Texas Commission on Environmental Quality

Waste Permits Division Correspondence Cover Sheet

Date: July 18, 2023
Facility Name: South Texas DeWatering Facility
Permit or Registration No.: 2417

Nature of Correspondence:
☐ Initial/New
☒ Response/Revision to TCEQ Tracking No.: 28154406 (from subject line of TCEQ letter regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
☐ New Notice of Intent	☐ Alternative Daily Cover Report
☐ Notice of Intent Revision	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Compost Report
☒ New Registration (including Subchapter T)	☐ Groundwater Alternate Source Demonstration
☐ Major Amendment	☐ Groundwater Corrective Action
☐ Minor Amendment	☐ Groundwater Monitoring Report
☐ Limited Scope Major Amendment	☐ Groundwater Background Evaluation
☐ Notice Modification	☐ Landfill Gas Corrective Action
☐ Non-Notice Modification	☐ Landfill Gas Monitoring
☐ Transfer/Name Change Modification	☐ Liner Evaluation Report
☐ Temporary Authorization	☐ Soil Boring Plan
☐ Voluntary Revocation	☐ Special Waste Request
☐ Subchapter T Disturbance Non-Enclosed Structure	☐ Other:
☐ Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☐ CCR Registration	☐ Extension Request
☐ CCR Registration Major Amendment	☐ Groundwater Monitoring Report
☐ CCR Registration Minor Amendment	☐ Interim Status Change
☐ Class 3 Modification	☐ Interim Status Closure Plan
☐ Class 2 Modification	☐ Soil Core Monitoring Report
☐ Class 1 ED Modification	☐ Treatability Study
☐ Class 1 Modification	☐ Trial Burn Plan/Result
☐ Endorsement	☐ Unsaturated Zone Monitoring Report
☐ Temporary Authorization	☐ Waste Minimization Report
☐ Voluntary Revocation	☐ Other:
☐ 335.6 Notification	
☐ Other:	

INTERA Incorporated
9600 Great Hills Trail, Suite 300W
Austin, Texas 78759 USA
512.425.2000

July 18, 2023

Mr. Steve Odil
Project Manager
Municipal Solid Waste Permits – MC 124
Texas Commission on Environmental Quality
12100 Park 35 Circle, Building F
Austin, Texas 78753

RE: Technical Notice of Deficiency Email Dated June 30 – Tracking No. 28154406
MSW Permit No. 2417 – South Texas Dewatering Facility

Dear Mr. Odil:

On behalf of South Texas Dewatering, INTERA Incorporated (INTERA) is submitting responses to your Technical Notice of Deficiency (NOD) email dated June 30,2023 regarding the Type V permit application for the South Texas Dewatering Facility in Alice. The enclosed documents address the NOD items listed in your email. The following information is included in this response:

- List of NOD comments immediately followed by a response for each comment.
- List of enclosures and replacement page instructions.

May 2, 2023 NOD Comments and Responses

1. Clarify maximum daily acceptance rates under Phase 1 and under Phase 2. Page 2-1 only indicates that "up to 164,000 gallons per day" will be accepted.

Response:

Section 4.1.6 indicates the Phase 1 maximum acceptance is 84,000 gpd. Sec 2.1 has been revised to clarify that the maximum waste acceptance rate is 84,000 gallons per day in Phase 1 and 164,000 gallons per day in Phase 2.

2. Information in the application indicates that there are no plans to process in the lead track easement, but the prohibition specified in the rule language is not clearly stated in the application. Please indicate that no waste will be unloaded, stored, processed, or disposed in any buffer, easement, or right of way within the permit boundary. Include the 24-foot buffer variance request in the first paragraph of Section 2.11. Delete the second sentence in the third paragraph in Section 2.11, as no exception for waste activity in an easement is provided under subsection 330.543(a).

Response:

Section 2.11 now prohibits the described activities in the easement and buffer zones. The 24 ft east buffer zone is stated in paragraphs 1 and 2. The sentence with the 330.543(a) reference has been deleted in the second paragraph of 2.11.

3. Explain how 50 vehicles/day was calculated.

Response: The maximum waste acceptance rate is 164,000 gpd, which is 25 loads from 5,000 gallon capacity trucks plus 13 loads from 3,000 gallon capacity trucks. Additionally, there is estimated to be 12 employee/vendor vehicles per day.

4. Clarify all information regarding secondary containment, particularly in areas of the process building where the roof is optional. Clarify what will be constructed with and without a roof. Address secondary containment for all sections of Phase 1 and Phase 2 designs. Page 4-2 indicates that a sump may be used for additional containment which will discharge to a dedicated storage tank or the city sewer. Provide design drawings for any storage tank, including secondary containment, you may use and illustrate its location on a site layout figure. Explain how you will ensure that contaminated water immediately discharged to the sanitary sewer will meet applicable pretreatment standards.

Response: Appendix 4 page 4-2 identifies that the storage and unloading areas have optional roofs. Calculations have been provided for each option on Appendix 4 pages 4-6 and 4-8. Spill prevention has been added for the Grit Drying Area on Appendix 4 page 4-4, and has been redescribed for the Unloading Area on Appendix 4 pages 4-3 and 4-4. The Grit Drying Area is described in Sections 3.1.2.1, 3.3, and Appendix 4 page 4-4 along with spill control. The Unloading Area spill prevention description in Section 3.3 and on Appendix 4 pages 4-3 and 4-4 has been revised so that additional storage tanks, a sump or sewer discharge of the spill are not needed. This is an approach that has been approved for other facilities (MSW 2343). Corresponding changes have been made to Figures 10 and 11.

5. For the existing building in the north end of the proposed facility, clarify its use and whether waste will be stored or processed within it to clarify the buffer zone exception requested adjacent to this building.

Response: Section 2.11 states that a 24 ft buffer is requested along the east boundary adjacent to the building and proposed processing areas. Operations are not currently proposed within the existing building, but could occur in the future with an approved permit modification.

6. Figure 9 illustrates three sumps. Provide generalized construction details for each. If protective coatings and periodic inspections will not be provided, explain how secondary containment will be provided.

Response: The revised spill protection descriptions have removed sumps at the unloading slab and grit drying area. Section 3.3 states that sumps will have a geomembrane underliner or protective surface coating with periodic inspections.

7. Provide a diagram showing the access routes and the expected flow of traffic within the facility. It appears from the current figure that traffic will pull directly in and back directly out. Explain if, and if so where, any turnaround will occur and how adequate turning radii are provided.

Response: Figure 9 has been revised to show that truck traffic will enter the facility and will make a U-turn to back into the unloading area. Figure 9 shows that adequate turning radii are provided.

8. Provide a response from TXDOT to demonstrate coordination.

Response: The coordination letter in Appendix 6 of the application was delivered to TxDOT in December 2022. On July 7, 2023, I emailed the TXDOT District Engineer in Corpus Christi to inquire about their review status. The District Engineer replied on July 10th and asked the TXDOT Area Engineer in Alice to review the coordination letter. The July 7th/July 10th email exchange is provided with this submittal for inclusion in Appendix 6.

9. Provide a response from the appropriate council of government to demonstrate coordination.

Response: I emailed the Executive Director of the Coastal Bend COG on July 7, 2023 to inquire about their review status. I have not received a reply.

List of Enclosures and Replacement Page Instructions

Enclosed are an original and two copies of the following:

1. Sealed and signed replacement Cover Page for Application Document that should replace the current cover at the front of the document.
2. Sealed and signed replacement Table of Contents pages ii, iii, iv, v, and vii that should replace the current pages with the same numbers.
3. A replacement Part I Form page 1 to replace the current Part I Form page 1.
4. A signed and notarized Part I Form Signature Page to replace the current Signature page.
5. Sealed and signed replacement Cover Page for Part II that should replace the current Part II Cover Page.
6. Replacement Part II pages 2-1 through 2-8 that should replace the current pages with the same numbers.
7. Replacement Part II pages 2-11 and 2-12 that should replace the current pages with the same numbers.
8. Sealed and signed Cover Page for Part III that should replace the current Part III Cover Page.
9. Replacement Part III pages 3-3 through 3-11 that should replace the current pages with the same numbers.
10. Replacement Figure 9 to replace the current Figure 9.
11. Replacement Figure 10 to replace the current Figure 10.
12. Replacement Figure 11 to replace the current Figure 11.
13. A replacement Appendix 4 fly sheet with the title changed to “Spill Prevention and Tank Secondary Containment Calculations” from “Secondary Containment Calculations.”
14. Sealed and signed Appendix 4 replacement pages APP-4-2 through APP-4-9 that should replace the current pages APP 4-2 through APP-4-8.
15. An email exchange with TxDOT that should be placed in Appendix 6.

One marked/redlined copy of the application cover pages and changes to the text in Parts II, III, and Appendix IV is also included.

An unmarked copy will also be mailed to the Waste Section Manager of the TCEQ Region 14 Office.

We appreciate your review of this application. Please contact me via email at jglaser@intera.com or via phone at 512.425.2058 if you have any questions.

Sincerely,

INTERA Incorporated

Jeff Glaser

Jeff Glaser, P.E.
Principal Engineer

Enclosure

cc: Mr. Howard Adams
Mr. Brian Dudley, P.E.
TCEQ Region 14 Waste Section Manager

SOUTH TEXAS DEWATERING FACILITY, ALICE, JIM WELLS COUNTY, TEXAS MSW PERMIT NO. 2417

TCEQ MSW Type V Permit Application

Prepared for:

South Texas DeWatering LLC
P.O. Box 721005
McAllen, TX 78504

Prepared by:

INTERA Incorporated
9600 Great Hills Trail
Suite 300W
Austin, Texas 78759

This document is issued for permitting purposes only.

