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July 30, 2026

TCEQ Permits Section MC-124
Municipal Solid Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
Building A, Room 122, 12100 Park 35 Circle
Austin, Texas 78753-1808

Via e-mail: [REDACTED]

RE: Request for Permit Modification – NOD #2 Response
Alternative Buffer Zone and Other Updates
Liquid Environmental Solutions of Texas, LLC
LES - Dallas Facility
TCEQ MSW Permit No. 2069A
CN603229436 | RN103002713
TCEQ Tracking No. 32721740

Dear MSWPER:

On behalf of Liquid Environmental Solutions of Texas, LLC (LES), and in accordance with 30 TAC 330.70(I), CK Associates, LLC (CK) is submitting this response to the request for a Permit Modification with Public Notice to Texas Commission on Environmental Quality (TCEQ) MSW Permit 2069A, Notice of Deficiency (NOD) which was issued on June 30, 2026. Responses to those comments are provided following the NOD responses.

Cover Letter

1. Provide the specific provision in which the modification to the Closure Cost Estimate is being made. Revisions to Closure Cost Estimates are made under the provision 30 TAC 305.70(j)(30).

The specific revision to which the Closure Cost Estimate is being made is 30 TAC 330.505.

Attachment I-2: List of Property Owners Within Quarter Mile Radius

2. Thirty-six property addresses were provided, however the map provided in the initial March 5, 2026 submittal indicates there are 38 properties within a quarter mile of the facility. Please revise the list of property owners to reflect all 38 properties.

A revised list of property owners is included in Appendix A.

Part II

3. Specify the revised distance of the proposed alternative buffer zone in the narrative portion of the permit in “Section 1.0-Introduction” using the same explanation/language used in the NOD response cover letter. Ensure this language is also reflected in “Part IV Section 1” under the “Buffer Zone” heading.

Part II and Part IV have been revised to specify the revised distance of the proposed buffer zone. The redline replacement pages are provided in Appendices B-1 and C-1, respectively. The clean replacement pages are provided in Appendices B-2 and C-2, respectively.

- a. Clarify if the reduced buffer zone is only occurring on the west and south portion of the facility. Based on the “General Facility Layout Plan” provided, it appears the north buffer zone has also reduced.

The buffer zone on the north portion of the facility has also been reduced to approximately 12 feet.

SDP 4-3

4. Clarify what “Available Freeboard” and “Additional Freeboard” mean in the “Freeboard Summary Table.”

Available Freeboard is the freeboard currently available at the site. Additional Freeboard is the freeboard that will be added to the containment areas in construction.

For clarity, columns have been updated to Available Freeboard and Modified Freeboard. The redline showing this change is available in Appendix C-1 and the clean version in Appendix C-2.

5. Provide the updated secondary containment calculations and figures accounting for the extended containment walls necessary for one foot of freeboard.

The redline of the updated calculations and figures are available in Appendix C-1 and the clean version in Appendix C-2.

As only the exterior walls are proposed to increase in height, the calculation has been updated to reflect Area A as a whole. This change has also been reflected in Figure II-A, SDP-4 Figure 1, and the Freeboard Figure. A redline of SDP-4 Figure 1 and the Freeboard Figure is available in Appendix C-1 and a clean version in Appendix C-2. A redline of Figure II-A is available in Appendix D-1 and a clean version in Appendix D-2.

Figure 3 in Appendix C-2 shows the elevations of various points of the containment.

Freeboard Modification Attachment

6. Include "Area B" in the "Proposed Freeboard Modification" designated area since this is a containment area.

Per discussions with TCEQ dated 7/1/2026, Area B is a roofed, walled, and enclosed area and thus not subject to wave action. This note has been added to the "Summary of Secondary Containment Calculations" table as well as the Appendix I Figure submitted in NOD 1. The redline is available in Appendix C-1 and the clean pages in Appendix C-2.

7. Update the table of contents to reflect the addition of the "Freeboard Modification Attachment".

The table of contents in Part IV has been updated. The redline pages can be found in Appendix C-1 and the clean pages in Appendix C-2.

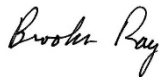
Closing

One original and one copy of this submittal are provided for your use and distribution. An additional copy is being submitted to the Dallas/Fort Worth Regional Office.

Please note that the changes addressed herein will not result in an increase in permitted capacity.

If you have any questions or require any additional information, please do not hesitate to contact Brooks Ray at 225-923-6482 or [REDACTED] or Paul Maier of LES at 817-713-2205 or [REDACTED]

Sincerely,
CK Associates



Brooks Ray
Sr. Scientist



Blake Vincent
Sr. Scientist

CC: Kate Benoit, TCEQ Project Manager
TCEQ Region 4 Office
Liquid Environmental Solutions of Texas, LLC

Attachments: As stated

Appendices

Appendix A

Attachment I-2: List of Property Owners Within Quarter Mile Radius

JACKSON MYERS STEWART LLC
901 MAIN ST
DALLAS, TX 75202

MOSTOWTI PARVANEH
15805 EL ESADO DR
DALLAS, TX 75248-4435

BRIGHTVIEW LANDSCAPE SERVICES INC
ATTN CARISSA ZELDIN TAX DEPT
980 JOLLY RD
BLUEBELL, PA 19422-1957

JACKSON MYERS STEWART LLC
901 MAIN ST
DALLAS, TX 75202

DIRT MONKEY LLC
2317 MERREL RD
DALLAS, TX 75229-4406

DIRT MONKEY LLC
2330 MERREL RD
DALLAS, TX 75229-4405

BROWN SOUTHWELL PROPERTIES
PO BOX 59831
DALLAS, TX 75529

TNTNS BUILDING MATERIALS LLC
11210 GOODNIGHT LN
DALLAS, TX 75229-3319

2345 SOUTHWELL LLC
4 STAR PT STE 204
STAMFORD, CT 06902-8928

AUSTIN INTERNATIONAL VENTURES INC
PO BOX 1590
DALLAS, TX 75221-1590

BCK PROPERTIES JOINT VENTURE
11518 REEDER RD
DALLAS, TX 75229-2114

RICHARD R. RAWLINGS
2330 MERREL RD
DALLAS, TX 75229-4405

BROWN LEWISVILLE RR
PO BOX 29615
DALLAS, TX 75229

RHOADS, CHARLES ANDREW11160
GOODNIGHT LNDALLAS, TX 75229-4401

2345 SOUTHWELL LLC
4 STAR PT STE 204
STAMFORD, CT 06902-8928

AUSTIN INTERNATIONAL VENTURES INC
PO BOX 1590
DALLAS, TX 75221-1590

VASQUEZ, MANUEL TRUSTEE &
DORA VASQUEZ TRUSTEE
4316 MANNING LN
DALLAS, TX 75220-3831

AGM TOOLS NORTH AMERICA
ATTN PROPERTY TAX
2350 MERELL RD
DALLAS, TX 75229-4405

TEXS TOWING HOLDINGS LLC
11211 GOODNIGHT LN
DALLAS, TX 75229-3320

VASQUEZ, MANUEL DANIEL TRUSTEE
4316 MANNING LN
DALLAS, TX 75220-3831

TEXO
11101 N. STEMMONS FWY
DALLAS, TX 75229-4530

1120 GOODNIGHT LLC
4511 HARRYS LN
DALLAS, TX 75229-5405

SCORPIONS WELDING
ATTN MANUEL GARCIA
1109 COOMBS CREEK DR
DALLAS, TX 75211-5920

TEXO ABC AGC INC
11101 N. STEMMONS FWY
DALLAS, TX 75229-4530

TNT SEAL IT LLC
PO BOX 788
DALLAS, TX 76099-0788

JAG MAC JAGUAR INC
2320 MERREL RD
DALLAS, TX 75229-4205

REGAL PLASTIC SUPPLY COINC
STE 120 9200 N ROYAL LN
IRING, TX 75063-2557

SONG SUK
2410 VALWOOD PKWY
FARMERS BRANCH, TX 75234-3412

DIRT MONKEY LLC
2330 MERREL RD
DALLAS, TX 75229-4405

CICF III TX1B02 LLC
5005 LYNDON B JOHNSON FWY STE 860
DALLAS, TX 75244-6100

ARBOR CONTRACT CARPET INC
PO BOX 140095
IRCING, TX 75014-0095

ONCOR ELECTRIC DELIVERY COMPANY
PO BOX 139100
DALLAS, TX 75313-9100

WALCON INDUSTRIAL LLC
3819 MAPLE AVE
DALLAS, TX 75219-3913

KOSH K LLC
826 HILLS CREEK DR
MCKINNEY, TX 75070-5230

TARGET CORPORATION
PO BOX 9456
MINNEAPOLIS, MN 55440-9456

CITY OF DALLAS
1500 MARILLA ST
DALLAS, TX 75201-6318

JACKSON MEYERS STEWART LLC
901 MAIN ST
DALLAS, TX 75202-3707

ONCOR ELECTRIC DELIVERY COMPANY
PO BOX 139100
DALLAS, TX 75313-9100

Appendix B-1

Part II Redline

APPLICATION PART II

**TYPE V MUNICIPAL SOLID WASTE FACILITY
TCEQ MSW PERMIT 2069A**

For

LIQUID ENVIRONMENTAL SOLUTIONS OF TEXAS, LLC

Dallas Facility

11115 Goodnight Lane

Dallas, TX 75229

CN603229436

RN103002713

Prepared By

C-K Associates, LLC

TBPE Reg. #F-9628

~~March-July~~ 2026

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1.0 Introduction

Liquid Environmental Solutions of Texas, LLC (LES) is in the business of processing certain non-hazardous liquid wastes. The Dallas LES Facility processes grease trap/food-related and grit trap waste streams. The facility is designed to separate and process the waste streams received into recyclable components, water suitable for discharge into the sanitary sewer system and solid materials for appropriate disposal. The acceptance and processing of these waste requires a Type V Municipal Solid Waste (MSW) Permit and the LES Dallas facility holds MSW Permit 2069A. The purpose of this permit modification request is to: allow an alternative buffer zone at the LES – Dallas Facility; update the permit to make modifications previously authorized under a Temporary Authorization; make minor equipment changes.

Buffer Zone

Per 30 TAC 330.543(b)(1), a minimum separating distance of 50 feet between solid waste storage/process units within and adjacent to the facility boundary on property owned or controlled by the owner/operator is required. The buffer zone shall not be narrower than necessary to provide for safe passage for fire fighting equipment and other emergency vehicles. LES has historically met this 50-foot buffer requirement along the north, south and west boundaries of the site by leasing land adjacent to its property boundary. The lease expires on June 30, 2026. LES believes that the lessor of the land may not renew the lease.

Therefore, one objective of this modification is to authorize an alternative to the buffer zone requirement in 30 TAC 330.543(b)(1). To support the amendment, LES met with the Dallas Fire Department (DFD) on August 20, 2025, to review the facility layout and allow DFD personnel to assess whether more than sufficient access for fire fighting or other emergency response would be available without the required 50-foot buffer. The layout reviewed by the DFD differs from the layout currently reflected in the permit; however, the version provided to the DFD was prepared for the specific purpose of evaluating emergency access and does not alter any operational or functional aspects relevant to the modification request. Following their review, the DFD determined that more than sufficient access is available without the buffer as long as pathways are maintained, regardless of the tank or equipment configuration, as documented in the Existing Fire Department Access Plan stamped by the DFD on September 10, 2025. A copy of this plan is provided as **F1.00**.

The alternative buffer zone is depicted on the Facility Layout Map provided as Figure II-A. The reduction of the buffer zone to approximately 12 feet along the northern property boundary, 4 feet along the southern property boundary and 10 feet along the western property boundary is consistent with the provisions outlined in 30 TAC §330.245(d) and (f) and 30 TAC §330.7(e)(9) regarding nuisance odors because these regulations do not establish a minimum odor-control buffer width. Rather, the regulations require that the facility be designed and operated such that nuisance odors do not leave the property boundary and that one or more appropriate odor-control measures be employed.

30 TAC §330.245(d) states: “The facility shall be designed and operated to provide adequate ventilation for odor control and employee safety. The owner or operator shall prevent nuisance odors from leaving the boundary of the facility. If nuisance odors are found to be passing the facility boundary, the facility owner or operator may be required to suspend operations until the nuisance is abated.”

30 TAC §330.245(f) states: “The owner or operator shall employ one or more of the following measures:

(1) air scrubber units for odor control;

(2) on-site buffer zones for odor control. Consideration should be given to additional buffer zones within the facility property boundary for odor control;

(3) additional waste handling procedures, storage procedures, and clean-up procedures for odor control when accepting putrescible waste; or

(4) alternative ventilation and odor control measures.

30 TAC §330.7(e)(9) states: “...The facility shall be designed and operated in a manner so as to prevent nuisance conditions, including, but not limited to, dust from ashes, disease vectors, odors, and liquids from spills, from being released from the property boundary of the authorized facility.”

While §330.245(f) identifies buffer zones as one potential odor-control measure, it also expressly recognizes the use of air scrubbers, waste handling and storage procedures, and other alternative ventilation and odor-control measures. Accordingly, compliance with the odor-control requirements is based on the effectiveness of the overall facility design and operational controls, not on the width of a particular setback distance.

The Facility employs multiple independent odor-control measures that prevent nuisance odors from migrating beyond the property boundary.

The permit requires that all incoming wastes be processed within 72 hours. Receipt of additional wastes beyond those that can be processed within 72 hours is curtailed until any adverse conditions are abated. If a significant work stoppage or slowdown occurs for any reason, the Facility restricts the receipt of waste and diverts loads to another approved processing or disposal facility. If a work stoppage is anticipated to last long enough to create objectionable odors, insect breeding, or harboring of vectors, accumulated waste is removed from the site and transported to an approved backup processing or disposal facility.

Processing of grease trap waste and food-related liquids occurs entirely within the enclosed process building. The building is maintained under negative pressure, and doors remain closed except when necessary for operations. Air from the building is directed through a wet air scrubber designed to neutralize odors before discharge.

The wet air scrubber is located on the west wall of the process building and vents above the roof line. The scrubber is routinely inspected and maintained to ensure continued operating efficiency.

In addition, odor-control maskants dispersed by atomizers and/or misters are utilized during operations and when meteorological conditions warrant their use.

All wastes and recovered materials are stored in fixed-roof vented tanks to minimize odor emissions. Processing equipment, including screens and related equipment, is routinely cleaned to prevent odor generation.

Facility personnel conduct daily perimeter inspections to assess the effectiveness of odor-control measures, and employee training emphasizes adherence to operating procedures intended to minimize odor generation and release.

The proposed buffer-zone reduction is limited to portions of the southern and western property boundaries and does not alter the enclosed nature of waste processing operations, the negative-pressure ventilation system, the wet air scrubber, storage practices, inspection procedures, or any other odor-control measures currently employed at the Facility. Because odors are controlled at the source through engineered and operational controls, LES does not rely on the southern or western buffer areas as the primary means of odor control.

LES believes that the combination of rapid waste processing, enclosed operations, negative-pressure ventilation, wet air scrubbing, fixed-roof tank storage, odor maskants, routine cleaning, and perimeter inspections effectively prevents nuisance odors from leaving the facility property boundary. Therefore, the proposed reduction in buffer width along the southern and western boundaries is consistent with the requirements of 30 TAC §§330.245(d), 330.245(f), and 330.7(e)(9).

The Facility's compliance history further demonstrates the effectiveness of these odor-control measures. LES is aware of only one public odor complaint during the past ten years, which occurred in February 2019 and resulted from anomalous operating conditions (TCEQ Tracking No. 20532). TCEQ investigated the complaint, including conducting site visits and odor surveys, and ultimately determined that the violations had been resolved (TCEQ Investigation Nos. 1551455 and 1604516).

Since that time, TCEQ has conducted additional compliance investigations in 2021 (TCEQ Investigation No. 1704988) and 2024 (TCEQ Investigation No. 2007468). No odor-related violations or other violations associated with nuisance conditions were identified during either investigation. This compliance history supports LES's conclusion that existing facility design and operational controls effectively prevent nuisance odors from crossing the property boundary notwithstanding the proposed reduction in buffer width.

Temporary Authorization Changes

This modification brings the permit up to date with changes made previously under a Temporary Authorization that was initially approved by the TCEQ on March 26, 2018 (see Tracking No. 22566826). These changes included the addition of a filter press and a lime storage tank which better equipped the facility to meet the limits of the City of Dallas Pre-Treatment Permit.

Equipment Changes

This modification updates the equipment list and addresses upgrades to the secondary containment system.

This permit application submittal retains the previous permit documents and only those additions that are changed within this February 2026 revision are being submitted as Permit Revision 17.

Table W-1 the Revision History for MSW Permit No. 2069.

Date	Site Development Plan (SDP)	Site Operating Plan (SOP)	Waste Acceptance and Analysis Plan (WAAP)	Permit Edition
6/1/1987	Original		-	Original
3/30/1988	Revision 1		-	Revision 1
3/19/1989	Revision 2		-	Revision 2
5/1991	-	Original (Old)	-	Revision 3
9/1991	-	Revision 1	-	Revision 4
5/18/1999	Revision 3	-	Original	Revision 5
8/24/2003	Revision 4	Revision 3	Revision 1	Revision 6
2/2/2004	Revision 5	Revision 4	Revision 2	Revision 7
6/25/2004	Revision 6	Revision 5	-	Revision 8
2/1/2005	Revision 7	Revision 6	-	Revision 9
4/5/2005	Revision 8	Revision 7	-	Revision 10
8/5/2005	Revision 9	Revision 8	-	Revision 11
11/27/2006	-	Original (New)	-	Revision 12
6/8/2007	-	Revision 1	-	Revision 13
5/30/2008	Revision 10	Revision 2	Revision 3	Revision 14
11/2012	Revision 11	Revision 3	Revision 4	Revision 15
11/2017	Revision 12	Revision 4	Revision 5	Revision 16
02/07 /2026	Revision 13	Revision 5	Revision 6	Revision 17

This permit application submittal (Revision 16) represented a major reorganization of the previous permit documents and only those additions that are changed within this February 2026 revision are being submitted as Permit Revision 17. The documents have been reorganized to align with the corresponding regulatory requirements. Where applicable, regulatory citations are noted.

