Quality (TCEQ). However, the TCEQ reserves the right to assess further fees as may be necessitated.

Please do not submit a photocopy of the check (or equivalent transaction submittal) with your application packet but provide only the following account information:

Check No.	Date of Check	Check Amount

XIII. Confidential Material-RESERVED

Appendix XIII Confidential Material