7/12/2023

For permitting only

J. Jeffrey Glaser, P.E.
INTERA Incorporated
Registered Engineering Firm F-4722

Permit Application December 12, 2022
Revision 1 (Admin NOD) January 17, 2023
Revision 2 (Technical NOD) May 26, 2023
Revision 3 (Technical NOD) July 12, 2023

7/12/2023

For permitting only

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APPENDIX

1 PROPERTY LEGAL DESCRIPTION

2 MISCELLANEOUS ITEMS
- EVIDENCE OF LEGAL STATUS
- EVIDENCE OF COMPETENCY
- PROPERTY OWNER AFFIDAVIT
- TPDES CERTIFICATION STATEMENT
- LIQUID WASTE PROFILE FORM

3 TYPICAL DEWATERING EQUIPMENT INFORMATION

4 SPILL PREVENTION AND TANK SECONDARY CONTAINMENT CALCULATIONS

5 CLOSURE PLAN AND COST ESTIMATE

6 COORDINATION DOCUMENTATION

- TXDOT COORDINATION LETTER
- COASTAL PLAINS COUNCIL OF GOVERNMENTS LETTER
- TEXAS HISTORICAL COMMISSION LETTER

Texas Commission on Environmental Quality

Part I Application Form for New Permit, Permit Amendment, or Registration for a Municipal Solid Waste Facility

Application Tracking Information

Facility Name: South Texas DeWatering Facility

Permittee or Registrant Name: South Texas DeWatering LLC

MSW Authorization Number: 2417

Initial Submission Date: 12/12/2022

Revision Date: 7/12/2023

Instructions for completing this Part I Application Form are provided in TCEQ 00650-instr[1]. Include a Core Data Form (TCEQ 10400)[2] with the application for the facility owner, and another Core Data Form for the operator if different from the owner. If you have questions, contact the Municipal Solid Waste Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335.

Application Data

1. Submission Type	
☐ Initial Submission	■ Notice of Deficiency (NOD) Response

2. Authorization Type	
■ Permit	☐ Registration

3. Application Type	
■ New Permit	
☐ Permit Major Amendment	☐ Permit Limited Scope Major Amendment
☐ New Registration	

[1] www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/00650-instr.pdf
[2] www.tceq.texas.gov/goto/coredata

Signature Page

Site Operator or Authorized Signatory

I 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.

Name: Howard Adams Title: President

Email Address: stwwrgv@aol.com

Signature: _____ Date: 7-13-23

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ 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.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said Howard Adams

On this 13th day of July, 2023

My commission expires on the 14th day of May, 2024

_____

Notary Public in and for

Harris County, Texas

EMMANUEL A. MOLINA
Notary Public, State of Texas
Comm. Expires 05-14-2024
Notary ID 128986016

Note: Application Must Bear Signature & Seal of Notary Public

SOUTH TEXAS DEWATERING FACILITY

Part II Facility and Area Conditions and Characteristics

Prepared for:

South Texas DeWatering LLC
P.O. Box 721005
McAllen, TX 78504

This document is issued for permitting purposes only.

7/12/2023

For permitting only

J. Jeffrey Glaser, P.E.
INTERA Incorporated
Registered Engineering Firm F-4722

Prepared by:

INTERA Incorporated
9600 Great Hills Trail
Suite 300W
Austin, Texas 78759

December 12, 2022
Revision 1 (Admin NOD) January 17, 2023
Revision 2 (Technical NOD) May 26, 2023
Revision 3 (Technical NOD) July 12, 2023

2.0 THE FACILITY AND EXISTING CONDITIONS SUMMARY [330.61(A)]

South Texas DeWatering LLC (STD) is applying to the Texas Commission on Environmental Quality (TCEQ) to permit a Type V MSW Liquid Waste Processing Facility in Jim Wells County.

2.1 SUMMARY TECHNICAL REPORT

The proposed South Texas DeWatering Facility will be authorized by a TCEQ municipal solid waste permit, as required by 30 TAC §330.7(a). Type V facility permit rules are applicable as defined in 30 TAC § 330.5(a)(3).

The South Texas DeWatering Facility is located on a 3.277 acre tract located at 502 Commerce Rd (FM 3376) within the City of Alice in Jim Wells County, Texas. The facility is at latitude 27° 46' 29.85" N and longitude 98° 04' 39.26" W. The site currently contains a metal building (approximately 40 ft x 150 ft) at the front of the property and a 35 ft x 40 ft roofed slab set back about 420 feet from the front property line. The roofed area will be the general location of most of the processing operations. Maps indicating these features along with property boundaries are included in the Figures Section of the Application.

This facility will process municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, lint trap and septage waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges. The facility will be built in phases with maximum waste acceptance of 84,000 gallons per day in Phase 1 and 164,000 gallons per day in Phase 2.

The material will arrive via vacuum trucks delivered by properly licensed transporters. Manifests will be checked prior to accepting the material and any material found to be unacceptable under 30 TAC §330.15 will not be off-loaded. Unloading, waste storage and processing will occur at paved areas with spill containment.

Acceptable material will be pumped into waste storage tanks until processed. Unprocessed material will not be stored longer than 72 hours.

The processing of waste involves treatment, stabilization and dewatering of the liquid. Material to be processed will be pumped from the holding tank into a rolloff treatment unit or treatment tank. Polymer will be added to the material to de-water the waste. During this process, free liquid will drain from the treatment vessel and will be collected, buffered as necessary and discharged to the City sewer. Solids will be contained in the rolloff processing units by filtering panels, or in the case of tank treatment, will be pumped as a thick sludge to a sludge storage tank. Solids will be disposed at an authorized compost facility, processor or area MSW landfill. Grit trap waste is typically handled separately from other wastes and recovered grit trap solids will not be transported to a compost facility.

The site has been a bulk petroleum liquids distribution company site for many years and is in an industrial area with residences about 1/3 mile away. Traffic generated by the Type V processing operations is not expected to exceed 50 vehicles per day.

The Type V processing facility will operate in compliance with the Texas Solid Waste Disposal Act, and any other applicable regulations or rules so that the following conditions will not occur:

- The discharge or imminent threat of discharge of liquid or solid waste to the waters of the state without obtaining specific authorization for discharge from the TCEQ;
- the creation and maintenance of a nuisance; and
- the endangerment of human health and welfare or the environment.

2.2 WASTE ACCEPTANCE PLAN [330.61(b)]

The waste materials that will be processed at the facility are municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, lint trap and septage waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges collected within about 200

miles of Alice, Texas. Wastes may be delivered to the facility by independent transporters or by trucks affiliated with South Texas DeWatering LLC. No waste will be accepted from unregistered transporters. Each incoming load will be manifested and visually screened by trained employees for unauthorized or prohibited material before processing.

This facility will accept and process authorized liquid wastes for the purpose of separation into solids and liquid. The total waste stream may be composed of any percentage of the above listed waste streams, consisting of solids, fine particles, grease and water. General descriptions of the authorized wastes follow.

Septage is composed of approximately 2-5% total solids with the remainder being water. Levels of Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) may be in the 3,000-9,000 mg/L range. The grease content of septage may be about 500 mg/L and the pH is in the range of 5.0 to 8.0 s.u. The definitive characteristics of the waste vary substantially depending upon the generator of waste itself, the size and capacity of the septic tank and the frequency with which the tank is cleaned. Wastewater sludge is typically composed of 1-4% solids with the remainder being water. Food wastes are variable and may be beverages or other foods containing water and oils.

Grease trap waste is material collected in and from a grease interceptor in the sanitary sewer service line of a commercial, institutional, or industrial food service or processing establishment, including the solids resulting from dewatering processes. Lint waste is from an interceptor at a laundry. The generalized characteristics of the grease trap waste stream are:

Fats, oils, and greases:	6 - 8%
Solids:	20 - 25%
Water:	67 - 74%
pH:	4.5 - 5.5 s. u.
BOD/COD:	10,000 - 60,000 mg/L

Grit trap solids are dirt and sand, with occasional small amounts of large solids such as twigs and rocks. The grit trap liquid fraction has some oil, approximately 10-15% of which is removed in the dewatering process. This is petroleum oil from crankcase drippings, road oils, grease and oil washed from engines, and other like materials from interceptors in the drains prior to entering the sewer system at maintenance and repair shops, automobile service stations, car washes, and other similar establishments. These loads have a higher oil content than other grit trap sources

(e.g., wastewater treatment plants and laundries) and are referred to as oily loads. Additionally, some retail/commercial and industrial facilities have traps to accumulate oils and sediment from floor washing. Other oily loads that may occasionally be received, such as oil/waster separator waste, are managed with grit trap wastes.

BOD and COD do not impact the treatment of the material. The pH of the waste material does affect the effectiveness of the polymer to coagulate suspended solids and produce large curds of solid materials (floc). Depending on the waste stream, the pH may be adjusted to between 9.0 and 9.5 s.u. No other unusual constituents in these wastes will impact the design or operation of the facility.

The amount of waste that STD will treat each day can be composed of any mixture of allowable wastes and is limited to the daily maximum limit specified in Section 2.1 of this permit application.

2.2.1 Prohibited and Unauthorized (Excluded) Wastes

Prohibited and unauthorized (excluded) wastes are all wastes which are not municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, lint trap and septage waste; raw sewage, lift station and chemical toilet waste; animal wastes; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes including:

- Class 1 industrial waste as defined in Subchapter R of Chapter 335 (including wastes containing petroleum substances with a TPH>1500 mg/Kg);
- regulated hazardous waste as defined in §330.3;
- polychlorinated biphenyls (PCB) waste as defined in accordance with 40 CFR Part 761;
- radioactive waste as defined in Chapter 336; and
- unidentified wastes.

If an incoming load is suspected or confirmed as containing an unauthorized, unknown, Class 1, hazardous, or PCB waste, the material will not be unloaded, and the transporter will remove the material from the site. This determination is made using the waste acceptance procedures identified in Section 4.1.4 in concert with the waste pre-approval and testing procedures identified in Section 4.1.3. If the operator becomes aware that hazardous wastes have been inadvertently accepted, they will immediately contain the accepted material by terminating process flow and

will return the material to the transporter or generator, if practical, or contact a company licensed and permitted to handle and dispose of such materials. The TCEQ will be immediately notified if any prohibited or unauthorized wastes are accidentally accepted. Records of the notification will be kept in the site operating record and will include the date and time of notification, the individual contacted, and the information reported.