2.0 Sources and Characteristics of Wastes (330.61 (b), 330.203(a))

The Waste Acceptance and Analysis Plan (WAAP) previously submitted 11/2012 as Revision 4, addresses regulatory requirements presented in Title 30, Texas Administrative Code (TAC), Chapter 330, Sections 61 and 203 and remains unchanged in this submittal. Included as part of this plan are LES policies governing Waste Acceptance and Analysis Procedures (Attachment II-1). No changes to Waste Acceptance Procedures or Analytical Procedures are being made in this permit modification. The Plan and the corresponding attachment provide a comprehensive discussion of the facility management and testing procedures for the wastes that will be processed at the facility. The facility will only accept wastes which are compatible with the production of liquid effluent that can safely be disposed into the City of Dallas sanitary sewer and solids that can be hauled offsite for beneficial reuse or disposal in a municipal solid waste landfill. Discharges to the sanitary sewer shall be in compliance with the facility's pre-treatment permit and applicable federal, state, and local regulations.

The LES Dallas Facility accepts three categories of non-hazardous wastes, grease trap wastes, Class 2 Industrial Solids (food-related) wastes and grit trap (and related) wastes. All other types of wastes are prohibited for processing or disposal at the facility. Detailed waste acceptance procedures are described in Attachment I. Management controls described in Attachment I have been developed to prevent acceptance of unauthorized wastes for processing.

2.1 Grease Trap and Food-Related Wastes

LES will accept and process non-hazardous grease trap and Class 2 Industrial food-related wastes from restaurants, food preparation facilities, other food-related industries and other sources serviced by its own and independent third-party vacuum trucks. Since the municipal and commercial businesses that transport grease waste to LES do not normally generate waste streams that contain any hazardous constituents it is very unlikely that any hazardous waste will be contained in these wastes. All waste will be documented using an appropriate trip ticket/manifest.

Grease trap waste is composed of food, grease, trash, food particles and/or water. Pollutant concentrations are extremely variable, depending upon, among other factors, the generator, the size of the trap and the frequency with which the trap is pumped. In most cases, the wastes food particles, and wastewater containing large amounts of dissolved and suspended food matter. The wastes are typically characterized by high levels of BOD and TSS and are

acidic, with pH levels generally in the 4.0 to 5.0 range. Class 2 Industrial food-related waste is typically composed of food solids, fats, oils and grease.

2.2 Grit Trap Waste.

LES will accept and process non-hazardous grit tap/lint trap wastes from car washes, garages, laundries, services stations, repair and maintenance shops, transport firms, car dealerships, and similar generators serviced by its own and independent third-party vacuum trucks. A grit trap is an interceptor in a sewer line designed to trap sand, grit, muck and heavy soils from car washes and other facilities that wash dirt and grime from equipment. All waste will be documented using an appropriate trip ticket/manifest as previously described above for grease trap/food related wastes. If large quantities of floating petroleum or synthetic petroleum oils are encountered, the oil will be separated and disposed or recycled through a waste oil or used oil recycler or processor. Chemical analysis will be performed to ensure that all new customer waste streams will be acceptable for processing, as described in Attachment I.

Grit trap waste pollutant concentrations are extremely variable. In most cases, the wastes contain floating matter made up primarily of petroleum and synthetic petroleum grease and oil, settled dirt and sand with wash down products such as matches, cigarettes, spark plugs, grass and sticks and wastewater containing suspended dirt, detergents and oil. The wastes are typically characterized by high levels of BOD and TSS and tend to be neutral to caustic.

3.0 Waste Storage and Processing Information (330.203 (B))

LES processes grease trap waste by removing the oil and grease and pre-treating the remaining liquids before discharge to the sanitary sewer system. The complete process is described in detail in the Site Development Plan (SDP). This submittal will not increase capacity or throughput as previously described in the SDP submittal of 11/2012 and no changes are being made to that submittal for this permit revision.

The grit trap waste treatment process is described in the Site Development Plan. LES processes a maximum of 600,000 gallons per month of grit trap waste. Waste acceptance procedures are described in Attachment 1. Receipt, storage, and processing data for each of these waste types are provided in the following Table W-2. Daily waste receipts assume an average over 30 days per month operation. Received grease trap/food-related wastes and grit trap wastes remain on-site on average for two hours prior to processing, but at a maximum are processed within 72 hours of receipt. Generally, wastes are processed immediately after receipt. The maximum amount of combined storage for pre-processed waste at any point in time is 302,408 gallons. This capacity includes the solidification pits, which have a combined capacity of 20,000 gallons and can be used to store grit trap wastes.

Table W-2 Receipt, Storage, and Processing Data for Wastes at LES

Waste Type		Grease Trap/Food Related	Grit Trap
Received Daily (gallons, 30 day average)		160,000	20,000
Max Storage (gallons)		251,150	72,500
Waste On Site (Days)	Max.	3	3
	Avg.	0.3	0.3
Waste Processing Time (Days)	Max.	3	3
	Avg.	0.3	0.3

Treatment of waste onsite yields treated effluent, heavy solids, sludge and recovered oil and grease. These facility generated wastes are disposed of as described in Section 7 of the Site Operating Plan (SOP).

4.0 Sampling of Wastes Received and Facility Effluent (330.203(c)).

Analytical testing of wastes received depends upon waste type and is fully described in the Waste Acceptance and Analysis Procedures, included as Attachment I. Sampling of facility effluent is described in Section 7 of the SOP.

Minimal analytical requirements are specified at 30 TAC 330.203 (c) pertaining to wastes received, sludges disposed at landfills, and facility effluent. Recordkeeping and methods requirements are also stated. These requirements, listed below, are also incorporated into the referenced sections of the facility permit documents:

1. Wastes received will be analyzed annually for benzene, lead, and total petroleum hydrocarbons (TPH) – refer to Attachment I, Section C-2.
2. Grit trap wastes will be analyzed annually for biochemical oxygen demand, total suspended solids, benzene, TPH, and lead – refer to Attachment I, Section C-2.
3. Sludges that may be disposed of at a municipal solid waste landfill will be analyzed annually for benzene, lead, and TPH – refer to Attachment 1, Section 7
4. At a minimum, effluent from the facility will be analyzed annually for TPH, fats, oil and grease, and pH refer to SOP, Section 7.
5. Records of each analysis will be maintained at the facility for a minimum of three years – refer to SOP, Section 14.
6. All sampling and analysis will be done according to EPA approved methods – refer to Attachment II-1, Section E.

5.0 Buffer Zone (330.543(b)(1))

Per 30 TAC 330.543(b)(1), a minimum separating distance of 50 feet between solid waste storage/process units within and adjacent to the facility boundary on property owned or controlled by the owner/operator is required. The buffer zone shall not be narrower than necessary to provide for safe passage for fire fighting equipment and other emergency vehicles. LES has historically met this 50-foot buffer requirement along the south and west boundaries of the site by leasing land adjacent to its property boundary. The lease expires on June 30, 2026.

To ensure that there remains safe passage for fire fighting equipment and other emergency vehicles after the lease expires, LES met with the Dallas Fire Department (DFD) on August 20, 2025, to review the facility layout and allow DFD personnel to assess whether more than sufficient access for fire fighting or other emergency response would be available without the required 50-foot buffer. Following their review, the DFD determined that more than sufficient access is available without the buffer as long as pathways are maintained, regardless of the tank or equipment configuration, as documented in the Existing Fire Department Access Plan stamped by the DFD on September 10, 2025. A copy of this plan is provided as **Figure F1.00**.

Appendix B-2

Part II

APPLICATION PART II

**TYPE V MUNICIPAL SOLID WASTE FACILITY
TCEQ MSW PERMIT 2069A**

For

LIQUID ENVIRONMENTAL SOLUTIONS OF TEXAS, LLC

**Dallas Facility
11115 Goodnight Lane
Dallas, TX 75229
CN603229436
RN103002713**

Prepared By

**C-K Associates, LLC
TBPE Reg. #F-9628**

July 2026



Jaceline Sheehan-Dean
7/30/26
Firm No 9628

Original Application – June 1, 1987
Major Document Reorganization – August 24, 2009
Revision – October 6, 2009
Revision – February 22, 2010
Revision – April 12, 2010
Revision, November 2017
Revision – July 2026

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II-5	Aerial Map
II-6	Flood Rate Insurance Map
F1.00	Existing Fire Department Access Plan

List of Attachments

II-1	Waste Acceptance and Analysis Plan
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1.0 Introduction

Liquid Environmental Solutions of Texas, LLC (LES) is in the business of processing certain non-hazardous liquid wastes. The Dallas LES Facility processes grease trap/food-related and grit trap waste streams. The facility is designed to separate and process the waste streams received into recyclable components, water suitable for discharge into the sanitary sewer system and solid materials for appropriate disposal. The acceptance and processing of these waste requires a Type V Municipal Solid Waste (MSW) Permit and the LES Dallas facility holds MSW Permit 2069A. The purpose of this permit modification request is to: allow an alternative buffer zone at the LES – Dallas Facility; update the permit to make modifications previously authorized under a Temporary Authorization; make minor equipment changes.

Buffer Zone

Per 30 TAC 330.543(b)(1), a minimum separating distance of 50 feet between solid waste storage/process units within and adjacent to the facility boundary on property owned or controlled by the owner/operator is required. The buffer zone shall not be narrower than necessary to provide for safe passage for fire fighting equipment and other emergency vehicles. LES has historically met this 50-foot buffer requirement along the north, south and west boundaries of the site by leasing land adjacent to its property boundary. The lease expires on June 30, 2026. LES believes that the lessor of the land may not renew the lease.

Therefore, one objective of this modification is to authorize an alternative to the buffer zone requirement in 30 TAC 330.543(b)(1). To support the amendment, LES met with the Dallas Fire Department (DFD) on August 20, 2025, to review the facility layout and allow DFD personnel to assess whether more than sufficient access for fire fighting or other emergency response would be available without the required 50-foot buffer. The layout reviewed by the DFD differs from the layout currently reflected in the permit; however, the version provided to the DFD was prepared for the specific purpose of evaluating emergency access and does not alter any operational or functional aspects relevant to the modification request. Following their review, the DFD determined that more than sufficient access is available without the buffer as long as pathways are maintained, regardless of the tank or equipment configuration, as documented in the Existing Fire Department Access Plan stamped by the DFD on September 10, 2025. A copy of this plan is provided as **F1.00**.

The alternative buffer zone is depicted on the Facility Layout Map provided as Figure II-A. The reduction of the buffer zone to approximately 12 feet along the northern property boundary, 4 feet along the southern property boundary and 10 feet along the western property boundary is consistent with the provisions outlined in 30 TAC §330.245(d) and (f) and 30 TAC §330.7(e)(9) regarding nuisance odors because these regulations do not establish a minimum odor-control buffer width. Rather, the regulations require that the facility be designed and operated such that nuisance odors do not leave the property boundary and that one or more appropriate odor-control measures be employed.

30 TAC §330.245(d) states: “The facility shall be designed and operated to provide adequate ventilation for odor control and employee safety. The owner or operator shall prevent nuisance odors from leaving the boundary of the facility. If nuisance odors are found to be passing the facility boundary, the facility owner or operator may be required to suspend operations until the nuisance is abated.”

30 TAC §330.245(f) states: “The owner or operator shall employ one or more of the following measures:

- (1) air scrubber units for odor control;*
- (2) on-site buffer zones for odor control. Consideration should be given to additional buffer zones within the facility property boundary for odor control;*
- (3) additional waste handling procedures, storage procedures, and clean-up procedures for odor control when accepting putrescible waste; or*
- (4) alternative ventilation and odor control measures.*

30 TAC §330.7(e)(9) states: “...The facility shall be designed and operated in a manner so as to prevent nuisance conditions, including, but not limited to, dust from ashes, disease vectors, odors, and liquids from spills, from being released from the property boundary of the authorized facility.”

While §330.245(f) identifies buffer zones as one potential odor-control measure, it also expressly recognizes the use of air scrubbers, waste handling and storage procedures, and other alternative ventilation and odor-control measures. Accordingly, compliance with the odor-control requirements is based on the effectiveness of the overall facility design and operational controls, not on the width of a particular setback distance.

The Facility employs multiple independent odor-control measures that prevent nuisance odors from migrating beyond the property boundary.

The permit requires that all incoming wastes be processed within 72 hours. Receipt of additional wastes beyond those that can be processed within 72 hours is curtailed until any adverse conditions are abated. If a significant work stoppage or slowdown occurs for any reason, the Facility restricts the receipt of waste and diverts loads to another approved processing or disposal facility. If a work stoppage is anticipated to last long enough to create objectionable odors, insect breeding, or harboring of vectors, accumulated waste is removed from the site and transported to an approved backup processing or disposal facility.

Processing of grease trap waste and food-related liquids occurs entirely within the enclosed process building. The building is maintained under negative pressure, and doors remain closed except when necessary for operations. Air from the building is directed through a wet air scrubber designed to neutralize odors before discharge.

The wet air scrubber is located on the west wall of the process building and vents above the roof line. The scrubber is routinely inspected and maintained to ensure continued operating efficiency.

In addition, odor-control maskants dispersed by atomizers and/or misters are utilized during operations and when meteorological conditions warrant their use.

All wastes and recovered materials are stored in fixed-roof vented tanks to minimize odor emissions. Processing equipment, including screens and related equipment, is routinely cleaned to prevent odor generation.

Facility personnel conduct daily perimeter inspections to assess the effectiveness of odor-control measures, and employee training emphasizes adherence to operating procedures intended to minimize odor generation and release.

The proposed buffer-zone reduction is limited to portions of the southern and western property boundaries and does not alter the enclosed nature of waste processing operations, the negative-pressure ventilation system, the wet air scrubber, storage practices, inspection procedures, or any other odor-control measures currently employed at the Facility. Because odors are controlled at the source through engineered and operational controls, LES does not rely on the southern or western buffer areas as the primary means of odor control.

LES believes that the combination of rapid waste processing, enclosed operations, negative-pressure ventilation, wet air scrubbing, fixed-roof tank storage, odor maskants, routine cleaning, and perimeter inspections effectively prevents nuisance odors from leaving the facility property boundary. Therefore, the proposed reduction in buffer width along the southern and western boundaries is consistent with the requirements of 30 TAC §§330.245(d), 330.245(f), and 330.7(e)(9).

The Facility's compliance history further demonstrates the effectiveness of these odor-control measures. LES is aware of only one public odor complaint during the past ten years, which occurred in February 2019 and resulted from anomalous operating conditions (TCEQ Tracking No. 20532). TCEQ investigated the complaint, including conducting site visits and odor surveys, and ultimately determined that the violations had been resolved (TCEQ Investigation Nos. 1551455 and 1604516).

Since that time, TCEQ has conducted additional compliance investigations in 2021 (TCEQ Investigation No. 1704988) and 2024 (TCEQ Investigation No. 2007468). No odor-related violations or other violations associated with nuisance conditions were identified during either investigation. This compliance history supports LES's conclusion that existing facility design and operational controls effectively prevent nuisance odors from crossing the property boundary notwithstanding the proposed reduction in buffer width.

Temporary Authorization Changes

This modification brings the permit up to date with changes made previously under a Temporary Authorization that was initially approved by the TCEQ on March 26, 2018 (see Tracking No. 22566826). These changes included the addition of a filter press and a lime storage tank which better equipped the facility to meet the limits of the City of Dallas Pre-Treatment Permit.

Equipment Changes

This modification updates the equipment list and addresses upgrades to the secondary containment system.

This permit application submittal retains the previous permit documents and only those additions that are changed within this February 2026 revision are being submitted as Permit Revision 17.

Table W-1 the Revision History for MSW Permit No. 2069.

Date	Site Development Plan (SDP)	Site Operating Plan (SOP)	Waste Acceptance and Analysis Plan (WAAP)	Permit Edition
6/1/1987	Original		-	Original
3/30/1988	Revision 1		-	Revision 1
3/19/1989	Revision 2		-	Revision 2
5/1991	-	Original (Old)	-	Revision 3
9/1991	-	Revision 1	-	Revision 4
5/18/1999	Revision 3	-	Original	Revision 5
8/24/2003	Revision 4	Revision 3	Revision 1	Revision 6
2/2/2004	Revision 5	Revision 4	Revision 2	Revision 7
6/25/2004	Revision 6	Revision 5	-	Revision 8
2/1/2005	Revision 7	Revision 6	-	Revision 9
4/5/2005	Revision 8	Revision 7	-	Revision 10
8/5/2005	Revision 9	Revision 8	-	Revision 11
11/27/2006	-	Original (New)	-	Revision 12
6/8/2007	-	Revision 1	-	Revision 13
5/30/2008	Revision 10	Revision 2	Revision 3	Revision 14
11/2012	Revision 11	Revision 3	Revision 4	Revision 15
11/2017	Revision 12	Revision 4	Revision 5	Revision 16
07/2026	Revision 13	Revision 5	Revision 6	Revision 17

This permit application submittal (Revision 16) represented a major reorganization of the previous permit documents and only those additions that are changed within this February 2026 revision are being submitted as Permit Revision 17. The documents have been reorganized to align with the corresponding regulatory requirements. Where applicable, regulatory citations are noted.

2.0 Sources and Characteristics of Wastes (330.61 (b), 330.203(a))

The Waste Acceptance and Analysis Plan (WAAP) previously submitted 11/2012 as Revision 4, addresses regulatory requirements presented in Title 30, Texas Administrative Code (TAC), Chapter 330, Sections 61 and 203 and remains unchanged in this submittal. Included as part of this plan are LES policies governing Waste Acceptance and Analysis Procedures (Attachment II-1). No changes to Waste Acceptance Procedures or Analytical Procedures are being made in this permit modification. The Plan and the corresponding attachment provide a comprehensive discussion of the facility management and testing procedures for the wastes that will be processed at the facility. The facility will only accept wastes which are compatible with the production of liquid effluent that can safely be disposed into the City of Dallas sanitary sewer and solids that can be hauled offsite for beneficial reuse or disposal in a municipal solid waste landfill. Discharges to the sanitary sewer shall be in compliance with the facility's pre-treatment permit and applicable federal, state, and local regulations.

The LES Dallas Facility accepts three categories of non-hazardous wastes, grease trap wastes, Class 2 Industrial Solids (food-related) wastes and grit trap (and related) wastes. All other types of wastes are prohibited for processing or disposal at the facility. Detailed waste acceptance procedures are described in Attachment I. Management controls described in Attachment I have been developed to prevent acceptance of unauthorized wastes for processing.