2.3 FACILITY SETTING [330.61(c-f, l)]

The facility is located at 502 Commerce Road (FM 3376) in Alice, Texas. Figure 1 (Vicinity Map), Figure 2 (Topographic Site Location Map), and Figure 3 (Aerial Photo) provide general location maps showing the facility's proximity to surrounding features. Figure 4 depicts the schools, churches, licensed day care/child care centers, ponds, lakes, residential, commercial, and recreational areas within one mile of the facility. There are no historic structures or sites, archaeologically significant sites, sites having exceptional aesthetic quality, or hospitals within one mile of the facility. The site is well suited for the processing facility, as it is located within a long-established industrial area. Surrounding commercial/industrial properties provide a suitable buffer to residential land use. The site layout plan is contained in Figure 9.

A water, oil, and gas well search within 500 feet of the facility has been conducted. An on the ground field survey was also performed in the area. One water well was located within 500 feet of the facility. No oil or gas wells were identified within 500 feet of the site. The water well, located approximately 424 feet to the northwest of the site, is an unused City of Alice well that was installed in 1960 to a depth of 896 feet.

All structures within 500 feet of the facility are described in Section 2.4.1. There are no drainage, pipeline, or utility easements within the facility. There is an unused lead track easement (rail spur) noted on the survey. The main rail line and spurs have all been removed and industrial buildings constructed on the alignment on nearby lots. Access to the site is controlled by a minimum six-foot-high chain link fence surrounding the tract, and vehicular gates exist at north and south locations shown in Figure 9.

The Alice International Airport is located approximately 3.3 miles southeast of the facility. Naval Auxiliary Landing Field Orange Grove, a military airport, is located just over 7 miles north-northeast of the facility. Airport locations are shown on Figure 1.

Runoff from the site generally flows towards the north and drains into a ditch located on the south side of Commerce Road at the north end of the facility.

A wind rose diagram showing the prevailing southeasterly wind direction is provided in Figure 7.

No known historic or prehistoric cultural resources have been identified within the project area. The Texas Historical Commission (THC) has been notified of this Permit application. A copy of the letter is provided in Appendix 6, and any response will be added to this application or the Operating Record.

2.4 IMPACT ON SURROUNDING AREA [330.61(g-h)]

The facility will not adversely impact human health or the environment and is compatible with existing land use and growth patterns as described in the following sections.

2.4.1 Land Use Setting

The land use within one mile of the site is shown in Figure 4. The site is surrounded by commercial and industrial properties, with some residential areas beyond approximately 1/3 mile. Within 500 feet of the site is a Baker Oil Tools facility, an MSI/Dixie Ironworks manufacturing facility, a Key Energy facility, an events center (611 Commerce Venue Hall), an auction house (ATX Auctions), a Drill Pipe Inc. facility, and a welder (Torres Welding and Fabrication).

The closest residential properties are approximately 0.32 mile to the south and 0.33 mile west of the facility. These residential areas are separated from the facility by property zoned as commercia/industrial. Additional residential properties are located approximately 0.42 mile to the north and 0.5 mile to the east. These residential areas are also separated from the facility by property zoned as commercial/industrial. The Baker Oil Tools facility adjoins the site to the south. The MSI/Dixie Ironworks facility adjoins the site to the west. The Drill Pipe Inc. facility adjoins the site on its east side. To the north of the site, across Commerce Road, is the Key Energy facility and the events center. One water well, unused City of Alice well, is located within 500 feet of the facility.

There is a church located within a mile of the site. The church is located approximately 0.7 mile east-southeast of the site. Schallert Elementary School is located approximately 0.98 mile to the

southeast of the site. Parks in the vicinity are Anderson Park (located 0.80 mile to the southeast) West Park (located 0.64 mile south-southeast), and Lake Findley Park (located 0.93 mile northeast). There are no historic structures or sites, archaeologically significant sites, or sites having exceptional aesthetic quality within one mile of the facility. There is one licensed child care center within one mile of the facility. It is approximately 0.8 miles from the facility.

The approximate number of residences and businesses within one mile of the site and approximate distances to the nearest residence and commercial entity are shown in Table 2.1 below:

TABLE 2.1

Number of Businesses and Residences Within One Mile		
Type	**Number**	**Closest Distance**
Businesses	25	101 feet
Residences	977	0.32 miles

2.4.2 Growth Trends and Zoning

The facility is located within the City of Alice, Jim Wells County, Texas. Growth in the vicinity of the site has been slow and primarily composed of industrial and commercial development along Commerce Road and Business US 281. The facility will not adversely impact human health or the environment.

Historical imagery from 1995 and 2020 from Google Earth were compared to evaluate growth in north Alice in the vicinity of the site. Little change was observed in this 25-year period. Some new development was observed near US 281 to the west of the site. No new neighborhoods were noted. According to City of Alice officials, most of the residential growth in the area has been on the south side of the city. Another limiting factor to growth near the site is the special flood hazard areas (shown on Figure 6) that are located to the north and south of the site.

The site is zoned commercial/industrial (see Figure 4A) and is within an area with limited growth that is compatible with its use. The site is separated with at least a ¼ mile buffer from current residential areas.

2.5 TRANSPORTATION [330.61(i)]

The primary access route to the site will be from Commerce Road (FM 3376) and Business US 281. Commerce Road borders the site to the north and provides access to the facility. Business US 281 runs north-south and intersects Commerce Road approximately 0.30 mile west of the site. Commerce Road is designated as a minor arterial roadway with a 24-foot wide asphalt pavement driving surface. Commerce Road provides access to many of the commercial/industrial facilities near the site.

As shown on Figure 8, the TxDOT 2020 District Traffic Map indicates the annual average daily traffic (AADT) count on Commerce Road near the site is 3,779 vehicles/day, with a similar count of 3,815 vehicles/day on Commerce Road less than one mile east of the site. A secondary access road, Business US 281, which intersects Commerce Road approximately 0.30 mile to the west of the facility, is shown to have a 2020 AADT of 3,551 vehicles per day at the monitoring location located just north of the intersection.

The most updated TXDOT traffic volumes for the access roads within one mile of the facility, including the 2040 projected volumes, are listed in Table 2.2 following. As shown, TXDOT expects traffic volumes on Commerce Road and Business US 281 to increase over the next 18 years

TABLE 2.2

Location	AADT Count for 2020 (vehicles/day)	Projected Volume in 2040 (vehicles/day)
Commerce Road near Business US 281	3,779	5,291
Commerce Road near North Texas Blvd	3,815	5,341
Business US 281 near Commerce Road	3,551	4,971

Up to an average 50 vehicles/day are expected to be generated by the facility at the requested operating capacity. This volume will be distributed throughout the day and will not cause any disruption of normal traffic patterns. As such, the facility's impact on nearby roads is insignificant.

The letter of coordination with the TxDOT Alice district has been included in Appendix 6.

or contribute to the taking of any endangered or threatened species.

The Texas Parks and Wildlife Department's *Rare, Threatened, and Endangered Species of Texas by County* website was researched, and its records indicated 64 listed rare, threatened, or endangered species as occurring in Jim Wells County, Texas. They included 4 amphibians, 13 birds, 1 fish, 14 mammals, 3 insects, 1 mollusk, 10 reptiles, and 18 plants. Habitat conditions were evaluated and compared to the preferred habitat of the species known or having historically occurred in Jim Wells County. The 3.277-acre facility is in an industrial area within the City of Alice and would not be a preferred habitat of the listed species. The site has been utilized for industrial purposes for over 35 years and is currently surrounded by industrial or commercial facilities. Some trees are located within the fenced facility. There are currently no plans to remove any trees.

2.10 COUNCIL OF GOVERNMENT REVIEW 330.61(p), REVIEW OF APPLICATION BY GOVERNMENTAL AGENCIES 39.103 (c)

The Coastal Bend Council of Governments was provided with Parts 1 and 2 of this application and asked for a determination of conformance with the Regional Solid Waste Plan (See Appendix 6). Any response received will be included in the facility's Operating Record. The site is located within the jurisdiction of the City of Alice, Jim Wells County. The Mayor, County Judge and Health Authority are listed below:

Mayor Cynthia Carrasco
P.O. Box 3229
Alice, TX 78333

Juan Rodriguez – Jim Wells County Judge
200 N. Almond Street, Ste. 101
Alice, TX 78332

Public Health Region 11
Emilie Prot, Regional Medical Director
601 W. Sesame Dr.
Harlingen, TX 78550

2.11 EASEMENTS AND BUFFER ZONES [330.543]

A 50-foot buffer zone exists between the permit boundary and waste loading, storage, and processing areas except along the boundary east of the existing building and operations area, where a minimum 24 ft buffer exists as shown on Figure 9.

A full 50-foot buffer zone along the east boundary near the existing building and proposed liquid processing facilities is not needed for firefighting or emergency access to the waste management areas at the STD facility. STD seeks TCEQ approval for a 24-foot buffer zone along the east boundary of the site.

There is a 25 ft lead track easement east-west across middle of the tract that is a vestige of an unused provision for a rail spur to a now-abandoned rail main line. Industrial buildings have been constructed on the spur alignment on nearby lots. There is no processing planned in this area, and there are no other easements on the facility property. No waste will be unloaded, stored, processed, or disposed within the 24 ft and 50 ft buffer zones or within any easement or right-of-way within the permit boundary.

2.12 NON-APPLICABLE REGULATORY SECTIONS

The following sections of the MSW regulations are not applicable to the subject facility.

- §330.61(b)(1)(B and C), waste acceptance requirements applicable only for transfer stations and landfills;
- §330.61(d)(3), applicable only for facilities with monitor wells, which is not this facility;
- §330.61(d)(7), for screening. This facility does not require screening since the processing occurs inside a building and waste is not visible.
- §330.61(d)(9), applicable only for landfill units;
- §330.61(i)(5), applicable only for landfill units;
- §330.61(j)(2), (3), and (4), applicable only for landfill units;
- §330.61(n)(2), applicable only for landfill units;
- §330.543(b)(2) and (3), applicable only for landfill units and alternative buffer zone requirements;
- §330.545, airport requirements applicable only at landfills;
- §330.549, applicable only for facilities located over recharge zone of the Edwards Aquifer, which this facility is not;
- §330.553(b), is not applicable, because the facility is not located in wetlands;
- §330.555(a), applicable only for landfills and waste disposal in fault areas;
- §330.557, applicable only for landfills in seismic impact zones;
- §330.559, applicable only for landfills in unstable areas;
- §330.561, applicable only for landfills in coastal areas; and

SOUTH TEXAS DEWATERING FACILITY

Part III Site Development Plan

Prepared for:

South Texas DeWatering LLC
P.O. Box 721005
McAllen, TX 78504

Prepared by:

INTERA Incorporated
9600 Great Hills Trail
Suite 300W
Austin, Texas 78759

This document is issued for permitting purposes only.

7/12/2023

For permitting only

J. Jeffrey Glaser, P.E.
INTERA Incorporated
Registered Engineering Firm F-4722

December 12, 2022
Revision 2 (Technical NOD) May 26, 2023
Revision 3 (Technical NOD) July 12, 2023

be dewatered on a slab that drains to a sump with controlled runoff and runon. The grit trap waste slab area, however, is not anticipated to be operational until Phase II.

Brown grease that may float to the top of tanks may be recovered and sent to a processor to be recycled into energy related products or other beneficial use products. It is not considered to be a waste. Brown grease may be further dewatered with a flash steam or other process similar to that developed by the biofuels industry.

PHASE II OPERATIONS

In Phase II, up to 4 additional waste storage or processing tanks may be added to handle the wastes. Other ancillary processing equipment may be added as described in Phase I operations.

In addition to the rolloff processing units, tank processing may occur where the waste liquid and fine waste particles are mixed and stabilized to an acceptable pH through the addition of hydrated lime or other flocculant during processing in the tanks. Natural gravity separation or flocculated separation occurs with grease waste concentrated at the top with solids settling to the bottom. The middle may be relatively dilute wastewater that may be decanted from the tank and transferred to a dissolved air floatation (DAF) unit for sewer discharge pretreatment or directly to the sewer without further processing as desired by the Alice Wastewater Department. High solids sludge recovered from the tank can be pumped to a storage tank or tanker truck for transport to an authorized compost or processing facility. Heated tanks may also be used to separate and decant grease for recovery as marketable brown grease.

A grit trap waste drying area may be constructed to the west of the unloading area as shown in Figure 10. The area will receive wet grit and allow any free water to drain to the middle of the area to be pumped out. The remaining low-moisture grit can be removed by a front-end loader and transported offsite to an authorized disposal facility. The area contains a concrete or paved slab and 1 ft high perimeter curbs with a rollover curb on the north side to allow access to a front-end loader during cleanout. The slab will slope slightly to the midpoint of the area, where an approximate 7.5 ft square area will be delineated with filter fabric or other material to effectively create a low area for liquid removal by a pump for disposal at an authorized disposal facility. The grit area will have a roof or a cover to divert rainfall from mixing with the grit.

Spill containment and closure cost estimates associated with each Operating Phase are contained in Appendices 4 and 5.

3.1.2.2 Ventilation and Odor Control 330.63(b)(2)(C)

Because of the nature of the waste material handled at the facility, the facility is permitted by rule and does not require a site-specific air permit (30 TAC 106.532). Odor will be controlled at this facility through moving wastes expeditiously through the process and off-site, minimizing contact between unprocessed waste and air and by following good housekeeping practices including regular washdown of surfaces contacting waste and cleanup of spilled waste. If airflow is limited over the surface of liquid as waste is transferred and processed, then odors will not be mixed with large volumes of air and widely distributed throughout the site.

The processing units containing waste will be covered when feasible to limit exchange of air and air contact with waste. In the event that odors related to the facility are a nuisance, deodorizing misters or foggers may be installed. These will be strategically located along the perimeter fence or process area to mitigate odor emissions from the property boundary. Odor absorbing filters or an air scrubber may also be used as needed. Further discussion of ventilation and odor control is contained in the Part IV, Site Operating Plan, Section 4.14.

3.1.2.3 Generalized Construction Details of Processing and Storage Units,330.63(b)(2)(D), (E), and (F)

Tanks and equipment used at the facility are presented in the following table (see Figure 10 for locations):

Unit Name	Maximum Number	Maximum Size	Materials of Construction	Function
PHASE I				
1. Unloading Screen/filter and Debris Hopper	1			Screen debris from the liquid waste
2. Waste Storage Tanks	2	21,000 gal/each	Steel	Waste and effluent storage, wastewater buffering
3. pH Adjustment System and Caustic Supply Tank	1	3000 gal	HDPE or Fiberglass	Waste or wastewater buffering

Unit Name	Maximum Number	Maximum Size	Materials of Construction	Function
4. Polymer Injection System	1	1000 gal	HDPE or Fiberglass	flocculant storage and injection into waste stream
5. Processing Unit (roll-off container or other configuration)	2	30 cy, nominal	steel	DeWatering of waste and transfer of solids from facility
6. Centrifugal Trash Pumps (Portable or dedicated)	3			Transfer of waste and wastewater
7. Boiler System	optional			Tank heating
8. Dump Trailer	optional	45 cy	steel	Waste transport
PHASE II (ADDITIONAL EQUIPMENT)				
9. Heated Brown Grease Holding Tank	optional	12,000 gal	Steel	Storage of recovered grease for recycling
10.Waste Storage/Processing Tanks	Up to 4 additional	20,000 gal/each	Steel	Waste and Effluent Storage, Wastewater Buffering
11.Polymer Injection System	1 additional	1000 gal	HDPE or fiberglass	flocculant storage and injection into waste stream
12.Belt Press with conveyor and ancillary equipment for operation	optional	Typically 2.0 meter		DeWatering of the waste
13.Processing Unit	1 additional	30 cy, nominal	Steel	DeWatering of waste and transfer of solids from facility
14.Dissolved Air Floatation (DAF) Unit	optional		Steel	Wastewater pretreatment

All concrete slabs, curbs and walls contain steel reinforcement. A representative storage or processing tank and rolloff processing unit are illustrated in Appendix 3.

3.1.2.4 Storage, Analysis and Disposition of Processed Materials 330.63(b)(2)(G) and (H), 330.63(d)(1)(C)

Processing at the facility separates the liquid wastes into wastewater and solids which will be stored and removed from the site as described below. The maximum time that unprocessed

material will be allowed to remain on-site is 72 hours. The average time that unprocessed material will remain on-site is estimated to be 24 hours.

Processed Wastewater

Effluent from the processing operation and other discharged liquids will be discharged to the City sewer in accordance with its requirements or transported to another authorized treatment or disposal facility such as a wastewater treatment plant or processing facility, compost facility, or anerobic digester.

Processed Waste Solids

Processed solids are retained in the processing unit. The solids will be removed from the facility in the roll-off processing units or transferred to a more efficient over-the-road roll-off, dump or tank truck for transport. A maximum of four transport containers may be staged and covered, ready for transport.

The solids will be taken to an authorized compost facility, processor or one of the permitted MSW landfills located in the area. Typically, the dewatered material will be on-site no more than 48 hours, except over weekends, when it may be onsite for 72 hours. Post-processing holding time will not exceed 7 days unless the material is reprocessed. The solids content of the wastes being processed will vary from 1% to over 25%, depending on waste type and source. An average 12% solids content can be assumed for an estimate of the maximum amount of solids which may be produced daily from a mixed waste stream. Assuming an average solids content of 12%, the quantity of processed waste solids expected at maximum production is 97 cy/day (wastes processed = 164,000 gallon/day → 21,925 cf/day x 0.12 typical avg. solids content = 2,631 cf/day = 97 cy/day).

If brown grease is recovered from the process, it may be stored in holding tanks for a period not longer than 30 days. The grease is not a waste and can be recycled into energy related products or other beneficial use products.

All solids sent for landfill disposal will pass the Paint Filter Liquids Test (EPA Method 9095). Landfilled solids will also be sampled by approved EPA methods and analyzed annually for

benzene, lead and total petroleum hydrocarbons (TPH). The solids will not exceed the following standards set in 30 TAC 330.205:

Contaminant	Total Limit	TCLP Limit	Test Method
Benzene	10 mg/kg	0.5 mg/L	EPA8021B
Lead	30 mg/kg	1.5 mg/L	EPA6020
TPH	1500 mg/kg	Not Applicable	TX1005 or app'd alternate

Any additional testing required by individual landfills or composting sites for waste classification will be followed and all records of analysis will be retained on-site for a minimum of three years.

Further description of waste sampling and testing is contained in Section 4.1.3

3.1.3 Sanitation and Water Pollution Control, 330.63(b)(3) AND (4)

The processing takes place at spill-contained paved surfaces that prevent surface water runoff onto, into and off of the processing area. The processing equipment will be inspected regularly and cleaned as required to minimize solids loading. Wash waters will not be allowed to accumulate on site without proper treatment to prevent the creation of odors or an attraction to vectors.

Pressurized water connections and washdown equipment, including hoses, sprayers and pressure washers, will be provided for the process and unloading areas. Slabs and walls adjacent to unloading areas, operating areas and equipment which require frequent washdown will be constructed of asphaltic concrete, reinforced concrete, steel or other non-porous hard-surfaced material.