2.1 Grease Trap and Food-Related Wastes

LES will accept and process non-hazardous grease trap and Class 2 Industrial food-related wastes from restaurants, food preparation facilities, other food-related industries and other sources serviced by its own and independent third-party vacuum trucks. Since the municipal and commercial businesses that transport grease waste to LES do not normally generate waste streams that contain any hazardous constituents it is very unlikely that any hazardous waste will be contained in these wastes. All waste will be documented using an appropriate trip ticket/manifest.

Grease trap waste is composed of food, grease, trash, food particles and/or water. Pollutant concentrations are extremely variable, depending upon, among other factors, the generator, the size of the trap and the frequency with which the trap is pumped. In most cases, the wastes food particles, and wastewater containing large amounts of dissolved and suspended food matter. The wastes are typically characterized by high levels of BOD and TSS and are

acidic, with pH levels generally in the 4.0 to 5.0 range. Class 2 Industrial food-related waste is typically composed of food solids, fats, oils and grease.

2.2 Grit Trap Waste.

LES will accept and process non-hazardous grit tap/lint trap wastes from car washes, garages, laundries, services stations, repair and maintenance shops, transport firms, car dealerships, and similar generators serviced by its own and independent third-party vacuum trucks. A grit trap is an interceptor in a sewer line designed to trap sand, grit, muck and heavy soils from car washes and other facilities that wash dirt and grime from equipment. All waste will be documented using an appropriate trip ticket/manifest as previously described above for grease trap/food related wastes. If large quantities of floating petroleum or synthetic petroleum oils are encountered, the oil will be separated and disposed or recycled through a waste oil or used oil recycler or processor. Chemical analysis will be performed to ensure that all new customer waste streams will be acceptable for processing, as described in Attachment I.

Grit trap waste pollutant concentrations are extremely variable. In most cases, the wastes contain floating matter made up primarily of petroleum and synthetic petroleum grease and oil, settled dirt and sand with wash down products such as matches, cigarettes, spark plugs, grass and sticks and wastewater containing suspended dirt, detergents and oil. The wastes are typically characterized by high levels of BOD and TSS and tend to be neutral to caustic.

3.0 Waste Storage and Processing Information (330.203 (B))

LES processes grease trap waste by removing the oil and grease and pre-treating the remaining liquids before discharge to the sanitary sewer system. The complete process is described in detail in the Site Development Plan (SDP). This submittal will not increase capacity or throughput as previously described in the SDP submittal of 11/2012 and no changes are being made to that submittal for this permit revision.

The grit trap waste treatment process is described in the Site Development Plan. LES processes a maximum of 600,000 gallons per month of grit trap waste. Waste acceptance procedures are described in Attachment 1. Receipt, storage, and processing data for each of these waste types are provided in the following Table W-2. Daily waste receipts assume an average over 30 days per month operation. Received grease trap/food-related wastes and grit trap wastes remain on-site on average for two hours prior to processing, but at a maximum are processed within 72 hours of receipt. Generally, wastes are processed immediately after receipt. The maximum amount of combined storage for pre-processed waste at any point in time is 302,408 gallons. This capacity includes the solidification pits, which have a combined capacity of 20,000 gallons and can be used to store grit trap wastes.

Table W-2 Receipt, Storage, and Processing Data for Wastes at LES

Waste Type		Grease Trap/Food Related	Grit Trap
Received Daily (gallons, 30 day average)		160,000	20,000
Max Storage (gallons)		251,150	72,500
Waste On Site (Days)	Max.	3	3
	Avg.	0.3	0.3
Waste Processing Time (Days)	Max.	3	3
	Avg.	0.3	0.3

Treatment of waste onsite yields treated effluent, heavy solids, sludge and recovered oil and grease. These facility generated wastes are disposed of as described in Section 7 of the Site Operating Plan (SOP).

4.0 Sampling of Wastes Received and Facility Effluent (330.203(c)).

Analytical testing of wastes received depends upon waste type and is fully described in the Waste Acceptance and Analysis Procedures, included as Attachment I. Sampling of facility effluent is described in Section 7 of the SOP.

Minimal analytical requirements are specified at 30 TAC 330.203 (c) pertaining to wastes received, sludges disposed at landfills, and facility effluent. Recordkeeping and methods requirements are also stated. These requirements, listed below, are also incorporated into the referenced sections of the facility permit documents:

1. Wastes received will be analyzed annually for benzene, lead, and total petroleum hydrocarbons (TPH) – refer to Attachment I, Section C-2.
2. Grit trap wastes will be analyzed annually for biochemical oxygen demand, total suspended solids, benzene, TPH, and lead – refer to Attachment I, Section C-2.
3. Sludges that may be disposed of at a municipal solid waste landfill will be analyzed annually for benzene, lead, and TPH – refer to Attachment 1, Section 7
4. At a minimum, effluent from the facility will be analyzed annually for TPH, fats, oil and grease, and pH refer to SOP, Section 7.
5. Records of each analysis will be maintained at the facility for a minimum of three years – refer to SOP, Section 14.
6. All sampling and analysis will be done according to EPA approved methods – refer to Attachment II-1, Section E.

5.0 Buffer Zone (330.543(b)(1))

Per 30 TAC 330.543(b)(1), a minimum separating distance of 50 feet between solid waste storage/process units within and adjacent to the facility boundary on property owned or controlled by the owner/operator is required. The buffer zone shall not be narrower than necessary to provide for safe passage for fire fighting equipment and other emergency vehicles. LES has historically met this 50-foot buffer requirement along the south and west boundaries of the site by leasing land adjacent to its property boundary. The lease expires on June 30, 2026.

To ensure that there remains safe passage for fire fighting equipment and other emergency vehicles after the lease expires, LES met with the Dallas Fire Department (DFD) on August 20, 2025, to review the facility layout and allow DFD personnel to assess whether more than sufficient access for fire fighting or other emergency response would be available without the required 50-foot buffer. Following their review, the DFD determined that more than sufficient access is available without the buffer as long as pathways are maintained, regardless of the tank or equipment configuration, as documented in the Existing Fire Department Access Plan stamped by the DFD on September 10, 2025. A copy of this plan is provided as **Figure F1.00**.

Appendix C-1

Part IV – Redline

TYPE V MUNICIPAL SOLID WASTE FACILITY TCEQ MSW PERMIT 2069A
PART IV
SITE OPERATING PLAN

For

LIQUID ENVIRONMENTAL SOLUTIONS OF TEXAS, LLC
Dallas Facility 11115 Goodnight Lane
Dallas, Texas, 75229

CN No. 603229436
RN No. 103002713

Prepared by:

Liquid Environmental Solutions of Texas, LLC 1801 Royal Lane, Suite 500
Dallas, Texas 75229

and

Brown and Caldwell 1100 NE Loop 410, Suite 300
San Antonio, TX 78209

TBPE Reg. #F-2139

Revised ~~March~~July 2026 by CK Associates, LLC
TBPE #F-9268

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LIST OF ATTACHMENTS

SDP-4	Secondary Containment Calculations
SDP-4-1	Summary of Secondary Containment Calculations
SDP-4-2	Tank and Equipment Schedule – LES Dallas Facility
SDP-4-3	Atlas of Depth-Duration Frequency of Precipitation Annual

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Figure 1	Containment Areas
<u>Figure 2</u>	<u>Freeboard Modification</u>
<u>Figure 3</u>	<u>Elevation Data</u>

Major Document Reorganization – August 24 2009
Revised – October 6, 2009
Revised- February 22, 2010
Revised – April 12, 2010
Revised – November 2012
Revised – November 2017
Revised – March 2026

1. Introduction

Liquid Environmental Solutions of Texas, LLC (LES) is in the business of processing certain non-hazardous liquid wastes. The Dallas LES Facility processes grease trap/food-related and grit trap waste streams. The facility is designed to separate and process the waste streams received into recyclable components, water suitable for discharge into the sanitary sewer system and solid materials for appropriate disposal. The acceptance and processing of these waste requires a Type V Municipal Solid Waste (MSW) Permit and the LES Dallas facility holds MSW Permit 2069A. The purpose of this permit modification request is to: allow an alternative buffer zone at the LES – Dallas Facility; update the permit to make modifications previously authorized under a Temporary Authorization; make minor equipment changes.

Buffer Zone

Per 30 TAC 330.543(b)(1), a minimum separating distance of 50 feet between solid waste storage/process units within and adjacent to the facility boundary on property owned or controlled by the owner/operator is required. The buffer zone shall not be narrower than necessary to provide for safe passage for fire fighting equipment and other emergency vehicles. LES has historically met this 50-foot buffer requirement along the south and west boundaries of the site by leasing land adjacent to its property boundary. The lease expires on June 30, 2026. LES believes that the lessor of the land may not renew the lease.

Therefore, one objective of this modification is to authorize an alternative to the buffer zone requirement in 30 TAC 330.543(b)(1). To support the amendment, LES met with the Dallas Fire Department (DFD) on August 20, 2025, to review the facility layout and allow DFD personnel to assess whether more than sufficient access for fire fighting or other emergency response would be available without the required 50-foot buffer. The layout reviewed by the DFD differs from the layout currently reflected in the permit; however, the version provided to the DFD was prepared for the specific purpose of evaluating emergency access and does not alter any operational or functional aspects relevant to the modification request. Following their review, the DFD determined that more than sufficient access is available without the buffer as long as pathways are maintained, regardless of the tank or equipment configuration, as documented in the Existing Fire Department Access Plan stamped by the DFD on September 10, 2025. A copy of this plan is provided as **Attachment Figure AF1.00 in Part II**.

The alternative buffer zone is depicted on the Facility Layout Map provided as Figure II-A. The reduction of the buffer zone to approximately 12 feet along the northern property boundary, 4 feet along the southern property boundary and 10 feet along the western property boundary is consistent with the provisions outlined in 30 TAC §330.245(d) and (f) and 30 TAC §330.7(e)(9) regarding nuisance odors because these regulations do not establish a minimum odor-control buffer width. Rather, the regulations require that the facility be designed and operated such that nuisance odors do not leave the property boundary and that one or more appropriate odor-control measures be employed.

30 TAC §330.245(d) states: “The facility shall be designed and operated to provide adequate ventilation for odor control and employee safety. The owner or operator shall prevent nuisance odors from leaving the boundary of the facility. If nuisance odors are found to be passing the facility boundary, the facility owner or operator may be required to suspend operations until the nuisance is abated.”

30 TAC §330.245(f) states: “The owner or operator shall employ one or more of the following measures:

(1) air scrubber units for odor control;

(2) on-site buffer zones for odor control. Consideration should be given to additional buffer zones within the facility property boundary for odor control;

(3) additional waste handling procedures, storage procedures, and clean-up procedures for odor control when accepting putrescible waste; or

(4) alternative ventilation and odor control measures.

30 TAC §330.7(e)(9) states: “...The facility shall be designed and operated in a manner so as to prevent nuisance conditions, including, but not limited to, dust from ashes, disease vectors, odors, and liquids from spills, from being released from the property boundary of the authorized facility.”

While §330.245(f) identifies buffer zones as one potential odor-control measure, it also expressly recognizes the use of air scrubbers, waste handling and storage procedures, and other alternative ventilation and odor-control measures. Accordingly, compliance with the odor-control requirements is based on the effectiveness of the overall facility design and operational controls, not on the width of a particular setback distance.

The Facility employs multiple independent odor-control measures that prevent nuisance odors from migrating beyond the property boundary.

The permit requires that all incoming wastes be processed within 72 hours. Receipt of additional wastes beyond those that can be processed within 72 hours is curtailed until any adverse conditions are abated. If a significant work stoppage or slowdown occurs for any reason, the Facility restricts the receipt of waste and diverts loads to another approved processing or disposal facility. If a work stoppage is anticipated to last long enough to create objectionable odors, insect breeding, or harboring of vectors, accumulated waste is removed from the site and transported to an approved backup processing or disposal facility.

Processing of grease trap waste and food-related liquids occurs entirely within the enclosed process building. The building is maintained under negative pressure, and doors remain

closed except when necessary for operations. Air from the building is directed through a wet air scrubber designed to neutralize odors before discharge.

The wet air scrubber is located on the west wall of the process building and vents above the roof line. The scrubber is routinely inspected and maintained to ensure continued operating efficiency.

In addition, odor-control maskants dispersed by atomizers and/or misters are utilized during operations and when meteorological conditions warrant their use.

All wastes and recovered materials are stored in fixed-roof vented tanks to minimize odor emissions. Processing equipment, including screens and related equipment, is routinely cleaned to prevent odor generation.

Facility personnel conduct daily perimeter inspections to assess the effectiveness of odor-control measures, and employee training emphasizes adherence to operating procedures intended to minimize odor generation and release.

The proposed buffer-zone reduction is limited to portions of the southern and western property boundaries and does not alter the enclosed nature of waste processing operations, the negative-pressure ventilation system, the wet air scrubber, storage practices, inspection procedures, or any other odor-control measures currently employed at the Facility. Because odors are controlled at the source through engineered and operational controls, LES does not rely on the southern or western buffer areas as the primary means of odor control.

LES believes that the combination of rapid waste processing, enclosed operations, negative-pressure ventilation, wet air scrubbing, fixed-roof tank storage, odor maskants, routine cleaning, and perimeter inspections effectively prevents nuisance odors from leaving the facility property boundary. Therefore, the proposed reduction in buffer width along the southern and western boundaries is consistent with the requirements of 30 TAC §§330.245(d), 330.245(f), and 330.7(e)(9).

The Facility's compliance history further demonstrates the effectiveness of these odor-control measures. LES is aware of only one public odor complaint during the past ten years, which occurred in February 2019 and resulted from anomalous operating conditions (TCEQ Tracking No. 20532). TCEQ investigated the complaint, including conducting site visits and odor surveys, and ultimately determined that the violations had been resolved (TCEQ Investigation Nos. 1551455 and 1604516).

Since that time, TCEQ has conducted additional compliance investigations in 2021 (TCEQ Investigation No. 1704988) and 2024 (TCEQ Investigation No. 2007468). No odor-related violations or other violations associated with nuisance conditions were identified during

either investigation. This compliance history supports LES's conclusion that existing facility design and operational controls effectively prevent nuisance odors from crossing the property boundary notwithstanding the proposed reduction in buffer width.

Temporary Authorization Changes

This modification brings the permit up to date with changes made previously under a Temporary Authorization that was initially approved by the TCEQ on March 26, 2018 (see Tracking No. 22566826). These changes included the addition of a filter press and a lime storage tank which better equipped the facility to meet the limits of the City of Dallas Pre-Treatment Permit.

Equipment Changes

This modification updates the equipment list and addresses upgrades to the secondary containment system.

This permit application submittal retains the previous permit documents and only those additions that are changed within this March 2026 revision are being submitted as Permit Revision 17.

This SOP contains information about how LES will conduct operations at its Dallas, Texas facility. The SOP represents the general instruction for facility management and personnel to operate the facility in a manner consistent with the approved design and the regulatory requirements to protect human health and the environment and prevent nuisances. The SOP is Part IV of the MSW permit/registration application and consists of the information required by Title 30, Texas Administrative Code (TAC), Chapter 330, Subchapter E: Operational Standards for Municipal Solid Waste Storage and Processing Units, 30 TAC §330.201–§330.249. At a minimum, the SOP must include provisions for facility management and operating personnel to meet the general and site-specific requirements.

Table SOP-1: Revision history for MSW Permit No. 2069

Date	Site Operating Plan	Site Development Plan	Waste Acceptance and Analysis Plan (WAAP)	Permit Edition
6/1/1987	Original	-	-	Original
3/30/1988	Revision 1	-	-	Revision 1
3/19/1989	Revision 2	-	-	Revision 2
5/1991	-	Original (Old)	-	Revision 3

9/1991	-	Revision 1	-	Revision 4
5/18/1999	Revision 3	-	-	Revision 5
8/24/2003	Revision 4	Revision 2	Original	Revision 6
2/2/2004	Revision 5	Revision 3	Revision 1	Revision 7
6/25/2004	Revision 6	Revision 4	Revision 2	Revision 8
2/1/2005	Revision 7	Revision 5	-	Revision 9
4/5/2005	Revision 8	Revision 6	-	Revision 10
8/5/2005	Revision 9	Revision 7	-	Revision 11
11/27/2006	-	Original (New)	-	Revision 12
6/8/2007	-	Revision 1	-	Revision 13
5/30/2008	Revision 10	Revision 2	Revision 3	Revision 14
11/2012	Revision 11	Revision 3	Revision 4	Revision 15
11/2017	Revision 12	Revision 4	Revision 5	Revision 16
0607 /2026	Revision 12	Revision 5		Revision 17

Equipment List

Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Vents	Covers	Enclosure Area ³	Protective Coatings
Processing Tanks	1	3	15,000 gallons	Grease Trap Treatment	minimum 3/16 carbon steel	fixed roof vented	No, Indoors	A	Painted
Dissolved Air Floatation	1	46	6'x 4'x 4' deep	Grit Trap Treatment	stainless steel	NA	No	A	No
Entrapped Air Flotation ⁶	2	EAF 1, EAF 2	25x6.5x6.5 20x5x5	Grease Trap Treatment	Stainless steel	NA	Indoors	B	No
Storage Tank	1	42	10,000 gallons	Bar Screen Offload Tank	Stainless Steel	NA	Indoors	B	No
Vibrating Screens	1	39	up to 5 hp	Grease Trap Treatment	stainless steel	NA	Indoors	B	No
Settling Pits	2	52, 53	10,000 gallons	Grit Trap Treatment	Concrete	NA	No	C	No
Grit Processing AST	1	31	20,300 gallons	Grit Trap Treatment	minimum 3/16 carbon steel	fixed roof vented	No	D	Painted
Grit Processing AST	1	34	24,000 gallons	Grit Trap Treatment	Fiber- reinforced plastic (FRP)	fixed roof vented	No	A	Painted
Grit Processing AST	1	32	18,000 gallons	Grit Trap Treatment	minimum 3/16 carbon steel	fixed roof vented	No	E	Painted
Yellow Grease Processing	1	12	6,000 gallons	Yellow Grease Processing	minimum 3/16 carbon steel	fixed roof vented	No	A	Painted
Debris Screening Unit	1	56	up to 400 gpm	Preliminary Waste Processing	Stainless steel	NA	No	A	No
Grinder Pump	1		up to 350 gpm	Preliminary Waste Processing	minimum carbon steel	NA	No	A	No
Centrifuge ⁵	1	54	up to 175 gpm	Brown Grease Recovery	Stainless steel	NA	Enclosure	A	No
Centrifuge Feed Tank ⁵	1	55	10,000 gal	Centrifuge Feed System	minimum 3/16 carbon steel	fixed roof vented	No	A	Insulated

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"

5. Base Table updated to show Centrifuge and Centrifuge Tank Information
6. Base Table updated to show EAF 1, EAF 2, and Tank 42 Information.