All unloading areas, waste storage tanks, processing areas and transport staging slabs will be in areas with spill containment. There will be no surface water discharges from these areas. The slabs will be designed to allow collection of any minor spills and facility washdown water, which will then be routed to the sewer or through the processing equipment. All disposal of process liquids will be in a manner that will not cause surface or groundwater pollution.

The facility will not discharge contaminated water without specific written authorization.

3.1.4 Endangered Species Protection, 330.63(b)(5)

No special design is required for endangered species protection at the site. Trees at the site will be left in place. See Section 2.9 for additional information.

3.2 SITE DRAINAGE, 330.63(c) and 330.303

Surface water drainage at the facility will be controlled to minimize surface water running into and off the operations area. The run-on and runoff associated with the 25-year, 24-hour rainfall event will be controlled so there is no discharge of waste caused by the associated stormwater conditions.

No levees are required since the facility is not located within the 100-year floodplain.

3.3 WASTE MANAGEMENT UNIT DESIGN AND SPILL PREVENTION/CONTROL, 330.63(d)(1)(A-c) and 330.227

Unprocessed and processed waste liquids will be stored in enclosed tanks at the facility. The number and size of tanks used for processing and storage have been selected to provide the facility with the capacity to process all the waste received each day. With equipment that has a maximum Phase 2 process capacity of 180,000 gal/day (as described in Section 4.1.6) or 110% of the 164,000 gal/day maximum waste acceptance rate, the holding time of solid waste is minimized. The liquid waste, which may be capable of creating public health hazards or nuisances, will be stored in tanks and processed or transferred promptly. It will not be allowed to result in nuisances or public health hazards.

Anticipated processing rates and storage times for unprocessed and processed materials are described in Sections 3.1.2.1, 3.1.2.4 and 4.1.6.

Spill Prevention and Control

All liquid waste unloading areas, waste storage tanks, and processing areas will contain curbs and spill containment capacity. No stormwater runs onto the slabs, and no contaminated stormwater or wastewater will drain off the slabs to surrounding ground and leave the facility.

Each area has been designed to contain a spill equal to the capacity of the largest tank within the area along with managing the 25-year, 24-hour rainfall event storm volume. The calculations for

spill containment are included in Appendix 4 of this report. To prevent leakage, any sumps will be constructed with a geomembrane underliner or a protective surface coating that is inspected for damage at least semi-annually.

Storage Tank Area -- The storage tank area contains a paved slab and perimeter walls that have sufficient capacity to contain a spill from the largest storage tank of 21,000 gallons and the 25-year, 24-hour storm if no roof will cover the area. Calculations in Appendix 4 show that sufficient spill containment can be provided with 31-inch walls if no roof is provided or 20-inch walls with a roof.

Unloading Area -- Truck unloading of incoming liquid waste will occur at the paved unloading slab, which incorporates minimum 8.5 inch rollover curbs or walls to control runon and also contain waste spills. This area can store a 5,000 gallon spill, and if it is covered with a roof, it requires no additional spill handling procedures. Without a roof, special operating procedures will assure that spill-volume containment within the curbs is available prior to unloading, and pumping and tank storage capacity is always available so the spill will be quickly removed and the maximum spill and rainfall do not comingle and require storage (see Appendix 4).

Phase 1 Processing Building – Runon and spill control is provided by 5 inch rollover or standard curb at the perimeter of the building. Additionally, a minimum 1000 gallon sump is provided for collection and storage of liquids from the building.

Phase 2 Processing Building – A 2-ft high wall is provided around the perimeter of the building for runon and spill control from the 20,000 tanks. To promote easier access to the building, it may be constructed with the slab depressed about a foot below natural grade with the wall projecting above natural grade. Soil can be backfilled against the outside of the wall for easy access to doorways located above the wall height.

Grit Drying Area - The grit drying area is a slab surrounded by a 1 ft high standard or rollover curb to contain the moist grit. This area will have a roof or a cover to divert rainfall from mixing with the grit. There will always be at least 2 inches of freeboard above free liquids in the grit area to prevent overtopping and spillage.

3.4 CLOSURE PLAN AND COST ESTIMATE 330.63(h) and (j), 330.459, 330.461

The facility closure plan is contained in Appendix 5. It lists specific actions which must be accomplished when the site closes and the schedule for these actions. Once completed, the closure work is certified by an Engineer, and TCEQ will determine that the facility may be classified as properly closed.

Additionally, a cost estimate for closure actions is contained in Appendix 5. The financial assurance will be established in this amount and maintained for closure of the facility in accordance with TAC Chapter 37, Subchapter R, including annual inflation adjustments as required by TCEQ.

3.5 POST-CLOSURE 330.63(i) and 330.463

All wastes and waste residues will be removed from the site during closure, and no post-closure care will be required.

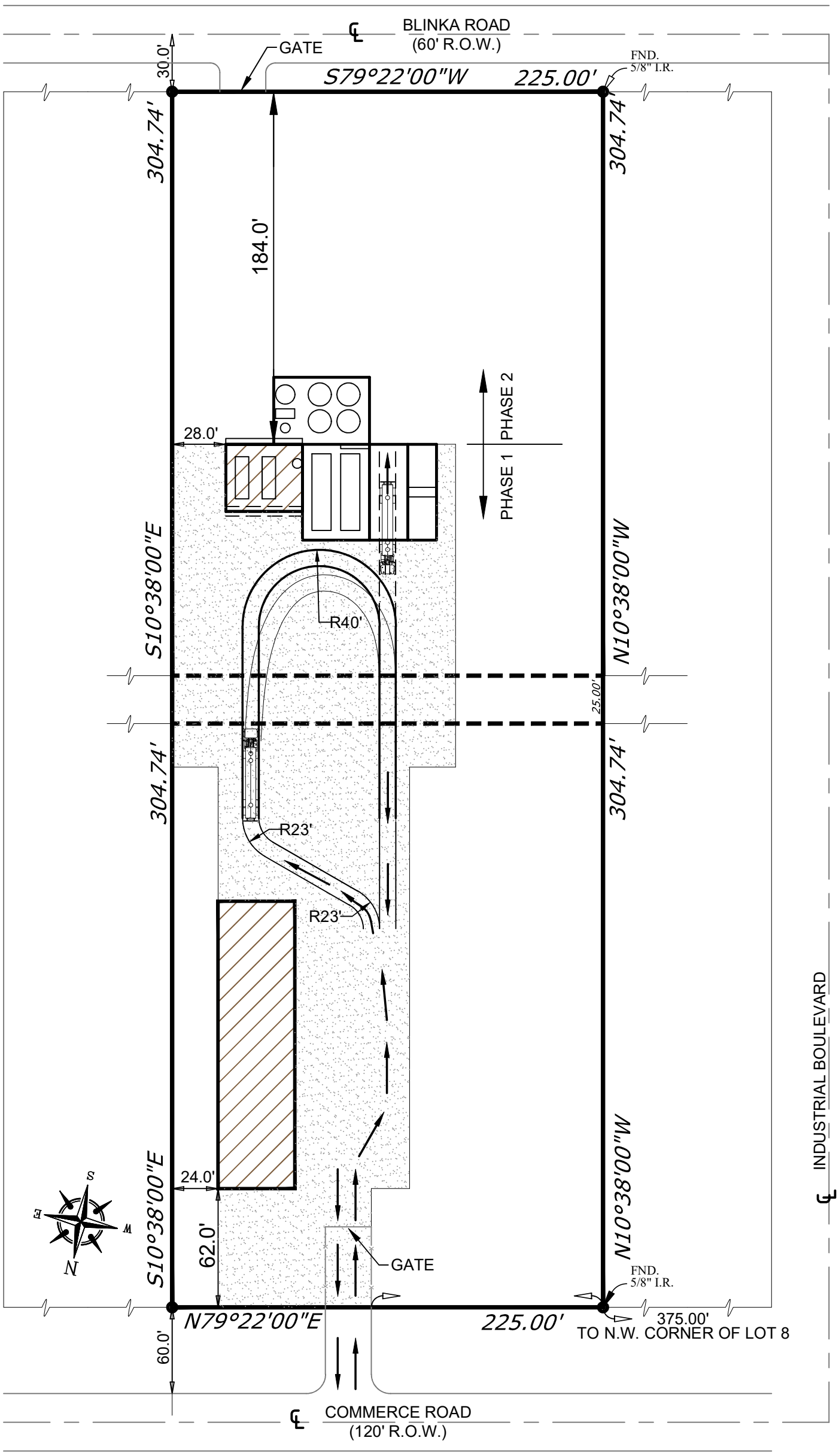
3.6 NON APPLICABLE REGULATORY SECTIONS

- §330.63(b)(2)(I), applicable only for transfer stations;
- §330.63(c)(1) and (2), applicable only for landfills;
- §330.63(d)(2), applicable only for incineration units;
- §330.63(d)(3), applicable only for facilities having a surface impoundment;
- §330.63(d)(4)-(7) and (9), applicable only for facilities other than Type V;
- §330.63(e), geology report applicable only for landfills and compost units;
- §330.63(f), groundwater sampling and analysis applicable only for landfills and some composting facilities;
- §330.63(g), applicable only for landfills' gas management plans;
- §330.305, applicable only for landfills;
- §330.307, applicable only for landfills;

- Subchapter F, applicable for laboratory analyses submitted for TCEQ decision-making. This facility will conduct some waste-related sampling for record purposes and will use EPA approved methods as described in Section 3.1.2.4, however, no reporting for decision-making is required;

- Subchapter H, applicable only to facilities with liners, which does not include this facility; and

- Subchapter J, applicable only to facilities with groundwater monitoring, which does not include this facility.