Equipment List

Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Covers
Diaphragm Pumps	3		0.5", 1 gph	Odor Control	Aluminum and Steel	No
Atomizing Nozzle	1		0.5"	Odor Control	NA	No
Misting Fan	2		1/3 hp		NA	No
Odor Control Scrubber	1	35	8,000 gallons	Air Scrubber Vent Tank	Steel	No
Odor Control Scrubber	1	36	2,000 gallons	Scrubber Intake Tank	Steel/ SS	No
Vacuum Tank	1	50	3,000 gallons	Various	Minimum 3/16 Carbon Steel	No
Poly Tanks	1	6	550 gallons	Transfer	Polycarbonate	Indoors
Squirrel Cage Fan	1	37	5' dia., 30 hp	Odor Control Scrubber	SS	Indoors
Chemical Diaphragm Pump	6		0.5"	Scrubber, Process Chemical and Boiler Chemical Feed	Thermoplastic and SS	Indoors
Centrifugal Pump	2		2.5 hp	Scrubber Recirculation Pump	Minimum Gray Iron	No
Front Loader Tractor	1		2 cu yd bucket	Material Handling	NA	No
Forklift	1		3,700 lbs	Material Lifting	NA	Indoors
Air Compressor	1	48	50 hp min.	Facility Main Air Supply	NA	
Steam Boiler	1	43	350 hp, 150 psi	In-Tank Material Heating	NA	Indoors
Boiler Tank	1	44	500 gallons	Boiler Feed Water System	Steel/ SS	Indoors
Water Softener System	1	45	14 gpm	Boiler Feed Water System	NA	Indoors
Diaphragm Pump	3		3"	Press Sludge Feed/ Precoat/ Sludge Conditioning and Transferring	Aluminum and Steel	Indoors and Outdoors
Diaphragm Pump	3		2"	Water Effluent/ Sumps	Aluminum and Steel	Indoors and Outdoors
Mixer with Blade Prop	1		3/4 hp	Sludge Conditioning	NA	No
Centrifugal Pump	2		10 hp	Material Transfer Pump	Minimum Gray Iron	Indoors and Outdoors

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.
3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"
5. Base Table updated to show Centrifuge and Centrifuge Tank Information
6. Base Table updated to show EAF 1, EAF 2, and Tank 42 Information.

Equipment List

Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Covers
Centrifugal Pump	1		25 hp	Material Transfer Pump	Minimum Gray Iron	Indoors and Outdoors
Vacuum Equipment	1		30 hp	Offload/ Material Transfer Vacuum Pump	NA	No
Screw Auger	1		15 hp	Solids Conveyance, Screens/Centrifuges to roll off box	SS	Indoors
Diaphragm Pump	3		1' - 1.5"	Lime Feed to pH Mix Tank	NA	No
Mixer	1		0.25 hp	Lime Tank Mixer for pH Mix Tank	NA	No
Polyblend Unit	2		60 gph	Polymer Feed for pH Mix Tank	Thermoplastic and SS	Indoors
Centrifugal Pump	3		3 - 5 hp	Material Transfer Pump	Minimum Gray Iron	Indoors and Outdoors
Sump Pump	3		125 gpm	Pit Drain Pump	NA	Indoors and Outdoors
Flow Meter - Grit Trap Process Discharge	1		Transit Time	Discharge Flow Measurement	NA	No
Flow Meter - Grease Trap Process Discharge	1		Doppler	Discharge Flow Measurement	NA	No
Pressure Washer	1		Portable	Cold Water Wash-Down Unit	NA	
Polymer Tote	1	15	360 gal	Chemical Storage	NA	No
Polymer Tote	1	24	275 gal	Treatment	HDPE	Indoors
Storage Tank	1	59	6,150	Lime Tank	NA	No
Filter Press	1	60	750 gal	Filter Press	NA	No
Sodium Hydroxide Tank	1	5	2,500 gal	Chemical Storage	NA	Indoors
Storage Tank	1	8	10,000 gal	Wastewater Sludge Holding	Steel	No
Storage Tank	1	10	10,000 gal	Wastewater Sludge Holding	Steel	No
Storage Tank	1	11	10,000 gal	Yellow Grease Finished Product Storage	Steel	No
Storage Tank	1	13	6,000 gal	Yellow Grease Offload	Steel	No
Storage Tank	1	14	10,000 gal	Brown Grease Storage	Steel	No
Storage Tank	1	17	24,000 gal	Offloading/Wastewater/Sludge Holding	Steel	No
Storage Tank	1	18	18,000 gal	Offloading/Wastewater/Sludge Holding	Steel	No

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"

5. Base Table updated to show Centrifuge and Centrifuge Tank Information
6. Base Table updated to show EAF 1, EAF 2, and Tank 42 Information.

Equipment List
Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Covers
Storage Tank	1	19	8,000 gal	Wastewater or Sludge Holding	Steel	No
Storage Tank	1	20	18,000 gal	Offloading/Wastewater/Sludge Holding	Steel	No
Storage Tank	1	21	10,000 gal	Brown Grease Storage	Steel	No
Storage Tank	1	23	10,000 gal	Wastewater or Sludge Holding	Steel	No
Storage Tank	1	25	12,500 gal	Wastewater or Sludge Holding	Steel	No
Storage Tank	1	33	12,000 gal	Wastewater or Sludge Holding	Steel	No

- Notes:**
1. Size indicated is for each unit.

2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations

4. Base Table from “Generalized Construction Details – Process Units”

5. Base Table updated to show Centrifuge and Centrifuge Tank Information

6. Base Table updated to show EAF 1, EAF 2, and Tank 42 Information.

Closure Cost Estimate
LES Dallas Facility March 2026
Revised February 22, 2010 (Brown and Caldwell) Revised October 22, 2012 (DBS&A)⁷ Revised November 2012 (DBS&A) Revised November 2017 (CK-LLC) Revised June 2026 (CK-LLC)

Item Number	Tank ID	Capacity (gal)	Contents	Total Gallons – disposal	Cost per Unit ^{1,3, 8}	Tank Contents	Estimated Disposal Cost
EA1	EA1 Unit	11,500	Grease Trap Treatment	11,500	\$0.62	on ground	\$7,130
EA2	EA2 Unit	6,000	Grease Trap Treatment	6,000	\$0.62	on ground	\$3,720
3	Processing Tank	15,000	Grease Trap Treatment	15,000	\$0.62	on ground	\$9,300
5	Storage Tank	2,500	Chemical Storage	2,500	\$5.43	on ground	\$13,581
6	Poly Tank	550	Transfer Tank	550	\$0.62	on ground	\$341
8	Storage Tank	10,000	Wastewater or Sludge Holding	10,000	\$0.62	on ground	\$6,200
10	Storage Tank	10,000	Wastewater or Sludge Holding	10,000	\$0.62	on ground	\$6,200
11	Storage Tank	10,000	Yellow Grease Finished Product	10,000	\$0.62	on ground	\$6,200
12	Processing Tank	6,000	Yellow Grease Processing & Offload	6,000	\$0.62	elevated	\$3,720
13	Storage Tank	6,000	Yellow Grease Offload	6,000	\$0.62	elevated	\$3,720
14	Storage Tank	10,000	Brown Grease Storage	10,000	\$0.62	on ground	\$6,200
15	Polymer Tote	360	Chemical Storage	360	\$622	on ground	\$622
17	Storage Tank	24,000	Offloading/Wastewater/Sludge Holding	24,000	\$0.62	elevated	\$14,880
18	Storage Tank	18,000	Offloading/Wastewater/Sludge Holding	18,000	\$0.62	elevated	\$11,160
19	Storage Tank	8,000	Wastewater or Sludge Holding	8,000	\$0.62	elevated	\$4,960
20	Storage Tank	18,000	Offloading/Wastewater/Sludge Holding	18,000	\$0.62	elevated	\$11,160
21	Storage Tank	10,000	Brown Grease Storage	10,000	\$0.62	on ground	\$6,200
23	Storage Tank	10,000	Wastewater or Sludge Holding	10,000	\$0.62	on ground	\$171
24	Polymer Tote	275	Storage	275	\$0.62	On Ground	\$171
25	Storage Tank	12,500	Wastewater or Sludge Holding	12,500	\$0.62	on ground	\$12,586
31	Grit Processing AST	20,300	Grit Trap Treatment	20,300	\$0.62	on ground	\$3,720
32	Grit Processing AST	18,000	Grit Trap Treatment	18,000	\$0.62	elevated	\$11,160

33	Storage Tank	12,000	Wastewater or Sludge Holding	12,000	\$0.62	on ground	\$7,440
34	Grit Processing AST	24,000	Grit Trap Treatment	24,000	\$0.62	on ground	\$14,880
35	Odor Control Scrubber	8,000	Air Scrubber Vent Tank	8,000	\$0.62	on ground	\$4,960
36	Odor Control Scrubber	2,000	Scrubber Intake Tank	2,000	\$0.62	on ground	\$1,240
42	Storage Tank	10,000	Bar Screen Offload Tank	10,000	\$0.62	on ground	\$6,200
50	Vacuum Tank	3,000	Various	3,000	\$0.62	on ground	\$1,860
52	Settling Pit	10,000	Solidification	10,000	\$0.62	on ground	\$6,200
53	Settling Pit	10,000	Solidification	10,000	\$0.62	on ground	\$6,200
55	Centrifuge Feed Tank	10,000	Sludge Holding	10,000	\$0.62	on ground	\$6,200
59	Storage Tank	6,150	Lime Tank	6,150	\$6.61	On Ground	\$40,657
60	Filter Press	750	Filter Press	750	\$0.17	Elevated	\$128
Summary				322,885		T&D Cost	\$249,125
Tank Cleaning Project Management and Contingency							
	Tank Cleaning Services	300,600	gallons @ a rate of 0.33/gallon avg. ²				\$99,198
	Sampling ⁴						\$4,000
	Analytical ⁵						\$1,230
Project Management, HSP, Work Plan ⁶						15%	\$37,369
Contingency						15%	\$37,369
Total Estimated Closure Cost							\$428,291

Notes:

Revised March 2026 based on current disposal rates (see invoice copies)

¹ These unit transportation and disposal (T&D) costs are representative of the cost to contract an outside disposal company to remove the tank contents and transport them for disposal/recycling to a facility licensed for disposal wastes.

² An Costs provided by HydroTex Excavation for tank cleaning based on invoices received form client.

³ Costs provided by Republic Waste Services for waste removal and site cleaning. Any tank that contains sludge or grit inside the tank, the cost is approximately \$0.62/gallon.

⁴ Sampling costs are estimated for four surface samples as per closure plan.

⁵ Analytical costs for samples provided by Eurofins.

⁶ Estimate for engineering associated with closure, including certification of closure report, health and safety plan and work plan.

⁷ Base cost estimate from "Opinion of Probable Closure Costs - LES Dallas facility" revised February 22, 2010 by Brown and Caldwell, known as Opinion of Probable Closure Costs - LES Dallas Facility in the Application Part III - Site Development Plan, signed and sealed by Horacio Juarez, P.E. on April 14, 2010.

⁸ Disposal costs for Caustic, Polymer, and Lime chemicals provided by Univar Solutions.

Attachment SDP-4: Secondary Containment Calculations

Methodology

Secondary containment calculations were prepared for the five containment areas shown on Figure 1 (Area A through Area E). The Tank Farm Area was subdivided into Areas A1 through A11 to better represent existing grade at the site and corresponding differences in surrounding containment curbs. The calculations provided are based on the rule found in 30 Texas Administrative Code (TAC) Chapter 330 Part §330.63(D). This section of the rule requires that “secondary containment be designed to control and contain a worst-case spill or release”. These secondary containment calculations take into account the volume of the largest tank or, where 10 percent of the total storage tank capacity within a containment area exceeds the total capacity of the largest tank, this volume is used for the design tank containment volume, V_{tank} . These calculations also take into account precipitation from a 25-year, 24-hour rainfall event (design storm), V_{precip} . Precipitation for each containment area is calculated using equation 1:

$$V_{\text{precip}} = A_{\text{cont}} * i \quad (\text{Eqn. 1})$$

Where V_{precip} = volume of precipitation A_{cont} = total containment area

i = depth of precipitation for the design storm

The total required secondary containment, $V_{\text{SC-req}}$, is the sum of precipitation from the design storm and the capacity of the largest tank, as shown in equation 2:

$$V_{\text{SC-req}} = V_{\text{precip}} + V_{\text{tank}} \quad (\text{Eqn. 2})$$

Available secondary containment is based on the open containment area, A_{open} , found by subtracting the footprint of any equipment located on the ground, A_{equip} , from the total containment area, A_{cont} , as shown in equation 3:

$$A_{\text{open}} = A_{\text{cont}} - A_{\text{equip}} \quad (\text{Eqn. 3})$$

Attachment SDP-4-1

The secondary containment volume, $V_{SC-exist}$, is determined by multiplying the open containment area, A_{open} , by the average height of the containment curb or wall, h_{cont} , and adding in additional containment storage, V_{add} , such as sump volume or hydraulic pass-through into other containment areas, as shown in equation 4:

$$V_{SC-exist} = A_{open} * h_{cont} + V_{add} \quad (\text{Eqn. 4})$$

Available containment can then be compared to the required secondary containment to determine whether a deficiency exists, and engineered solutions can be proposed to eliminate the deficiency. When a containment surplus is found, the available freeboard, h_{FB} , or the height from the top of the design containment water surface to the top of the containment wall, can be calculated based on the available open containment area, as shown in equation 5:

$$h_{FB} = (V_{SC-exist} - V_{SC-req}) / A_{open} \quad (\text{Eqn. 5})$$

Sample Calculation

A sample calculation for Area D is provided below, with calculations for all containment areas summarized in attached tables.

According to data from Atlas of Depth-Duration Frequency of Precipitation Annual Maxima for Texas, a collaboration between the United States Geological Survey and the Texas Department of Transportation (June 2004), a 25-year, 24-hour storm event at the site produces approximately 7.25 inches of rainfall. Containment Area D has dimensions of approximately 20 feet by 23 feet for a total containment area, A_{cont} , of approximately 460 square feet (ft^2). The volume of precipitation is calculated using equation 1:

$$V_{precip} = A_{cont} * i = 460 \text{ ft}^2 * 7.25 \text{ in} * (\text{ft}/12 \text{ in}) * (7.48 \text{ gallons} / \text{ft}^3) \quad (\text{Eqn. 1})$$

$$V_{precip} = 2,079 \text{ gallons}$$

Attachment SDP-4-2

There is a single storage tank found on the ground within the containment area with a tank capacity, V_{tank} , of 20,300 gallons. The total required secondary containment is calculated using equation 2:

$$V_{\text{SC-req}} = V_{\text{precip}} + V_{\text{tank}} = 2,079 \text{ gallons} + 20,300 \text{ gallons} \quad (\text{Eqn. 2})$$

$$V_{\text{SC-req}} = 22,379 \text{ gallons}$$

As shown on the attached equipment schedule, the single storage tank diameter is elevated, resulting in a footprint area, A_{equip} , of 0 ft². The open containment area can be calculated using equation 3:

$$A_{\text{open}} = A_{\text{cont}} - A_{\text{equip}} = 460 \text{ ft}^2 - 0 \text{ ft}^2 \quad (\text{Eqn. 3})$$

$$A_{\text{open}} = 460 \text{ ft}^2$$

The containment wall height in this containment area, h_{cont} , is 83 inches (6.9 feet). Area D also utilizes a weir-type flow-through located near the top of the north wall that allows Area E to be used as additional containment capacity in the event of a release in Area D. This additional capacity, V_{add} , is 13,464 gallons. The total existing available containment capacity is then calculated using equation 4:

$$V_{\text{SC-exist}} = A_{\text{open}} * h_{\text{cont}} + V_{\text{add}} \quad (\text{Eqn. 4})$$

$$V_{\text{SC-exist}} = (460 \text{ ft}^2 * 83 \text{ inches} * [\text{ft}/12 \text{ in}]) * (7.48 \text{ gallons} / \text{ft}^3) + 13,464 \text{ gallons}$$

$$V_{\text{SC-exist}} = 37,263 \text{ gallons}$$

Comparing the required to the available secondary containment shows that a surplus exists in Area D of approximately 14,884 gallons. Based on this calculated surplus, determine the approximate freeboard. Due to additional containment used in Area E, freeboard will be based on the open area in Area E, $A_{\text{open}} = 400 \text{ ft}^2$. Using equation 5:

Attachment SDP-4-3

$$h_{FB} = (37,263 \text{ gallons} - 22,379 \text{ gallons}) / (7.48 \text{ gallons} / \text{ft}^3) / 460 \text{ ft}^2 * (12 \text{ in/ft}) \text{ (Eqn. 5)}$$

$$h_{FB} = 51.91 \text{ inches}$$

Secondary containment calculations are summarized in the table below:

Freeboard Summary							
Area	Containment Area Description	Containment Capacity (gallons)			Available Freeboard (inches)	Additional Freeboard (inches)	Total Modified Freeboard (inches)
		Available	Modified	Required			
A & E*	Tank Farm & Storage Tank 32	65,485	159,571	62,24071,614	0.62	Varies*	12.0013.85
B**	Process Building	15,382	N/A	11,500	1.30	0	1.30
C	Solidification Pits	29,681	44,830	18,96621,208	2.46	10.00	12.4615.28
D	Storage Tank 31	37,263	N/A	22,379	51.91	0	51.91

*Exterior wall heights will increase such that each area the total area will have one foot of available freeboard

**Area B is a roofed, walled, and enclosed area and thus not subject to wave action

Summary of Secondary Containment Calculations

Liquid Environmental Solutions, Dallas Facility

Area:	A	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	E	Total A&E	B	C	D
Containment area (ft2)	11,038	1,888	342	198	84	260	1,508	40	630	800	714	2500	400	9,36411,438	5,100	1,9842,480	460
Open containment area (ft2)	10,185	1,838	342	148	84	260	1,172	40	529	750	477	2421	400	8,46210,536	4,775	1,9842,480	460
Existing containment height (in) ⁴	Varies	12	19	15	15	15	9	15	10.5	12	10.5	6	54	(varies)	5	4858	83
Maximum tank volume (gal)	24,000	24,000	12,000	10,000	-	-	15,000	-	12,500	18,000	24,000	6,150	18,000	24,000	11,500	10,000	20,300
Total tank volume (gal)	231,460	62,000	12,000	10,000	-	-	47,000	-	40,500	28,000	24,700	7,260	231,46018,000	13,325249,460	20,000	20,300	18,000
Design tank containment volume (gal)	24,000	24,000	12,000	10,000	-	-	15,000	-	12,500	18,000	24,000	6,150	18,000	24,000	11,500	10,000	20,300
Design precipitation (gal)	46,028	8,305	1,546	669	380	-	5,296	181	2,393	3,389	2,156	10,943	1,808	38,24047,614	-	8,96611,208	2,079
Total containment required (gal)	70,028												19,808	62,24076,614	11,500	18,96621,208	22,379
Existing containment available (gal)	144,685	13,746	4,050	1,384	785	2,431	6,575	374	3,465	5,610	3,122	9,056	13,464	64,063158,149	14,882	29,68144,830	23,799
Additional containment (gal)	1,422	711	-	-	-	-	711	-	-	-	-	-	-	1,422	500	3600	13,464
Total containment capacity (gal)	146,107	14,457	4,050	1,384	785	2,431	7,286	374	3,465	5,610	3,122	9,056	13,464	65,485159,571	15,382	30,04144,830	37,263
Existing containment deficiency (gal)														0	0	0	0

Notes / Assumptions:

1. Area A5 is covered. Precipitation will drain off-site, outside containment Area A.
2. Tank 35 in Area A6 contains vapor (not fluid), which does not require secondary containment.
3. Area B is a roofed, walled, and enclosed area
4. Area A varies in elevation internally

Conversions

7.25 inches, 25-year 24-hour design storm

7.48 gallons per cubic foot

12 inches per foot

Summary of Secondary Containment Areas and Volumes

Liquid Environmental Solutions, Dallas Facility

Area:	A	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	B	C	D	E
Length (ft)	168, 58, 69	59	18	11	7	13	58	5	63	25	14	53, 40	85	6480	23	20
Width (ft)	51, 36, 18	32	19	18	12	20	26	8	10	32	51	34, 17	60	31	20	20
Area (ft²)	11,038	1,888	342	198	84	260	1,508	40	630	800	714	2500	5,100	1,9842,480	460	400
Height (in)	Varies	12	19	15	15	15	9	15	10.5	12	10.5	6	5	4858	83	54
Volume (ft³)	19,423	1,888	542	248	105	325	1,131	50	551	800	625	1,250	2,125	3,9685,993	3,182	1,800
Volume (gal)	145,282	14,122	4,051	1,851	785	2,431	8,460	374	4,124	5,984	4,673	9,350	15,896	29,68144,830	23,799	13,465
Existing Conditions																
Open area (ft²)	10,185	1,838	342	148	84	260	1,172	40	529	750	477	2,421	4,755	1,9842,480	460	400
Open volume (ft³)	19,423	1,838	542	185	105	325	879	50	463	750	417	1,211	1,974	3,9685,993	3,182	1,800
Open volume (gal)	144,685	13,746	4,050	1,384	785	2,431	6,575	374	3,465	5,610	3,122	9,056	14,882	29,68144,830	23,799	13,464

Assumptions / Conversions

7.48 gallons per cubic foot

12 inches per foot

Tank and Equipment Schedule - LES Dallas Facility											
Item	Containment Area	Containment Sub-Area	Equipment Placement	Diameter (ft)	Length (ft)	Width (Ft)	Surface Area (Sq. ft.)	Size	Units	Equipment Type	Function
14	A	A1	On Ground	8			50	10,000	gallons	Storage Tank	Brown Grease Storage
17	A	A1	Elevated	10				24,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
18	A	A1	Elevated	10				18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
25	A	A1	Elevated	8				12,500	gallons	Storage Tank	Wastewater or Sludge Holding
55	A	A1	Elevated	10				10,000	gallons	Centrifuge Feed Tank	Centrifuge Feed System
						Total:	50	74,500	gallons		
33	A	A2	Elevated	12				12,000	gallons	Storage Tank	Wastewater or Sludge Holding
						Total:	113	12,000	gallons		
10	A	A3	On Ground	8			50	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
						Total:	50	10,000	gallons		
54	A	A5	Elevated					175	gpm	Centrifuge	Brown Grease Recovery
						Total:	0	0	gallons		
3	A6	A6	On Ground	12			113	15,000	gallons	Processing Tank	Grease Trap Treatment
11	A6	A6	On Ground	8			50	10,000	gallons	Storage Tank	Yellow Grease Finished Product Storage
12	A6	A6	Elevated	8				6,000	gallons	Processing Tank	Yellow Grease Processing
13	A6	A6	Elevated	8				6,000	gallons	Storage Tank	Yellow Grease Offload
35	A6	A6	On Ground	8			50		gallons	Odor Control Scrubber	Air Scrubber Vent Tank (8,000 gallon AIR ONLY)
36	A6	A6	On Ground	12			113	2,000	gallons	Odor Control Scrubber	Scrubber Intake Tank
37	A6	A6	On Ground		3	3	9	30	HP	Odor Control Scrubber	Scrubber Fan
						Total:	336	39,000	gallons		
8	A	A8	On Ground	8			50	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
19	A	A8	Elevated	10				8,000	gallons	Storage Tank	Wastewater or Sludge Holding
22	A	A8	On Ground	8			50	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
						Total:	101	28,000	gallons		
20	A	A9	Elevated	10				20,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
21	A	A9	On Ground	8			50	10,000	gallons	Storage Tank	Brown Grease Storage
50	A	A9	Elevated					3,000	gallons	Vacuum Tank	Various
						Total:	50	33,000	gallons		
34	A	A10	Elevated	12				24,000	gallons	Grit Processing AST	Offloading/Grit Trap Treatment
46	A	A10	On Ground		6	4	24	6x4x4	feet	Dissolved Air Flotation	Grit Trap Treatment
56	A	A10	Elevated					400	gpm	Mechanical Processing	Mechanical Debris Screen
57	A	A10	On Ground		10	10	100	3,500	gallons	Holding Tank	Offloading Tank Platform
						Total:	237	27,500	gallons		
15	A	A11	On Ground					360	gallons	Polymer Tote	Chemical Storage
58	A	A11	On Ground	10			79	6,150	gallons	Storage Tank	Lime Tank
59	A	A11	Elevated					750	gallons	Filter Press	Filter Press
						Total:	79	7,260	gallons		
EA1	B		On ground		25	6.5	163	7,900	gallons	Entrapped Air Flotation	Grease Trap Treatment
EA2	B		On ground		20	5	100	3,740	gallons	Entrapped Air Flotation	Grease Trap Treatment
5	B		On Ground	8			50	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
6	B		On Ground	4			13	550	gallons	Poly Tank	Transfer Tank
42	B		Elevated					10,000	gallons	Storage Tank	Bar Screen Offload Tank
						Total:	325	24,690	gallons		
52	C		In Ground		64	16		10,000	gallons	Settling Pit	Solidification
53	C		In Ground		64	15		10,000	gallons	Settling Pit	Solidification
31	D		Elevated	13				20,300	gallons	Grit Processing AST	Grit Trap Treatment
						Total:	0	20,300	gallons		

32	E		Elevated	12			113	18,000	gallons	Grit Processing AST	Grit Trap Treatment
							Total:	113	18,000	gallons	

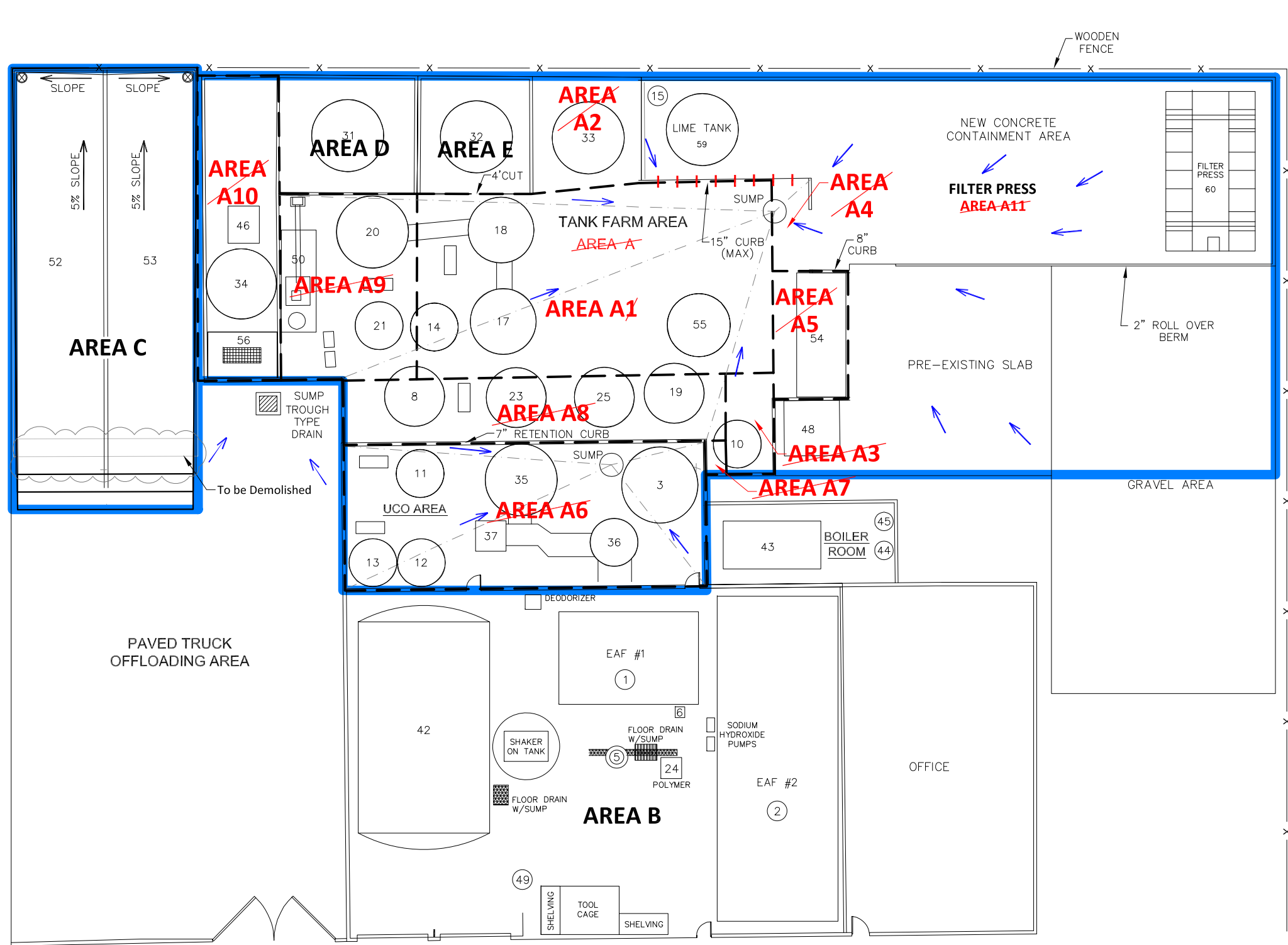
43			On Ground				0	350	HP	Steam Boiler	In Tank Material Heating
44			On Ground	4			13	500	gallons	Boiler Feed Water Tank	Boiler Feed Water System
45			On Ground					14	gpm	Water Softener System	Boiler Feed Water System
48			Elevated					50	HP	Air Compressor	Facility Main Air Supply

Legend

 Not applicable for this equipment

Assumptions/Conversions

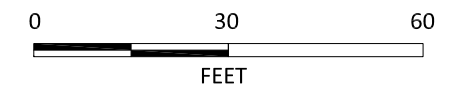
7.48 gallons per cubic foot



LEGEND

- Stormwater Flow Direction
- 1" Drain Hole
- Proposed Freeboard Modification

Tank and Equipment Schedule						
Item #	Containment Area	Equipment Placement	Size	Units	Equipment Type	Function
EAF #1	B	On Ground	11,500	gallons	Entrapped Air Floatation Tank	Grease Trap Treatment
EAF #2	B	On Ground	6,000	gallons	Entrapped Air Floatation Tank	Grease Trap Treatment
3	A	On Ground	15,000	gallons	Processing Tank	Grease Trap Treatment
5	B	On Ground	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
6	B	On Ground	550	gallons	Poly Tank	Transfer Tank
8	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
10	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
11	A	On Ground	10,000	gallons	Storage Tank	Yellow Grease Finished Product Storage
12	A	Elevated	6,000	gallons	Processing Tank	Yellow Grease Processing
13	A	Elevated	6,000	gallons	Storage Tank	Yellow Grease Offload
14	A	On Ground	10,000	gallons	Storage Tank	Brown Grease Storage
15	A	On Ground	360	gallons	Polymer Tote	Chemical Storage
17	A	Elevated	24,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
18	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
19	A	Elevated	8,000	gallons	Storage Tank	Wastewater or Sludge Holding
20	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
21	A	On Ground	10,000	gallons	Storage Tank	Brown Grease storage
23	A	On Ground	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
24	B	On Ground	275	gallons	Polymer Tote	Treatment
25	A	On Ground	12,500	gallons	Storage Tank	Wastewater or Sludge Holding
31	D	On Ground	20,300	gallons	Grit Processing AGT	Grit Trap Treatment
32	E	Elevated	18,000	gallons	Grit Processing AGT	Grit Trap Treatment
33	A	On Ground	12,000	gallons	Storage Tank	Wastewater or Sludge Holding
34	A	On Ground	24,000	gallons	Grit Processing AGT	Offloading/Grit Trap Treatment
35	A	On Ground	8,000	gallons	Odor Control Scrubber	Air Scrubber Vent Tank (Air Only)
36	A	On Ground	2,000	gallons	Odor Control Scrubber	Scrubber Intake Tank
37	A	On Ground	30	HP	Odor Control Scrubber	Scrubber Fan
39	B	Elevated	5	HP	Vibratory Screen	Grease Trap Treatment
42	B	Elevated	10,000	gallons	Storage Tank	Bar screen Offload Tank
43		On Ground	350	HP	Steam Boiler	In Tank Material Heating
44		On Ground	500	gallons	Boiler Feed Water Tank	Boiler Feed Water System
45		On Ground	14	gpm	Water Softener System	Boiler Feed Water System
46	A	On Ground	700	gallons	Dissolved Air Flotation	Grit Trap Treatment
48		Elevated	50	HP	Air Compressor	Facility Main Air Supply
50	A	Elevated	3,000	gallons	Vacuum Tank	Various
52	C	In Ground	10,000	gallons	Settling Pit	Solidification
53	C	In Ground	10,000	gallons	Settling Pit	Solidification
54	A	Elevated	175	gpm	Centrifuge	Brown Grease Recovery
55	A	Elevated	10,000	gallons	Centrifuge Feed Tank	Centrifuge Feed System
56	A	Elevated	400	gpm	Mechanical Processing	Mechanical Debris Screen
59	A	On Ground	6,150	gallons	Storage Tank	Lime Tank
60	A	Elevated	750	gallons	Filter Press	Filter Press



Freeboard Summary						
Area	Containment Area Description	Containment Capacity (gallons)			Available Freeboard (inches)	Proposed Freeboard Increase (inches)
		Available	Modified	Required		
A & E*	Tank Farm & Storage Tank 32	65,485	160,168	62,240 71,614	0.62	Varies*
B**	Process Building	15,382	N/A	11,500	1.3	0
C	Solidification Pits	29,681	44,830	18,966 21,208	2.46	10
D	Storage Tank 31	37,263	N/A	22,379	51.91	0

*Exterior wall heights will increase such that the total area will have one foot of available freeboard
**Area B is a roofed, walled, and enclosed area and thus not subject to wave action

Notes:

- EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE NOT SHOWN TO SCALE.
- EQUIPMENT SCHEDULE AND CONTAINMENT HEIGHTS ARE BASED ON INFORMATION PROVIDED TO CK ASSOCIATES BY LIQUID ENVIRONMENTAL SOLUTIONS, LLC.
- CONTAINMENT HEIGHTS SHOWN ARE EXISTING. REFER TO SECONDARY CONTAINMENT CALCULATION SUMMARY TABLE FOR ADDITIONAL CONTAINMENT INFORMATION AND ATTACHMENT D.
- APPROXIMATE LOCATIONS OF ELEVATED INCIDENTAL EQUIPMENT, SUCH AS PUMPS, ARE SHOWN FOR REFERENCE ONLY AND MAY NOT BE IDENTIFIED ON THE TANK AND EQUIPMENT SCHEDULE.

Liquid Environmental Solutions
Dallas, Texas

Municipal Solid Waste (MSW) Permit 2069A
Permit Modification

Freeboard Modification

Dallas County

CK ASSOCIATES
Environmental Consultants

Drawn: CAL
Date: 7/30/2026
Dwg. No.: 00002100-05

Checked: BHR
Approved: DWH

Figure 2

Appendix C-2

Part IV

TYPE V MUNICIPAL SOLID WASTE FACILITY TCEQ MSW PERMIT 2069A
PART IV
SITE OPERATING PLAN

For

LIQUID ENVIRONMENTAL SOLUTIONS OF TEXAS, LLC
Dallas Facility 11115 Goodnight Lane
Dallas, Texas, 75229

CN No. 603229436
RN No. 103002713

Prepared by:

Liquid Environmental Solutions of Texas, LLC 1801 Royal Lane, Suite 500
Dallas, Texas 75229

and

Brown and Caldwell 1100 NE Loop 410, Suite 300
San Antonio, TX 78209

TBPE Reg. #F-2139

Revised July 2026 by CK Associates, LLC
TBPE #F-9268



Handwritten signature in blue ink over the seal.
7/30/26
Firm No. 9628

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SDP-4-1	Summary of Secondary Containment Calculations
SDP-4-2	Tank and Equipment Schedule – LES Dallas Facility
SDP-4-3	Atlas of Depth-Duration Frequency of Precipitation Annual

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Figure 1	Containment Areas
Figure 2	Freeboard Modification
Figure 3	Elevation Data



Jayle Sheehan
7/30/26
Firm No. 9628

1. Introduction

Liquid Environmental Solutions of Texas, LLC (LES) is in the business of processing certain non-hazardous liquid wastes. The Dallas LES Facility processes grease trap/food-related and grit trap waste streams. The facility is designed to separate and process the waste streams received into recyclable components, water suitable for discharge into the sanitary sewer system and solid materials for appropriate disposal. The acceptance and processing of these waste requires a Type V Municipal Solid Waste (MSW) Permit and the LES Dallas facility holds MSW Permit 2069A. The purpose of this permit modification request is to: allow an alternative buffer zone at the LES – Dallas Facility; update the permit to make modifications previously authorized under a Temporary Authorization; make minor equipment changes.