LEGEND

- EXISTING STRUCTURE
- ASPHALT PAVING
- TRACK EASEMENT (UNUSED)
- TRAFFIC FLOW
- R40' TURN RADIUS

BASE MAP SOURCE:
MEDINA ENGINEERING & SURVEYING 4531
AYERS STREET SUITE 225 P.O. BOX 7129
CORPUS CHRISTI, TEXAS 78467-7129
BUS. (361) 877-1255 FAX (361) 993-2955

STATE OF TEXAS
J. JEFFREY GLASER
79731
LICENSED PROFESSIONAL ENGINEER

7/12/2023

FOR PERMITTING ONLY

60 30 0 60
(SCALE IN FEET)

REV.	DATE	DESCRIPTION	DR BY	APP BY
2	7/12/23	Per Technical NOD2		
1	5/23	Added Traffic Flow		

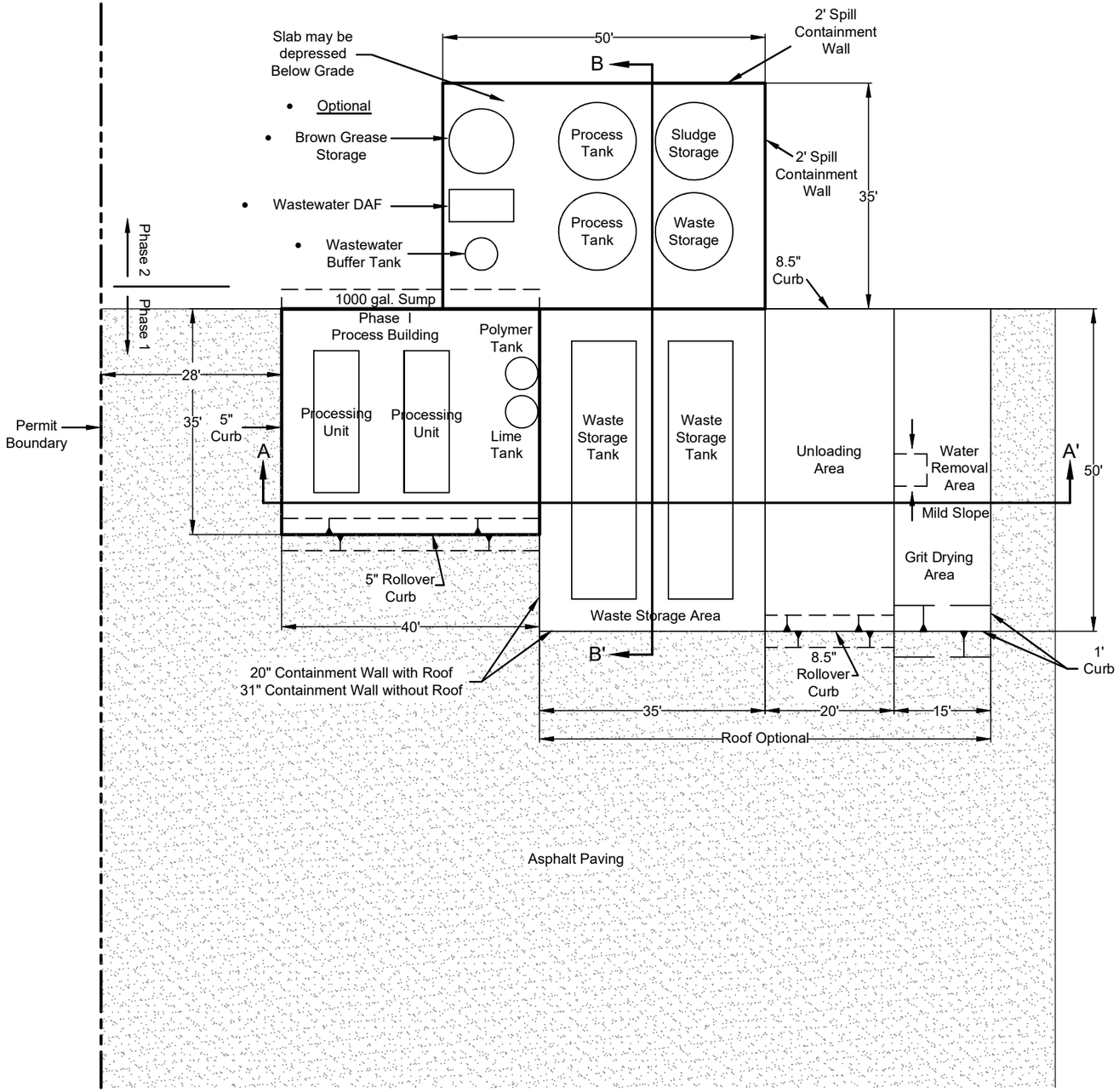
INTERA
9600 GREAT HILLS TRAIL, SUITE 300W
AUSTIN, TEXAS 78759 USA 512-425-2000
TEXAS REGISTERED ENGINEERING FIRM F-4722

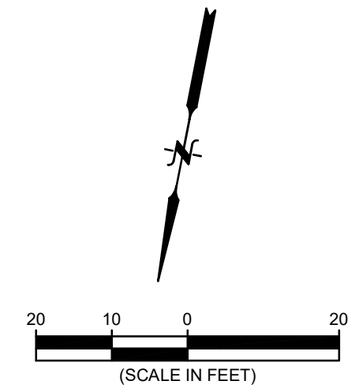
PROJECT: SOUTH TEXAS DEWATERING
502 COMMERCE ROAD
ALICE, TEXAS

SHEET TITLE: SITE LAYOUT PLAN

DES BY			SCALE:	SEE BAR SCALE
DR BY	SDB		PROJ NO.	STXWW.M001.MSW
CHK BY	JBD		DWG NO.	STXWW.M001.MSW009R2
APP BY	JJG		SHEET	1 OF 1 SHEETS
DATE ISSUED: 12-12-2022			FIGURE NO.	9
PURPOSE: PERMIT APPLICATION				

S:\AUS\STXWW.M001.MSW\CAD\STXWW.M001.MSW009 Site Layout Plan Fig 9R2.dwg





LEGEND

Permit Boundary

7/12/2023

FOR PERMITTING ONLY

REV.	DATE	DESCRIPTION	DR BY	APP BY
1	7/12/23	PER TECHNICAL NOD2		

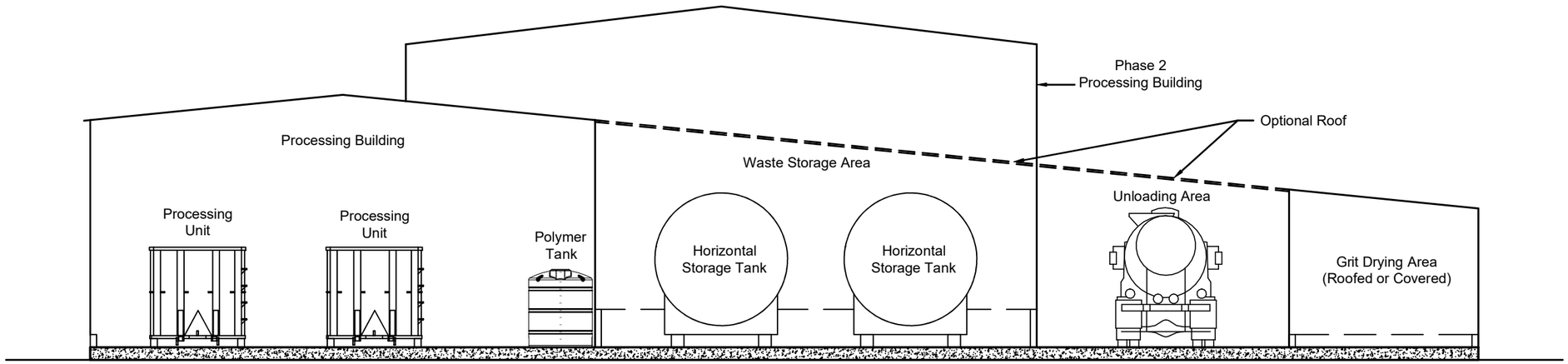
INTERA
9600 GREAT HILLS TRAIL, SUITE 300W
AUSTIN, TEXAS 78759 USA 512-425-2000
TEXAS REGISTERED ENGINEERING FIRM F-4722

PROJECT:
SOUTH TEXAS DEWATERING
502 COMMERCE ROAD
ALICE, TEXAS

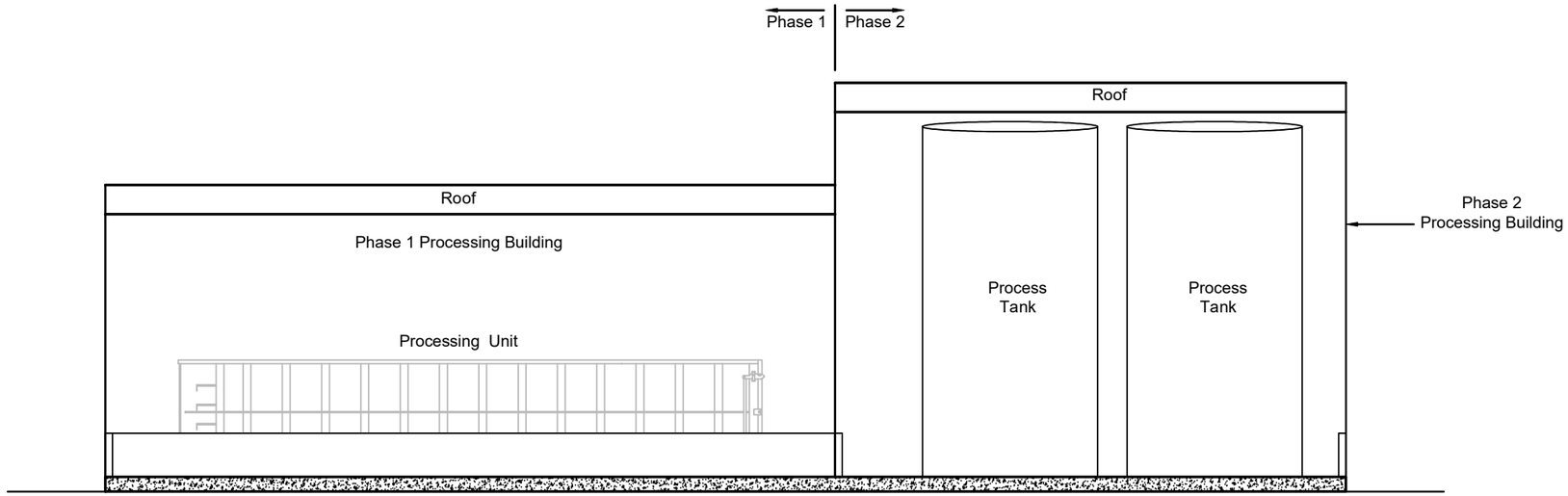
SHEET TITLE:
OPERATIONS AREA DETAIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJ NO. STXWW.M001.MSW
CHK BY	JBD		DWG NO. STXWW.MOO1.MSW010R1
APP BY	JJG		SHEET 1 OF 1 SHEETS
DATE ISSUED: 12-12-2022			FIGURE NO. 10
PURPOSE: PERMIT APPLICATION			