Buffer Zone

Per 30 TAC 330.543(b)(1), a minimum separating distance of 50 feet between solid waste storage/process units within and adjacent to the facility boundary on property owned or controlled by the owner/operator is required. The buffer zone shall not be narrower than necessary to provide for safe passage for fire fighting equipment and other emergency vehicles. LES has historically met this 50-foot buffer requirement along the south and west boundaries of the site by leasing land adjacent to its property boundary. The lease expires on June 30, 2026. LES believes that the lessor of the land may not renew the lease.

Therefore, one objective of this modification is to authorize an alternative to the buffer zone requirement in 30 TAC 330.543(b)(1). To support the amendment, LES met with the Dallas Fire Department (DFD) on August 20, 2025, to review the facility layout and allow DFD personnel to assess whether more than sufficient access for fire fighting or other emergency response would be available without the required 50-foot buffer. The layout reviewed by the DFD differs from the layout currently reflected in the permit; however, the version provided to the DFD was prepared for the specific purpose of evaluating emergency access and does not alter any operational or functional aspects relevant to the modification request. Following their review, the DFD determined that more than sufficient access is available without the buffer as long as pathways are maintained, regardless of the tank or equipment configuration, as documented in the Existing Fire Department Access Plan stamped by the DFD on September 10, 2025. A copy of this plan is provided as **Figure F1.00 in Part II**.

The alternative buffer zone is depicted on the Facility Layout Map provided as Figure II-A. The reduction of the buffer zone to approximately 12 feet along the northern property boundary, 4 feet along the southern property boundary and 10 feet along the western property boundary is consistent with the provisions outlined in 30 TAC §330.245(d) and (f) and 30 TAC §330.7(e)(9) regarding nuisance odors because these regulations do not establish a minimum odor-control buffer width. Rather, the regulations require that the facility be designed and operated such that nuisance odors do not leave the property boundary and that one or more appropriate odor-control measures be employed.

30 TAC §330.245(d) states: “The facility shall be designed and operated to provide adequate ventilation for odor control and employee safety. The owner or operator shall prevent nuisance odors from leaving the boundary of the facility. If nuisance odors are found to be passing the facility boundary, the facility owner or operator may be required to suspend operations until the nuisance is abated.”

30 TAC §330.245(f) states: “The owner or operator shall employ one or more of the following measures:

- (1) air scrubber units for odor control;*
- (2) on-site buffer zones for odor control. Consideration should be given to additional buffer zones within the facility property boundary for odor control;*
- (3) additional waste handling procedures, storage procedures, and clean-up procedures for odor control when accepting putrescible waste; or*
- (4) alternative ventilation and odor control measures.*

30 TAC §330.7(e)(9) states: “...The facility shall be designed and operated in a manner so as to prevent nuisance conditions, including, but not limited to, dust from ashes, disease vectors, odors, and liquids from spills, from being released from the property boundary of the authorized facility.”

While §330.245(f) identifies buffer zones as one potential odor-control measure, it also expressly recognizes the use of air scrubbers, waste handling and storage procedures, and other alternative ventilation and odor-control measures. Accordingly, compliance with the odor-control requirements is based on the effectiveness of the overall facility design and operational controls, not on the width of a particular setback distance.

The Facility employs multiple independent odor-control measures that prevent nuisance odors from migrating beyond the property boundary.

The permit requires that all incoming wastes be processed within 72 hours. Receipt of additional wastes beyond those that can be processed within 72 hours is curtailed until any adverse conditions are abated. If a significant work stoppage or slowdown occurs for any reason, the Facility restricts the receipt of waste and diverts loads to another approved processing or disposal facility. If a work stoppage is anticipated to last long enough to create objectionable odors, insect breeding, or harboring of vectors, accumulated waste is removed from the site and transported to an approved backup processing or disposal facility.

Processing of grease trap waste and food-related liquids occurs entirely within the enclosed process building. The building is maintained under negative pressure, and doors remain

closed except when necessary for operations. Air from the building is directed through a wet air scrubber designed to neutralize odors before discharge.

The wet air scrubber is located on the west wall of the process building and vents above the roof line. The scrubber is routinely inspected and maintained to ensure continued operating efficiency.

In addition, odor-control maskants dispersed by atomizers and/or misters are utilized during operations and when meteorological conditions warrant their use.

All wastes and recovered materials are stored in fixed-roof vented tanks to minimize odor emissions. Processing equipment, including screens and related equipment, is routinely cleaned to prevent odor generation.

Facility personnel conduct daily perimeter inspections to assess the effectiveness of odor-control measures, and employee training emphasizes adherence to operating procedures intended to minimize odor generation and release.

The proposed buffer-zone reduction is limited to portions of the southern and western property boundaries and does not alter the enclosed nature of waste processing operations, the negative-pressure ventilation system, the wet air scrubber, storage practices, inspection procedures, or any other odor-control measures currently employed at the Facility. Because odors are controlled at the source through engineered and operational controls, LES does not rely on the southern or western buffer areas as the primary means of odor control.

LES believes that the combination of rapid waste processing, enclosed operations, negative-pressure ventilation, wet air scrubbing, fixed-roof tank storage, odor maskants, routine cleaning, and perimeter inspections effectively prevents nuisance odors from leaving the facility property boundary. Therefore, the proposed reduction in buffer width along the southern and western boundaries is consistent with the requirements of 30 TAC §§330.245(d), 330.245(f), and 330.7(e)(9).

The Facility's compliance history further demonstrates the effectiveness of these odor-control measures. LES is aware of only one public odor complaint during the past ten years, which occurred in February 2019 and resulted from anomalous operating conditions (TCEQ Tracking No. 20532). TCEQ investigated the complaint, including conducting site visits and odor surveys, and ultimately determined that the violations had been resolved (TCEQ Investigation Nos. 1551455 and 1604516).

Since that time, TCEQ has conducted additional compliance investigations in 2021 (TCEQ Investigation No. 1704988) and 2024 (TCEQ Investigation No. 2007468). No odor-related violations or other violations associated with nuisance conditions were identified during

either investigation. This compliance history supports LES's conclusion that existing facility design and operational controls effectively prevent nuisance odors from crossing the property boundary notwithstanding the proposed reduction in buffer width.

Temporary Authorization Changes

This modification brings the permit up to date with changes made previously under a Temporary Authorization that was initially approved by the TCEQ on March 26, 2018 (see Tracking No. 22566826). These changes included the addition of a filter press and a lime storage tank which better equipped the facility to meet the limits of the City of Dallas Pre-Treatment Permit.

Equipment Changes

This modification updates the equipment list and addresses upgrades to the secondary containment system.

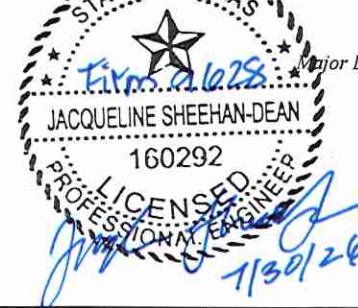
This permit application submittal retains the previous permit documents and only those additions that are changed within this March 2026 revision are being submitted as Permit Revision 17.

This SOP contains information about how LES will conduct operations at its Dallas, Texas facility. The SOP represents the general instruction for facility management and personnel to operate the facility in a manner consistent with the approved design and the regulatory requirements to protect human health and the environment and prevent nuisances. The SOP is Part IV of the MSW permit/registration application and consists of the information required by Title 30, Texas Administrative Code (TAC), Chapter 330, Subchapter E: Operational Standards for Municipal Solid Waste Storage and Processing Units, 30 TAC §330.201–§330.249. At a minimum, the SOP must include provisions for facility management and operating personnel to meet the general and site-specific requirements.

Table SOP-1: Revision history for MSW Permit No. 2069

Date	Site Operating Plan	Site Development Plan	Waste Acceptance and Analysis Plan (WAAP)	Permit Edition
6/1/1987	Original	-	-	Original
3/30/1988	Revision 1	-	-	Revision 1
3/19/1989	Revision 2	-	-	Revision 2
5/1991	-	Original (Old)	-	Revision 3

9/1991	-	Revision 1	-	Revision 4
5/18/1999	Revision 3	-	-	Revision 5
8/24/2003	Revision 4	Revision 2	Original	Revision 6
2/2/2004	Revision 5	Revision 3	Revision 1	Revision 7
6/25/2004	Revision 6	Revision 4	Revision 2	Revision 8
2/1/2005	Revision 7	Revision 5	-	Revision 9
4/5/2005	Revision 8	Revision 6	-	Revision 10
8/5/2005	Revision 9	Revision 7	-	Revision 11
11/27/2006	-	Original (New)	-	Revision 12
6/8/2007	-	Revision 1	-	Revision 13
5/30/2008	Revision 10	Revision 2	Revision 3	Revision 14
11/2012	Revision 11	Revision 3	Revision 4	Revision 15
11/2017	Revision 12	Revision 4	Revision 5	Revision 16
07/2026	Revision 12	Revision 5		Revision 17



Major Document Reorganization – August 24 2009
 Revised – October 6, 2009
 Revised- February 22, 2010
 Revised – April 12, 2010
 Revised – November 2012
 Revised – November 2017
 Revised – July 2026

Equipment List Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Vents	Covers	Enclosure Area ³	Protective Coatings
Processing Tanks	1	3	15,000 gallons	Grease Trap Treatment	minimum 3/16 carbon steel	fixed roof vented	No, Indoors	A	Painted
Dissolved Air Floatation	1	46	6'x 4'x 4' deep	Grit Trap Treatment	stainless steel	NA	No	A	No
Entrapped Air Flotation ⁶	2	EAF 1, EAF 2	25x6.5x6.5 20x5x5	Grease Trap Treatment	Stainless steel	NA	Indoors	B	No
Storage Tank	1	42	10,000 gallons	Bar Screen Offload Tank	Stainless Steel	NA	Indoors	B	No
Vibrating Screens	1	39	up to 5 hp	Grease Trap Treatment	stainless steel	NA	Indoors	B	No
Settling Pits	2	52, 53	10,000 gallons	Grit Trap Treatment	Concrete	NA	No	C	No
Grit Processing AST	1	31	20,300 gallons	Grit Trap Treatment	minimum 3/16 carbon steel	fixed roof vented	No	D	Painted
Grit Processing AST	1	34	24,000 gallons	Grit Trap Treatment	Fiber- reinforced plastic (FRP)	fixed roof vented	No	A	Painted
Grit Processing AST	1	32	18,000 gallons	Grit Trap Treatment	minimum 3/16 carbon steel	fixed roof vented	No	E	Painted
Yellow Grease Processing	1	12	6,000 gallons	Yellow Grease Processing	minimum 3/16 carbon steel	fixed roof vented	No	A	Painted
Debris Screening Unit	1	56	up to 400 gpm	Preliminary Waste Processing	Stainless steel	NA	No	A	No
Grinder Pump	1		up to 350 gpm	Preliminary Waste Processing	minimum carbon steel	NA	No	A	No
Centrifuge ⁵	1	54	up to 175 gpm	Brown Grease Recovery	Stainless steel	NA	Enclosure	A	No
Centrifuge Feed Tank ⁵	1	55	10,000 gal	Centrifuge Feed System	minimum 3/16 carbon steel	fixed roof vented	No	A	Insulated

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"

5. Base Table updated to show Centrifuge and Centrifuge Tank Information
6. Base Table updated to show EAF 1, EAF 2, and Tank 42 Information.



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 Revised – October 6, 2009
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Equipment List Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Covers
Diaphragm Pumps	3		0.5", 1 gph	Odor Control	Aluminum and Steel	No
Atomizing Nozzle	1		0.5"	Odor Control	NA	No
Misting Fan	2		1/3 hp		NA	No
Odor Control Scrubber	1	35	8,000 gallons	Air Scrubber Vent Tank	Steel	No
Odor Control Scrubber	1	36	2,000 gallons	Scrubber Intake Tank	Steel/ SS	No
Vacuum Tank	1	50	3,000 gallons	Various	Minimum 3/16 Carbon Steel	No
Poly Tanks	1	6	550 gallons	Transfer	Polycarbonate	Indoors
Squirrel Cage Fan	1	37	5' dia., 30 hp	Odor Control Scrubber	SS	Indoors
Chemical Diaphragm Pump	6		0.5"	Scrubber, Process Chemical and Boiler Chemical Feed	Thermoplastic and SS	Indoors
Centrifugal Pump	2		2.5 hp	Scrubber Recirculation Pump	Minimum Gray Iron	No
Front Loader Tractor	1		2 cu yd bucket	Material Handling	NA	No
Forklift	1		3,700 lbs	Material Lifting	NA	Indoors
Air Compressor	1	48	50 hp min.	Facility Main Air Supply	NA	
Steam Boiler	1	43	350 hp, 150 psi	In-Tank Material Heating	NA	Indoors
Boiler Tank	1	44	500 gallons	Boiler Feed Water System	Steel/ SS	Indoors
Water Softener System	1	45	14 gpm	Boiler Feed Water System	NA	Indoors
Diaphragm Pump	3		3"	Press Sludge Feed/ Precoat/ Sludge Conditioning and Transferring	Aluminum and Steel	Indoors and Outdoors
Diaphragm Pump	3		2"	Water Effluent/ Sumps	Aluminum and Steel	Indoors and Outdoors
Mixer with Blade Prop	1		3/4 hp	Sludge Conditioning	NA	No
Centrifugal Pump	2		10 hp	Material Transfer Pump	Minimum Gray Iron	Indoors and Outdoors

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"

5. Base Table updated to show Centrifuge and Centrifuge Tank Information
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 Revised – July 2026

Equipment List Revised March 2026

Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Covers
Centrifugal Pump	1		25 hp	Material Transfer Pump	Minimum Gray Iron	Indoors and Outdoors
Vacuum Equipment	1		30 hp	Offload/ Material Transfer Vacuum Pump	NA	No
Screw Auger	1		15 hp	Solids Conveyance, Screens/Centrifuges to roll off box	SS	Indoors
Diaphragm Pump	3		1' - 1.5"	Lime Feed to pH Mix Tank	NA	No
Mixer	1		0.25 hp	Lime Tank Mixer for pH Mix Tank	NA	No
Polyblend Unit	2		60 gph	Polymer Feed for pH Mix Tank	Thermoplastic and SS	Indoors
Centrifugal Pump	3		3 - 5 hp	Material Transfer Pump	Minimum Gray Iron	Indoors and Outdoors
Sump Pump	3		125 gpm	Pit Drain Pump	NA	Indoors and Outdoors
Flow Meter - Grit Trap Process Discharge	1		Transit Time	Discharge Flow Measurement	NA	No
Flow Meter - Grease Trap Process Discharge	1		Doppler	Discharge Flow Measurement	NA	No
Pressure Washer	1		Portable	Cold Water Wash-Down Unit	NA	
Polymer Tote	1	15	360 gal	Chemical Storage	NA	No
Polymer Tote	1	24	275 gal	Treatment	HDPE	Indoors
Storage Tank	1	59	6,150	Lime Tank	NA	No
Filter Press	1	60	750 gal	Filter Press	NA	No
Sodium Hydroxide Tank	1	5	2,500 gal	Chemical Storage	NA	Indoors
Storage Tank	1	8	10,000 gal	Wastewater Sludge Holding	Steel	No
Storage Tank	1	10	10,000 gal	Wastewater Sludge Holding	Steel	No
Storage Tank	1	11	10,000 gal	Yellow Grease Finished Product Storage	Steel	No
Storage Tank	1	13	6,000 gal	Yellow Grease Offload	Steel	No
Storage Tank	1	14	10,000 gal	Brown Grease Storage	Steel	No
Storage Tank	1	17	24,000 gal	Offloading/Wastewater/Sludge Holding	Steel	No
Storage Tank	1	18	18,000 gal	Offloading/Wastewater/Sludge Holding	Steel	No

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"

5. Base Table updated to show Centrifuge and Centrifuge Tank Information
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Equipment List
Revised March 2026

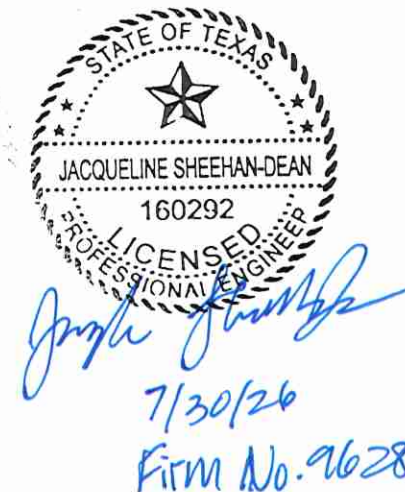
Equipment Type	Number (Minimum)	Location on Facility Map	Typical Size ¹	Function	MOC ²	Covers
Storage Tank	1	19	8,000 gal	Wastewater or Sludge Holding	Steel	No
Storage Tank	1	20	18,000 gal	Offloading/Wastewater/Sludge Holding	Steel	No
Storage Tank	1	21	10,000 gal	Brown Grease Storage	Steel	No
Storage Tank	1	23	10,000 gal	Wastewater or Sludge Holding	Steel	No
Storage Tank	1	25	12,500 gal	Wastewater or Sludge Holding	Steel	No
Storage Tank	1	33	12,000 gal	Wastewater or Sludge Holding	Steel	No

Notes:

1. Size indicated is for each unit.
2. Primary material of construction.

3. See Facility Map for Enclosure Area Locations
4. Base Table from "Generalized Construction Details – Process Units"

5. Base Table updated to show Centrifuge and Centrifuge Tank Information
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 Revised – October 6, 2009
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 Revised – April 12, 2010
 Revised – November 2012
 Revised – November 2017
 Revised – July 2026

Closure Cost Estimate
 LES Dallas Facility March 2026
 Revised February 22, 2010 (Brown and Caldwell) Revised October 22, 2012 (DBS&A)⁷ Revised November 2012 (DBS&A) Revised November 2017 (CK-LLC) Revised June 2026 (CK-LLC)

Item Number	Tank ID	Capacity (gal)	Contents	Total Gallons – disposal	Cost per Unit _{1,3,8}	Tank Contents	Estimated Disposal Cost
EA1	EA1 Unit	11,500	Grease Trap Treatment	11,500	\$0.62	on ground	\$7,130
EA2	EA2 Unit	6,000	Grease Trap Treatment	6,000	\$0.62	on ground	\$3,720
3	Processing Tank	15,000	Grease Trap Treatment	15,000	\$0.62	on ground	\$9,300
5	Storage Tank	2,500	Chemical Storage	2,500	\$5.43	on ground	\$13,581
6	Poly Tank	550	Transfer Tank	550	\$0.62	on ground	\$341
8	Storage Tank	10,000	Wastewater or Sludge Holding	10,000	\$0.62	on ground	\$6,200
10	Storage Tank	10,000	Wastewater or Sludge Holding	10,000	\$0.62	on ground	\$6,200
11	Storage Tank	10,000	Yellow Grease Finished Product	10,000	\$0.62	on ground	\$6,200
12	Processing Tank	6,000	Yellow Grease Processing & Offload	6,000	\$0.62	elevated	\$3,720
13	Storage Tank	6,000	Yellow Grease Offload	6,000	\$0.62	elevated	\$3,720
14	Storage Tank	10,000	Brown Grease Storage	10,000	\$0.62	on ground	\$6,200
15	Polymer Tote	360	Chemical Storage	360	\$622	on ground	\$622
17	Storage Tank	24,000	Offloading/Wastewater/Sludge Holding	24,000	\$0.62	elevated	\$14,880
18	Storage Tank	18,000	Offloading/Wastewater/Sludge Holding	18,000	\$0.62	elevated	\$11,160
19	Storage Tank	8,000	Wastewater or Sludge Holding	8,000	\$0.62	elevated	\$4,960
20	Storage Tank	18,000	Offloading/Wastewater/Sludge Holding	18,000	\$0.62	elevated	\$11,160
21	Storage Tank	10,000	Brown Grease Storage	10,000	\$0.62	on ground	\$6,200
23	Storage Tank	10,000	Wastewater or Sludge Holding	10,000	\$0.62	on ground	\$171
24	Polymer Tote	275	Storage	275	\$0.62	On Ground	\$171
25	Storage Tank	12,500	Wastewater or Sludge Holding	12,500	\$0.62	on ground	\$12,586
31	Grit Processing AST	20,300	Grit Trap Treatment	20,300	\$0.62	on ground	\$3,720
32	Grit Processing AST	18,000	Grit Trap Treatment	18,000	\$0.62	elevated	\$11,160

33	Storage Tank	12,000	Wastewater or Sludge Holding	12,000	\$0.62	on ground	\$7,440
34	Grit Processing AST	24,000	Grit Trap Treatment	24,000	\$0.62	on ground	\$14,880
35	Odor Control Scrubber	8,000	Air Scrubber Vent Tank	8,000	\$0.62	on ground	\$4,960
36	Odor Control Scrubber	2,000	Scrubber Intake Tank	2,000	\$0.62	on ground	\$1,240
42	Storage Tank	10,000	Bar Screen Offload Tank	10,000	\$0.62	on ground	\$6,200
50	Vacuum Tank	3,000	Various	3,000	\$0.62	on ground	\$1,860
52	Settling Pit	10,000	Solidification	10,000	\$0.62	on ground	\$6,200
53	Settling Pit	10,000	Solidification	10,000	\$0.62	on ground	\$6,200
55	Centrifuge Feed Tank	10,000	Sludge Holding	10,000	\$0.62	on ground	\$6,200
59	Storage Tank	6,150	Lime Tank	6,150	\$6.61	On Ground	\$40,657
60	Filter Press	750	Filter Press	750	\$0.17	Elevated	\$128
Summary				322,885		T&D Cost	\$249,125
Tank Cleaning Project Management and Contingency							
	Tank Cleaning Services	300,600	gallons @ a rate of 0.33/gallon avg. ²				\$99,198
	Sampling ⁴						\$4,000
	Analytical ⁵						\$1,230
Project Management, HSP, Work Plan ⁶						15%	\$37,369
Contingency						15%	\$37,369
Total Estimated Closure Cost							\$428,291

Notes:

Revised March 2026 based on current disposal rates (see invoice copies)

¹ These unit transportation and disposal (T&D) costs are representative of the cost to contract an outside disposal company to remove the tank contents and transport them for disposal/recycling to a facility licensed for disposal wastes.

² An Costs provided by HydroTex Excavation for tank cleaning based on invoices received form client.

³ Costs provided by Republic Waste Services for waste removal and site cleaning. Any tank that contains sludge or grit inside the tank, the cost is approximately \$0.62/gallon.

⁴ Sampling costs are estimated for four surface samples as per closure plan.

⁵ Analytical costs for samples provided by Eurofins.

⁶ Estimate for engineering associated with closure, including certification of closure report, health and safety plan and work plan.

⁷ Base cost estimate from "Opinion of Probable Closure Costs - LES Dallas facility" revised February 22, 2010 by Brown and Caldwell, known as Opinion of Probable Closure Costs - LES Dallas Facility in the Application Part III - Site Development Plan, signed and sealed by Horacio Juarez, P.E. on April 14, 2010.

⁸ Disposal costs for Caustic, Polymer, and Lime chemicals provided by Univar Solutions.



Attachment SDP-4: Secondary Containment Calculations

Methodology

Secondary containment calculations were prepared for the five containment areas shown on Figure 1 (Area A through Area E). The Tank Farm Area was subdivided into Areas A1 through A11 to better represent existing grade at the site and corresponding differences in surrounding containment curbs. The calculations provided are based on the rule found in 30 Texas Administrative Code (TAC) Chapter 330 Part §330.63(D). This section of the rule requires that "secondary containment be designed to control and contain a worst-case spill or release". These secondary containment calculations take into account the volume of the largest tank or, where 10 percent of the total storage tank capacity within a containment area exceeds the total capacity of the largest tank, this volume is used for the design tank containment volume, V_{tank} . These calculations also take into account precipitation from a 25-year, 24-hour rainfall event (design storm), V_{precip} . Precipitation for each containment area is calculated using equation 1:

$$V_{\text{precip}} = A_{\text{cont}} * i \quad (\text{Eqn. 1})$$

Where V_{precip} = volume of precipitation A_{cont} = total containment area

i = depth of precipitation for the design storm

The total required secondary containment, $V_{\text{SC-req}}$, is the sum of precipitation from the design storm and the capacity of the largest tank, as shown in equation 2:

$$V_{\text{SC-req}} = V_{\text{precip}} + V_{\text{tank}} \quad (\text{Eqn. 2})$$

Available secondary containment is based on the open containment area, A_{open} , found by subtracting the footprint of any equipment located on the ground, A_{equip} , from the total containment area, A_{cont} , as shown in equation 3:

$$A_{\text{open}} = A_{\text{cont}} - A_{\text{equip}} \quad (\text{Eqn. 3})$$



Attachment SDP-4-1

The secondary containment volume, $V_{SC-exist}$, is determined by multiplying the open containment area, A_{open} , by the average height of the containment curb or wall, h_{cont} , and adding in additional containment storage, V_{add} , such as sump volume or hydraulic pass-through into other containment areas, as shown in equation 4:

$$V_{SC-exist} = A_{open} * h_{cont} + V_{add} \quad (\text{Eqn. 4})$$

Available containment can then be compared to the required secondary containment to determine whether a deficiency exists, and engineered solutions can be proposed to eliminate the deficiency. When a containment surplus is found, the available freeboard, h_{FB} , or the height from the top of the design containment water surface to the top of the containment wall, can be calculated based on the available open containment area, as shown in equation 5:

$$h_{FB} = (V_{SC-exist} - V_{SC-req}) / A_{open} \quad (\text{Eqn. 5})$$

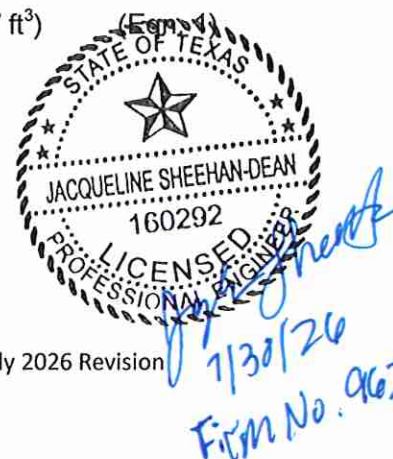
Sample Calculation

A sample calculation for Area D is provided below, with calculations for all containment areas summarized in attached tables.

According to data from Atlas of Depth-Duration Frequency of Precipitation Annual Maxima for Texas, a collaboration between the United States Geological Survey and the Texas Department of Transportation (June 2004), a 25-year, 24-hour storm event at the site produces approximately 7.25 inches of rainfall. Containment Area D has dimensions of approximately 20 feet by 23 feet for a total containment area, A_{cont} , of approximately 460 square feet (ft^2). The volume of precipitation is calculated using equation 1:

$$V_{precip} = A_{cont} * i = 460 \text{ ft}^2 * 7.25 \text{ in} * (\text{ft}/12 \text{ in}) * (7.48 \text{ gallons} / \text{ft}^3) \quad (\text{Eqn. 1})$$

$$V_{precip} = 2,079 \text{ gallons}$$



Attachment SDP-4-2

There is a single storage tank found on the ground within the containment area with a tank capacity, V_{tank} , of 20,300 gallons. The total required secondary containment is calculated using equation 2:

$$V_{\text{SC-req}} = V_{\text{precip}} + V_{\text{tank}} = 2,079 \text{ gallons} + 20,300 \text{ gallons} \quad (\text{Eqn. 2})$$

$$V_{\text{SC-req}} = 22,379 \text{ gallons}$$

As shown on the attached equipment schedule, the single storage tank diameter is elevated, resulting in a footprint area, A_{equip} , of 0 ft². The open containment area can be calculated using equation 3:

$$A_{\text{open}} = A_{\text{cont}} - A_{\text{equip}} = 460 \text{ ft}^2 - 0 \text{ ft}^2 \quad (\text{Eqn. 3})$$

$$A_{\text{open}} = 460 \text{ ft}^2$$

The containment wall height in this containment area, h_{cont} , is 83 inches (6.9 feet). Area D also utilizes a weir-type flow-through located near the top of the north wall that allows Area E to be used as additional containment capacity in the event of a release in Area D. This additional capacity, V_{add} , is 13,464 gallons. The total existing available containment capacity is then calculated using equation 4:

$$V_{\text{SC-exist}} = A_{\text{open}} * h_{\text{cont}} + V_{\text{add}} \quad (\text{Eqn. 4})$$

$$V_{\text{SC-exist}} = (460 \text{ ft}^2 * 83 \text{ inches} * [\text{ft}/12 \text{ in}]) * (7.48 \text{ gallons} / \text{ft}^3) + 13,464 \text{ gallons}$$

$$V_{\text{SC-exist}} = 37,263 \text{ gallons}$$

Comparing the required to the available secondary containment shows that a surplus exists in Area D of approximately 14,884 gallons. Based on this calculated surplus, determine the approximate freeboard. Due to additional containment used in Area E, freeboard will be based on the open area in Area E, $A_{\text{open}} = 400 \text{ ft}^2$. Using equation 5:



Attachment SDP-4-3

$$h_{FB} = (37,263 \text{ gallons} - 22,379 \text{ gallons}) / (7.48 \text{ gallons} / \text{ft}^3) / 460 \text{ ft}^2 * (12 \text{ in/ft}) \text{ (Eqn. 5)}$$

$$h_{FB} = 51.91 \text{ inches}$$

Secondary containment calculations are summarized in the table below:

Freeboard Summary							
Area	Containment Area Description	Containment Capacity (gallons)			Available Freeboard (inches)		Modified Freeboard (inches)
		Available	Modified	Required			
A & E*	Tank Farm & Storage Tank 32	65,485	159,571	71,614	0.62		13.85
B**	Process Building	15,382	N/A	11,500	1.30		1.30
C	Solidification Pits	29,681	44,830	21,208	2.46		15.28
D	Storage Tank 31	37,263	N/A	22,379	51.91		51.91

*Exterior wall heights will increase such that the total area will have one foot of available freeboard

**Area B is a roofed, walled, and enclosed area and thus not subject to wave action



John Sheehan
7/30/26

Firm No. 9628

Summary of Secondary Containment Calculations

Liquid Environmental Solutions, Dallas Facility

Area:	A	E	Total A&E	B	C	D
Containment area (ft2)	11,038	400	11,438	5,100	2,480	460
Open containment area (ft2)	10,185	400	10,536	4,775	2,480	460
Existing containment height (in) ⁴	Varies	54	(varies)	5	58	83
Maximum tank volume (gal)	24,000	18,000	24,000	11,500	10,000	20,300
Total tank volume (gal)	231,460	18,000	249,460	20,000	20,300	18,000
Design tank containment volume (gal)	24,000	18,000	24,000	11,500	10,000	20,300
Design precipitation (gal)	46,028	1,808	47,614	-	11,208	2,079
Total containment required (gal)	70,028	19,808	76,614	11,500	21,208	22,379
Existing containment available (gal)	144,685	13,464	158,149	14,882	44,830	23,799
Additional containment (gal)	1,422	-	1,422	500	0	13,464
Total containment capacity (gal)	146,107	13,464	159,571	15,382	44,830	37,263
Existing containment deficiency (gal)	0	0	0	0		

Notes / Assumptions:

1. Area A5 is covered. Precipitation will drain off-site, outside containment Area A.
2. Tank 35 in Area A6 contains vapor (not fluid), which does not require secondary containment.
3. Area B is a roofed, walled, and enclosed area
4. Area A varies in elevation internally

Conversions

7.25 inches, 25-year 24-hour design storm
 7.48 gallons per cubic foot
 12 inches per foot



Handwritten signature: Jacqueline Sheehan-Dean
Handwritten date: 1/30/26
Handwritten text: Firm No. 9628

Summary of Secondary Containment Areas and Volumes

Liquid Environmental Solutions, Dallas Facility

Area:	A	B	C	D	E
Length (ft)	168, 58, 69	85	80	23	20
Width (ft)	51, 36, 18	60	31	20	20
Area (ft ²)	11,038	5,100	2,480	460	400
Height (in)	Varies	5	58	83	54
Volume (ft ³)	19,423	2,125	5,993	3,182	1,800
Volume (gal)	145,282	15,896	44,830	23,799	13,465
Existing Conditions					
Open area (ft ²)	10,185	4,755	2,480	460	400
Open volume (ft ³)	19,423	1,974	5,993	3,182	1,800
Open volume (gal)	144,685	14,882	44,830	23,799	13,464

Assumptions / Conversions

7.48 gallons per cubic foot

12 inches per foot



Tank and Equipment Schedule - LES Dallas Facility

Item	Containment Area	Containment Sub-Area	Equipment Placement	Diameter (ft)	Length (ft)	Width (ft)	Surface Area (Sq. ft.)	Size	Units	Equipment Type	Function
14	A	A1	On Ground	8			50	10,000	gallons	Storage Tank	Brown Grease Storage
17	A	A1	Elevated	10				24,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
18	A	A1	Elevated	10				18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
25	A	A1	Elevated	8				12,500	gallons	Storage Tank	Wastewater or Sludge Holding
55	A	A1	Elevated	10				10,000	gallons	Centrifuge Feed Tank	Centrifuge Feed System
Total:							50	74,500	gallons		
33	A	A2	Elevated	12				12,000	gallons	Storage Tank	Wastewater or Sludge Holding
Total:							113	12,000	gallons		
10	A	A3	On Ground	8				50	10,000	gallons	Storage Tank
Total:							50	10,000	gallons		Wastewater or Sludge Holding
54	A	A5	Elevated					175	gpm	Centrifuge	Brown Grease Recovery
Total:							0	0	gallons		
3	A6	A6	On Ground	12			113	15,000	gallons	Processing Tank	Grease Trap Treatment
11	A6	A6	On Ground	8			50	10,000	gallons	Storage Tank	Yellow Grease Finished Product Storage
12	A6	A6	Elevated	8				6,000	gallons	Processing Tank	Yellow Grease Processing
13	A6	A6	Elevated	8				6,000	gallons	Storage Tank	Yellow Grease Offload
35	A6	A6	On Ground	8			50		gallons	Odor Control Scrubber	Air Scrubber Vent Tank (8,000 gallon AIR ONLY)
36	A6	A6	On Ground	12			113	2,000	gallons	Odor Control Scrubber	Scrubber Intake Tank
37	A6	A6	On Ground		3	3	9	30	HP	Odor Control Scrubber	Scrubber Fan
Total:							336	39,000	gallons		
8	A	A8	On Ground	8			50	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
19	A	A8	Elevated	10				8,000	gallons	Storage Tank	Wastewater or Sludge Holding
22	A	A8	On Ground	8			50	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
Total:							101	28,000	gallons		
20	A	A9	Elevated	10				20,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
21	A	A9	On Ground	8			50	10,000	gallons	Storage Tank	Brown Grease Storage
50	A	A9	Elevated					3,000	gallons	Vacuum Tank	Various
Total:							50	33,000	gallons		
34	A	A10	Elevated	12				24,000	gallons	Grit Processing AST	Offloading/Grit Trap Treatment
46	A	A10	On Ground		6	4	24	6x4x4	feet	Dissolved Air Flotation	Grit Trap Treatment
56	A	A10	Elevated					400	gpm	Mechanical Debris Processing	Mechanical Debris Screen
57	A	A10	On Ground		10	10	100	3,500	gallons	Holding Tank	Offloading Tank Platform
Total:							237	27,500	gallons		
15	A	A11	On Ground					360	gallons	Polymer Tote	Chemical Storage
58	A	A11	On Ground	10			79	6,150	gallons	Storage Tank	Lime Tank
59	A	A11	Elevated					750	gallons	Filter Press	Filter Press
Total:							79	7,260	gallons		
EA1	B		On ground		25	6.5	163	7,900	gallons	Entrapped Air Flotation	Grease Trap Treatment
EA2	B		On ground		20	5	100	3,740	gallons	Entrapped Air Flotation	Grease Trap Treatment
5	B		On Ground	8			50	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
6	B		On Ground	4			13	550	gallons	Poly Tank	Transfer Tank
42	B		Elevated					10,000	gallons	Storage Tank	Bar Screen Offload Tank
Total:							325	24,690	gallons		
52	C		In Ground		64	16		10,000	gallons	Settling Pit	Solidification
53	C		In Ground		64	15		10,000	gallons	Settling Pit	Solidification
31	D		Elevated	13				20,300	gallons	Grit Processing AST	Grit Trap Treatment
Total:							0	20,300	gallons		