S:\AUS\STXWW.M001.MSW\CAD\STXWW.M001.MSW010 Operations Area Detail Fig 10R1.dwg



Cross-Section A-A'
Scale: 1" = 10'



Cross-Section B-B'
Scale: 1" = 10'

STATE OF TEXAS
J. JEFFREY GLASER
79731
LICENSED
PROFESSIONAL ENGINEER

7/12/2023

J. Jeffrey Glaser

FOR PERMITTING ONLY

REV.	DATE	DESCRIPTION	DR BY	APP BY
1	7/12/23	PER TECHNICAL NOD2		

INTERA
9600 GREAT HILLS TRAIL, SUITE 300W
AUSTIN, TEXAS 78759 USA 512-425-2000
TEXAS REGISTERED ENGINEERING FIRM F-4722

PROJECT:
SOUTH TEXAS DEWATERING
502 COMMERCE ROAD
ALICE, TEXAS

SHEET TITLE:
OPERATIONS AREA
CROSS SECTIONS

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJ NO. STXWW.M001.MSW
CHK BY	JBD		DWG NO. STXWW.MOO1.MSW011R1
APP BY	JJG		SHEET 1 OF 1 SHEETS
DATE ISSUED: 12-12-2022			FIGURE NO. 11
PURPOSE: PERMIT APPLICATION			

S:\AUS\STXWW.M001.MSW\CAD\STXWW.M001.MSW011 Operations Area Cross-Sections Fig 11R1.dwg

APPENDIX 4
SPILL PREVENTION AND TANK SECONDARY CONTAINMENT CALCULATIONS

7/12/2023

For permitting only

APPENDIX 4

SPILL PREVENTION AND TANK SECONDARY CONTAINMENT CALCULATIONS (330.227)

This Appendix presents spill prevention methods and the secondary containment for spilled waste from tanks and rainwater at the unloading, processing and waste storage tank areas shown in Figure 4-1. The areas are designed to control and contain spills and contaminated water from leaving the facility. Areas with tanks are designed to contain spilled waste equal to the capacity of the largest liquid storage vessel. Additionally, 8.81 inches of rain from the 25 year, 24 hour storm (NOAA, Atlas 14) is controlled by:

- preventing accumulation with a roof,
- providing full storage capacity at the area, or
- providing partial storage plus immediate drainage to a sump where it is automatically pumped to the sewer or dedicated tank storage.

The Phase 1 and 2 Buildings are enclosed and contain a roof. The Grit Drying Area will have a roof or cover. For the Waste Storage Area and Truck Unloading Area, a roof may or may not be built, and spill containment has been calculated for both options. Detailed calculations for secondary containment volumes are included as Tables in this Appendix.

Phase 1 Waste Storage Area

The design conditions assume that the largest 21,000 gallon waste storage tank leaks and loses all the liquid volume above the height of the released liquid contained inside the storage area. The other tank remains intact. The intact tank is elevated about a foot above the paved surface so some of the tank displaces spill volume since spilled liquid will be deeper than one foot. This volume is subtracted in the storage calculations. The storage tanks are enclosed with a concrete wall which is 20 inches tall if a roof is provided that prevents rainfall accumulation, or 31 inches tall if there is no roof. This provides sufficient capacity to contain both the spilled volume of the largest tank and water from the 25 year, 24 hour storm.

Phase 1 Processing Building

The design conditions for the Phase 1 Processing Building assumes that a 4,847 gallon processing unit leaks and loses all of the liquid. Any other processing unit remains intact, and since it is elevated above the slab, its presence does not reduce the storage capacity within the containment. Five and six foot diameter tanks may be present which displace storage volume, and this is subtracted in the calculations. Processing is performed on a concrete slab with 5 inch (0.417 ft) curbs and is connected to a 1,000 gallon sump on the south end. This provides sufficient capacity to contain a spill.

Phase 1 Truck Unloading Area

The Unloading Area is composed of a truck unloading area and is designed to contain a spill from a 5,000 gallon truck. A low 0.7 ft (8.5 inch) rollover curb is provided on the north and south sides of the unloading area and short walls on the other sides. This area can store a 5,000 gallon spill, and if it is covered with a roof, it requires no additional spill handling procedures.

Without a roof, precipitation is managed by operationally preventing the comingling of a spill and the 25-year, 24-hour rainfall at the unloading slab. Site operating requirements are as follows;

1. Any tanker may be unloaded at the unloading slab only under the following conditions:
    - Any retained stormwater has first been removed from the unloading area;
    - A 75 gpm pump or vacuum truck is available on-site to remove spills in the unloading containment area; and
    - The truck's volume capacity is available in the site's storage tanks in the event a spill occurs.
2. Spills in the unloading area must be removed immediately by pumping into available tank capacity within either the site's storage tanks or a tanker truck.

These procedures will assure that spill-volume containment within the curbs is available prior to unloading, and the always-available pumping and tank storage capacity will be able to quickly

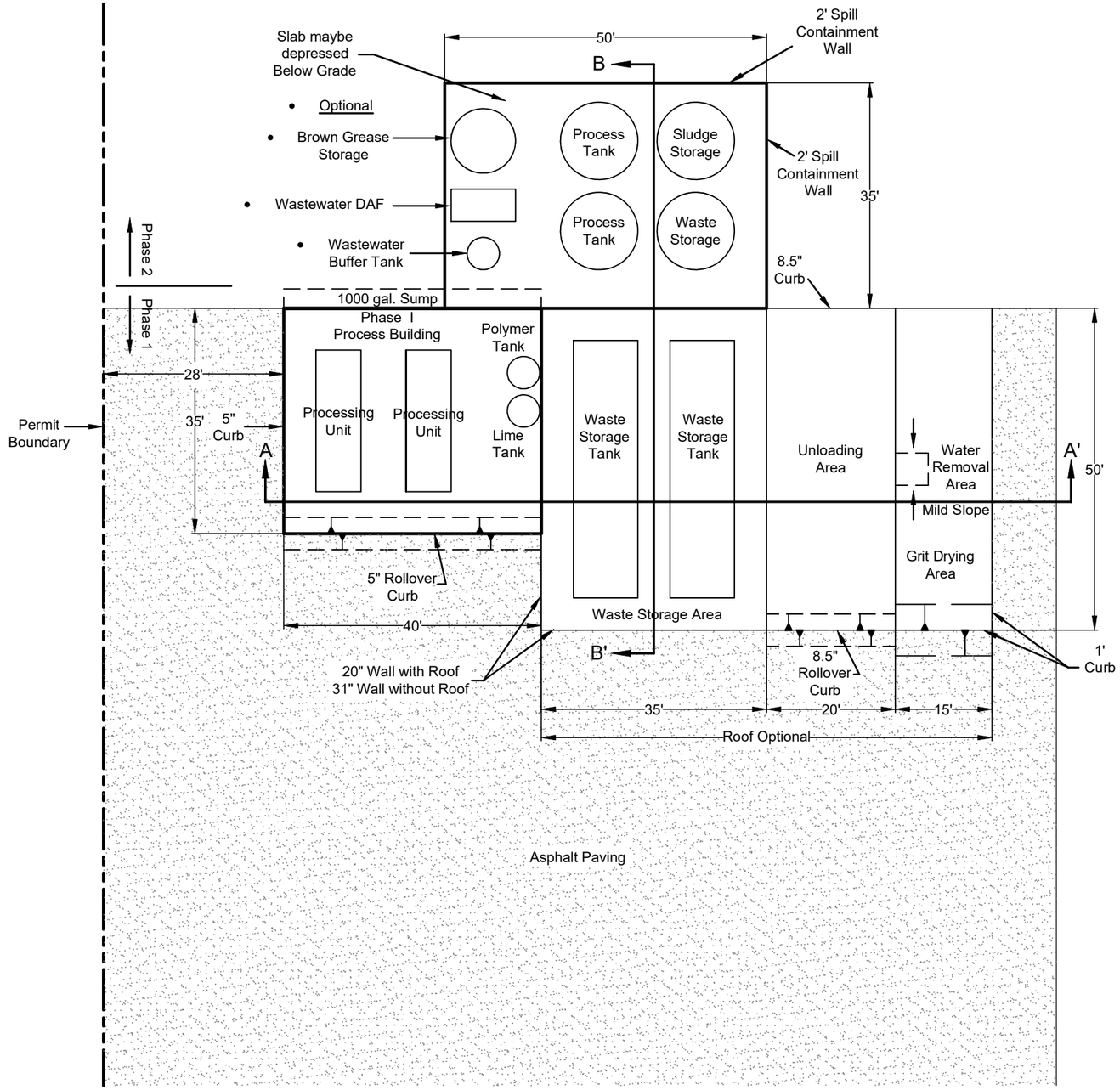
remove the spill so that the maximum spill and rainfall do not comingle and require storage.

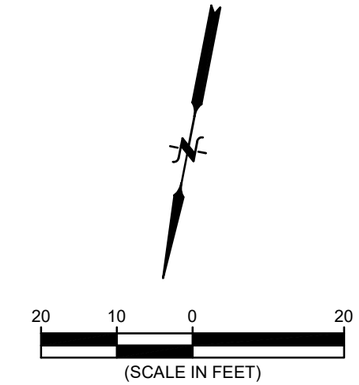
Phase 2 Processing Building

The Phase 2 Processing Building will contain 4, 20,000 gallon tanks and a smaller 8 ft diameter tank. It is assumed that one 20,000 gallon tank leaks and loses all the liquid volume above the height of the released liquid contained inside the storage area. Other equipment in the building is assumed to be elevated above the spill height. The storage volume displaced by the intact tanks has been subtracted in the calculations. A two foot high concrete wall provides sufficient storage capacity for spill containment.

Phase 2 Grit Drying Area

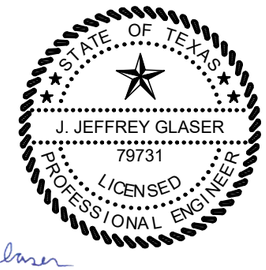
The Grit Drying Area is a slab surrounded by a 1 ft high curb to contain the moist grit. This area will have a roof or a cover to divert rainfall from mixing with the grit. There will always be at least 2 inches of freeboard above free liquids in the grit area to prevent overtopping and spillage.





LEGEND

Permit Boundary



7/12/2023

J. Jeffrey Glaser

FOR PERMITTING ONLY

REV.	DATE	DESCRIPTION	DR BY	APP BY
1	7/12/23	PER TECHNICAL NOD2		

INTERA

9600 GREAT HILLS TRAIL, SUITE 300W
AUSTIN, TEXAS 78759 USA 512-425-2000
TEXAS REGISTERED ENGINEERING FIRM F-4722

PROJECT:
SOUTH TEXAS DEWATERING
502 COMMERCE ROAD
ALICE, TEXAS

SHEET TITLE:
OPERATIONS AREA DETAIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJ NO. STXWW.M001.MSW
CHK BY	JBD		DWG NO.STXWW.MOO1.MSW015R1
APP BY	JJG		SHEET 1 OF 1 SHEETS
DATE ISSUED: 12-12-2022			FIGURE NO. 4-1
PURPOSE: PERMIT APPLICATION			

S:\AUS\STXWW.M001.MSW\CAD\STXWW.M001.MSW015 Operations Area Detail Fig 4-1R1.dwg

Phase 1 Processing Building -- Secondary Containment Calculations

A. Minimum Required Containment

This area is within a building so the minimum required containment is equal to the capacity of the largest tank.
The largest tank is the rolloff processing unit which is elevated abovethe slab.

Volume of largest tank = 24 yd^3	4,847	gallons	(working capacity is 80% x 30 cy due to liquid fill ports)
Total Req'd Storage Volume =	**4,847**	**gallons**	

B. Volume Provided without any Tanks in the Area

Secondary Containment Volume

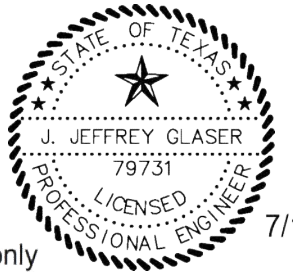
Area	1388	ft^2	(35 x 40 ft less 1 ft rollover ramp at 2 rollup doors)
Storage depth h =	0.417	ft (5 in.)	
Volume Provided =	579	ft3	
	4,329	gallons	
Additional Sump Volume =	1000	gallons	
Total Volume Provided =	5,329	gallons	

C. Volume Reduction - One lime and One polymer storage tank.

Cylindrical Tank-	5	ft Dia	6	ft Dia
$A = \pi R^2 =$	20	ft^2	28	ft^2
$V = A(h) =$	8.2	ft^3	11.8	ft^3
Total Reduction =	20	ft^3		
	149	gallons		

D. Total Volume Provided) = (B.- C.)= 5,180 gallons

Excess Containment Volume Provided = (D.-A.) = **333 gallons**



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Unloading Area -- Secondary Containment Calculations

A. Minimum required containment is equal to the Rainfall from the 25-yr, 24-hr storm plus the capacity of the largest tank (5000 gal tanker).

-From NOAA Atlas 14, 25-yr, 24-hr Precipitation for Alice 8.81 in = 0.734167 ft

Containment Area, A = 1,000 ft^2 (20 x 50 ft)

Rainfall Volume = PxA 734 ft^3
5,492 gallons

Volume of largest tank = 5,000 gallons

Total Req'd Storage Mgt or Vol without Roof = 10,492 gallons
Total Req'd Storage Volume with Roof = 5,000 gallons

B. Volume Provided without any Tanks in the Area

Secondary Containment Volume

Area	980	ft^2	(20 x 50 ft less 2 ft rollover ramp)
Storage depth h =	0.7	ft	
Volume Provided =	686	ft3	
	5,131	gallons	

Excess Containment Volume **With Roof** **131 gallons**

Without Roof -- 131 gallons + special operating procedures will assure that spill-volume containment within the curbs is available prior to unloading, and pumping and tank storage capacity is always available so the spill will be quickly removed and the maximum spill and rainfall do not comingle and require storage (see Appendix 4 text)

For permitting only

J. Jeffrey Glaser

STATE OF TEXAS
J. JEFFREY GLASER
79731
LICENSED
PROFESSIONAL ENGINEER

7/12/2023

Phase 2 Processing Building -- Secondary Containment Calculations

A. Minimum Required Containment

This area is within a building so the minimum required containment is equal to the capacity of the largest tank.

Volume of largest tank =	20,000	gallons
Total Req'd Storage Volume =	**20,000**	**gallons**

B. Volume Provided without any Tanks in the Area

Secondary Containment Volume

Area	1750	ft^2	(35 x 50 ft)
Storage depth h =	2	ft	
Volume Provided =	3,500	ft3	
	26,180	gallons	

C. Volume Reduction - Three 20,000 gal storage tanks and one 8000 gal optional grease tank.

Optional DAF and buffer tank are elevated above the spill depth.

Cylindrical Tank-	12	ft Dia (3 tanks)	8	ft Dia
$A = \pi R^2 =$	113	ft^2	50	ft^2
$V = A(h) =$	226.1	ft^3 ea.=($678.3 ft^3$)	100.5	ft^3

Total Reduction =	779	ft^3
	5,825	gallons

D. Total Volume Provided) = (B.- C.)= 20,355 gallons

Excess Containment Volume Provided = (D.-A.) = **355** **gallons**

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Waste Storage Horizontal Tank Area With and Without Roof -- Secondary Containment Calculations

A. Minimum required containment is equal to the Rainfall from the 25-yr, 24-hr storm plus the capacity of the largest tank.

-From NOAA Atlas 14, 25-yr, 24-hr Precipitation for Alice TX P= 8.81 in = 0.73 ft

Containment Area, A = 1,750 ft^2 (35 x 50 ft)

Rainfall Volume = PxA 1,285 ft^3
9,610 gallons

Volume of largest tank = 21,000 gallons

Total Req'd Storage Volume without Roof = 30,610 gallons
Total Req'd Storage Volume with Roof = 21,000 gallons

B. Containment Volume Provided without any Tanks in the Area

Area (35 x 50 ft) 1750 ft^2

Storage Depth without Roof h =	**2.583 ft (31 in.)**
Storage Depth with Roof h =	**1.67 ft (20 in.)**

	Without Roof	**With Roof**
Volume Provided =	4,520 ft^3	2,923 ft^3
	33,811 gallons	21,860 gallons

C. Volume Reduction - One Tank within the containment area elevated 1 ft above slab.

Horiz Cylindrical Tank - 10.5 ft Dia

Volume Reduction = $V = L \times [R^2 \cos^{-1}((R-H)/R) - (R-H)(2RH-H^2)^{\wedge 1/2}]$ (See note below)

		Without Roof	**With Roof**
Tank Dimension	L =	40 ft	40 ft
Tank Dimension	Dia. =	10.5 ft	10.5 ft
Tank Dimension	Radius =	5.25 ft	5.25 ft
Storage depth provided	h =	2.583 ft	1.67 ft
Liquid depth displaced by tank	H =	1.583 ft	0.67 ft

Volume Reduction = V =	328 ft^3	93 ft^3
	2,458 gallons	696 gallons
	31,353 gallons	21,164 gallons

Note: Volume Reduction formula is the Volume of a partially filled cylinder, see mathopenref.com.

D. Excess Containment Volume Provided = (C.- A.) = **743 gallons** **164 gallons**

For permitting only

7/12/2023

Jeff Glaser

From: Valente Olivarez Jr <Valente.Olivarez@txdot.gov>
Sent: Monday, July 10, 2023 10:36 AM
To: Jeff Glaser; Lucio Ramos; Kimberly Amy
Subject: RE: TCEQ Permit Application Coordination
Attachments: APP6_L221208_TXDOT.pdf

This sender is trusted.

Good morning Jeff.

Let us look into this.

Lucio- Please get with Kim and review request if we have not done so already. Coordinate with Mr. Glaser as needed.

Thanks,
-Valente

From: Jeff Glaser <JGlaser@intera.com>
Sent: Friday, July 7, 2023 5:01 PM
To: Valente Olivarez Jr <Valente.Olivarez@txdot.gov>
Subject: TCEQ Permit Application Coordination

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Olivarez,

I am following up on the attached letter that was mailed to TxDOT in December 2022. The TCEQ Project manager has asked me to provide a response from TxDOT to the attached letter. Would it be possible for you to ask someone on your staff to check on the status of a response to the attached?

Please let me know if you have any questions.

Thank you,
Jeff

Jeff Glaser, P.E. | Principal Engineer | 512-425-2058

INTERA

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