32	E		Elevated	12			113	18,000	gallons	Grit Processing AST	Grit Trap Treatment
Total:							113	18,000	gallons		
43			On Ground				0	350	HP	Steam Boiler	In Tank Material Heating
44			On Ground	4			13	500	gallons	Boiler Feed Water Tank	Boiler Feed Water System
45			On Ground					14	gpm	Water Softener System	Boiler Feed Water System
48			Elevated					50	HP	Air Compressor	Facility Main Air Supply

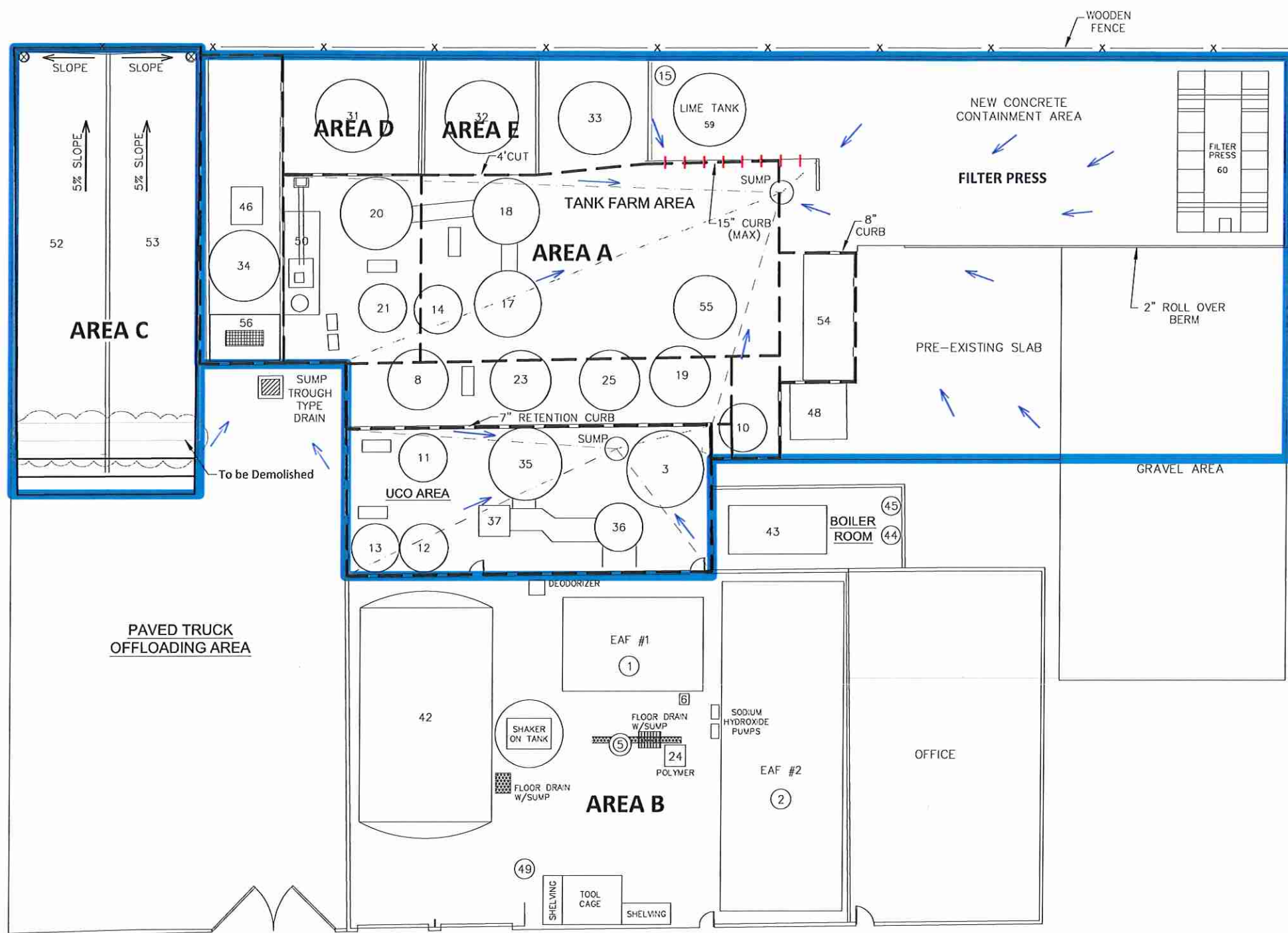
Legend

Not applicable for this equipment

Assumptions/Conversions

7.48 gallons per cubic foot





LEGEND

- Stormwater Flow Direction
- 1" Drain Hole
- Proposed Freeboard Modification

Item #	Containment Area	Equipment Placement	Size	Units	Equipment Type	Function
EA1 #1	B	On Ground	11,500	gallons	Entrapped Air Flotation Tank	Grease Trap Treatment
EA1 #2	B	On Ground	6,000	gallons	Entrapped Air Flotation Tank	Grease Trap Treatment
3	A	On Ground	15,000	gallons	Processing Tank	Grease Trap Treatment
5	B	On Ground	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
6	B	On Ground	550	gallons	Poly Tank	Transfer Tank
8	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
10	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
11	A	On Ground	10,000	gallons	Storage Tank	Yellow Grease Finished Product Storage
12	A	Elevated	6,000	gallons	Processing Tank	Yellow Grease Processing
13	A	Elevated	6,000	gallons	Storage Tank	Yellow Grease Offload
14	A	On Ground	10,000	gallons	Storage Tank	Brown Grease Storage
15	A	On Ground	350	gallons	Polymer Tote	Chemical Storage
17	A	Elevated	24,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
18	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
19	A	Elevated	8,000	gallons	Storage Tank	Wastewater or Sludge Holding
20	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
21	A	On Ground	10,000	gallons	Storage Tank	Brown Grease Storage
23	A	On Ground	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
24	B	On Ground	275	gallons	Polymer Tote	Treatment
25	A	On Ground	12,500	gallons	Storage Tank	Wastewater or Sludge Holding
31	D	On Ground	20,300	gallons	Grit Processing AGT	Grit Trap Treatment
32	E	Elevated	18,000	gallons	Grit Processing AGT	Grit Trap Treatment
33	A	On Ground	12,000	gallons	Storage Tank	Wastewater or Sludge Holding
34	A	On Ground	24,000	gallons	Grit Processing AGT	Offloading/Grit Trap Treatment
35	A	On Ground	8,000	gallons	Odor Control Scrubber	Air Scrubber Vent Tank (Air Only)
36	A	On Ground	2,000	gallons	Odor Control Scrubber	Scrubber Intake Tank
37	A	On Ground	30	HP	Odor Control Scrubber	Scrubber Fan
39	B	Elevated	5	HP	Vibratory Screen	Grease Trap Treatment
42	B	Elevated	10,000	gallons	Storage Tank	Bar screen Offload Tank
43		On Ground	350	HP	Steam Boiler	In Tank Material Heating
44		On Ground	500	gallons	Boiler Feed Water Tank	Boiler Feed Water System
45		On Ground	14	gpm	Water Softener System	Boiler Feed Water System
46	A	On Ground	700	gallons	Dissolved Air Flotation	Grit Trap Treatment
48		Elevated	50	HP	Air Compressor	Facility Main Air Supply
50	A	Elevated	3,000	gallons	Vacuum Tank	Various
52	C	In Ground	10,000	gallons	Settling Pit	Solidification
53	C	In Ground	10,000	gallons	Settling Pit	Solidification
54	A	Elevated	175	gpm	Centrifuge	Brown Grease Recovery
55	A	Elevated	10,000	gallons	Centrifuge Feed Tank	Centrifuge Feed System
56	A	Elevated	400	gpm	Mechanical Processing	Mechanical Debris Screen
59	A	On Ground	6,150	gallons	Storage Tank	Lime Tank
60	A	Elevated	750	gallons	Filter Press	Filter Press



7/30/26
Firm NO. 9628

30
60
FEET

Freeboard Summary

Area	Containment Area Description	Containment Capacity (gallons)			Available Freeboard (inches)	Modified Freeboard (inches)
		Available	Modified	Required		
A & E*	Tank Farm & Storage Tank 32	65,485	160,168	71,614	0.62	13.95
B**	Process Building	15,382	N/A	11,500	1.3	1.3
C	Solidification Pits	29,681	44,830	18,966	2.46	16.73
D*	Storage Tank 31	37,263	N/A	22,379	51.91	51.91

*Exterior wall heights will increase such that the total area will have one foot of available freeboard

**Area B is a roofed, walled, and enclosed area and thus not subject to wave action

Notes:

- EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE NOT SHOWN TO SCALE.
- EQUIPMENT SCHEDULE AND CONTAINMENT HEIGHTS ARE BASED ON INFORMATION PROVIDED TO CK ASSOCIATES BY LIQUID ENVIRONMENTAL SOLUTIONS, LLC.
- CONTAINMENT HEIGHTS SHOWN ARE EXISTING. REFER TO SECONDARY CONTAINMENT CALCULATION SUMMARY TABLE FOR ADDITIONAL CONTAINMENT INFORMATION AND ATTACHMENT D.
- APPROXIMATE LOCATIONS OF ELEVATED INCIDENTAL EQUIPMENT, SUCH AS PUMPS, ARE SHOWN FOR REFERENCE ONLY AND MAY NOT BE IDENTIFIED ON THE TANK AND EQUIPMENT SCHEDULE.

Liquid Environmental Solutions

Dallas, Texas

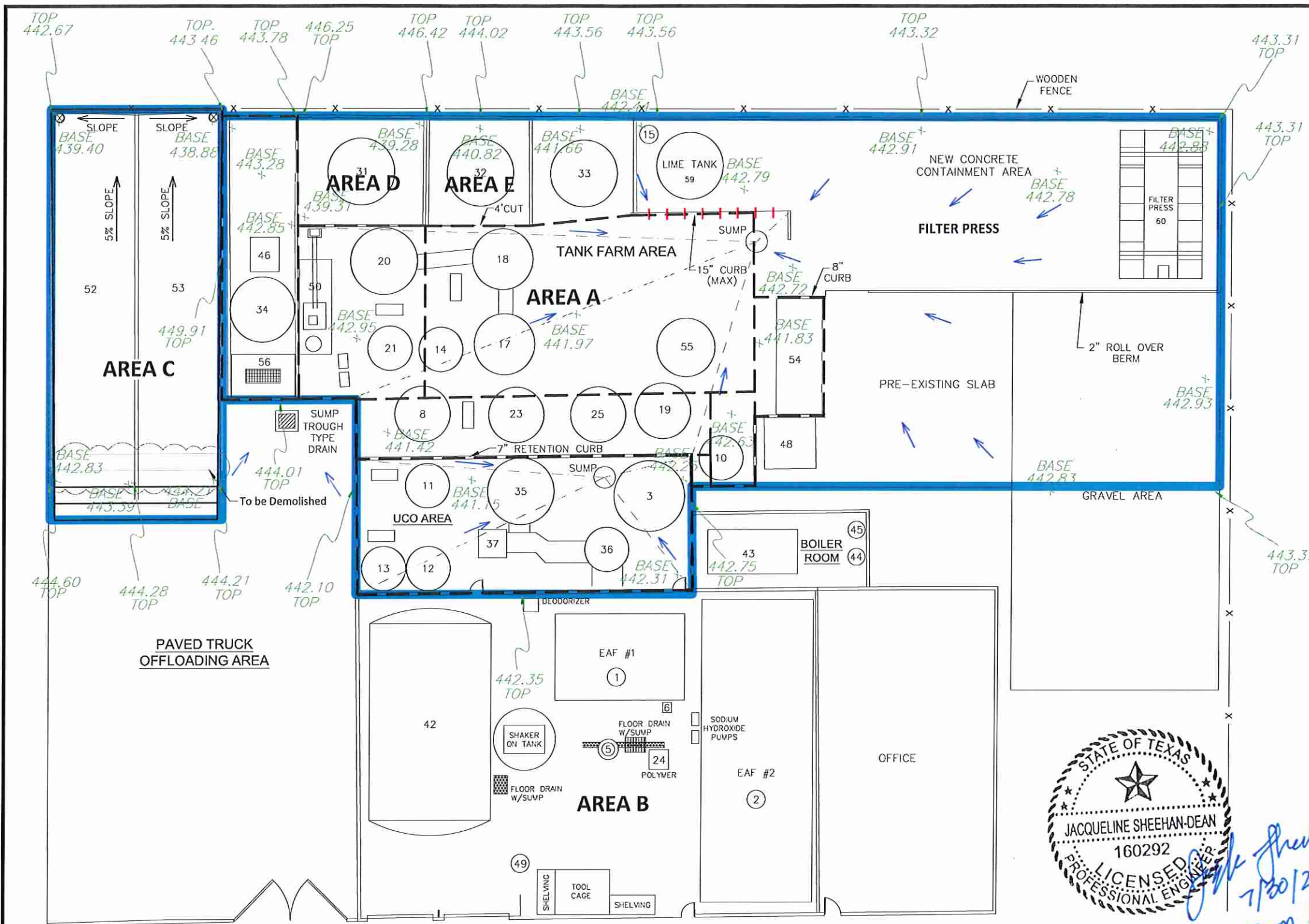
Municipal Solid Waste (MSW) Permit 2069A
Permit Modification

Freeboard Modification

Dallas County



Drawn: CAL
Date: 7/30/2026
Checked: BHR
Approved: DWH
Dwg. No.: 00002100-05
Figure 2

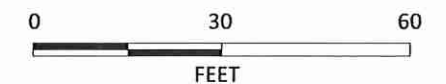


LEGEND

- Stormwater Flow Direction
- 1" Drain Hole
- Proposed Freeboard Modification

Item #	Containment Area	Equipment Placement	Size	Units	Equipment Type	Function
EA#1	B	On Ground	11,500	gallons	Entrapped Air Flotation Tank	Grease Trap Treatment
EA#2	B	On Ground	6,000	gallons	Entrapped Air Flotation Tank	Grease Trap Treatment
3	A	On Ground	15,000	gallons	Processing Tank	Grease Trap Treatment
5	B	On Ground	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
6	B	On Ground	550	gallons	Poly Tank	Transfer Tank
8	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
10	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
11	A	On Ground	10,000	gallons	Storage Tank	Yellow Grease Finished Product Storage
12	A	Elevated	6,000	gallons	Processing Tank	Yellow Grease Processing
13	A	Elevated	6,000	gallons	Storage Tank	Yellow Grease Offload
14	A	On Ground	10,000	gallons	Storage Tank	Brown Grease Storage
15	A	On Ground	360	gallons	Polymer Tote	Chemical Storage
17	A	Elevated	24,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
18	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
19	A	Elevated	8,000	gallons	Storage Tank	Wastewater or Sludge Holding
20	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
21	A	On Ground	10,000	gallons	Storage Tank	Brown Grease Storage
23	A	On Ground	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
24	B	On Ground	275	gallons	Polymer Tote	Treatment
25	A	On Ground	12,500	gallons	Storage Tank	Wastewater or Sludge Holding
31	D	On Ground	20,300	gallons	Grit Processing AGT	Grit Trap Treatment
32	E	Elevated	18,000	gallons	Grit Processing AGT	Grit Trap Treatment
33	A	On Ground	12,000	gallons	Storage Tank	Wastewater or Sludge Holding
34	A	On Ground	24,000	gallons	Grit Processing AGT	Offloading/Grit Trap Treatment
35	A	On Ground	8,000	gallons	Odor Control Scrubber	Air Scrubber Vent Tank (Air Only)
36	A	On Ground	2,000	gallons	Odor Control Scrubber	Scrubber Intake Tank
37	A	On Ground	30	HP	HP	Odor Control Scrubber
39	B	Elevated	5	HP	Vibratory Screen	Grease Trap Treatment
42	B	Elevated	10,000	gallons	Storage Tank	Bar screen Offload Tank
43		On Ground	350	HP	Steam Boiler	In Tank Material Heating
44		On Ground	500	gallons	Boiler Feed Water Tank	Boiler Feed Water System
45		On Ground	14	gpm	Water Softener System	Boiler Feed Water System
46	A	On Ground	700	gallons	Dissolved Air Flotation	Grit Trap Treatment
48		Elevated	50	HP	Air Compressor	Facility Main Air Supply
50	A	Elevated	3,000	gallons	Vacuum Tank	Various
52	C	In Ground	10,000	gallons	Settling Pit	Solidification
53	C	In Ground	10,000	gallons	Settling Pit	Solidification
54	A	Elevated	175	gpm	Centrifuge	Brown Grease Recovery
55	A	Elevated	10,000	gallons	Centrifuge Feed Tank	Centrifuge Feed System
56	A	Elevated	400	gpm	Mechanical Processing	Mechanical Debris Screen
59	A	On Ground	6,150	gallons	Storage Tank	Lime Tank
60	A	Elevated	750	gallons	Filter Press	Filter Press

BARROW LAND SURVEYING INC.
Vertical Datum: Elevations shown are based on the North American Vertical Datum of 1988 (NAVD88), derived using GPS observations and processed with the National Geodetic Survey's GEOID18 geoid model.



Notes:

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Freeboard Summary

Area	Containment Area Description	Containment Capacity (gallons)			Available Freeboard (inches)	Modified Freeboard (inches)
		Available	Modified	Required		
A & E*	Tank Farm & Storage Tank 32	65,485	160,168	71,614	0.62	13.95
B**	Process Building	15,382	N/A	11,500	1.3	1.3
C	Solidification Pits	29,681	44,830	18,966	2.46	16.73
D*	Storage Tank 31	37,263	N/A	22,379	51.91	51.91

*Exterior wall heights will increase such that the total area will have one foot of available freeboard

**Area B is a roofed, walled, and enclosed area and thus not subject to wave action

Liquid Environmental Solutions

Dallas, Texas

Municipal Solid Waste (MSW) Permit 2069A
Permit Modification

Elevation Data

Dallas County



Drawn: CAL

Checked: BHR

Date: 7/30/2026

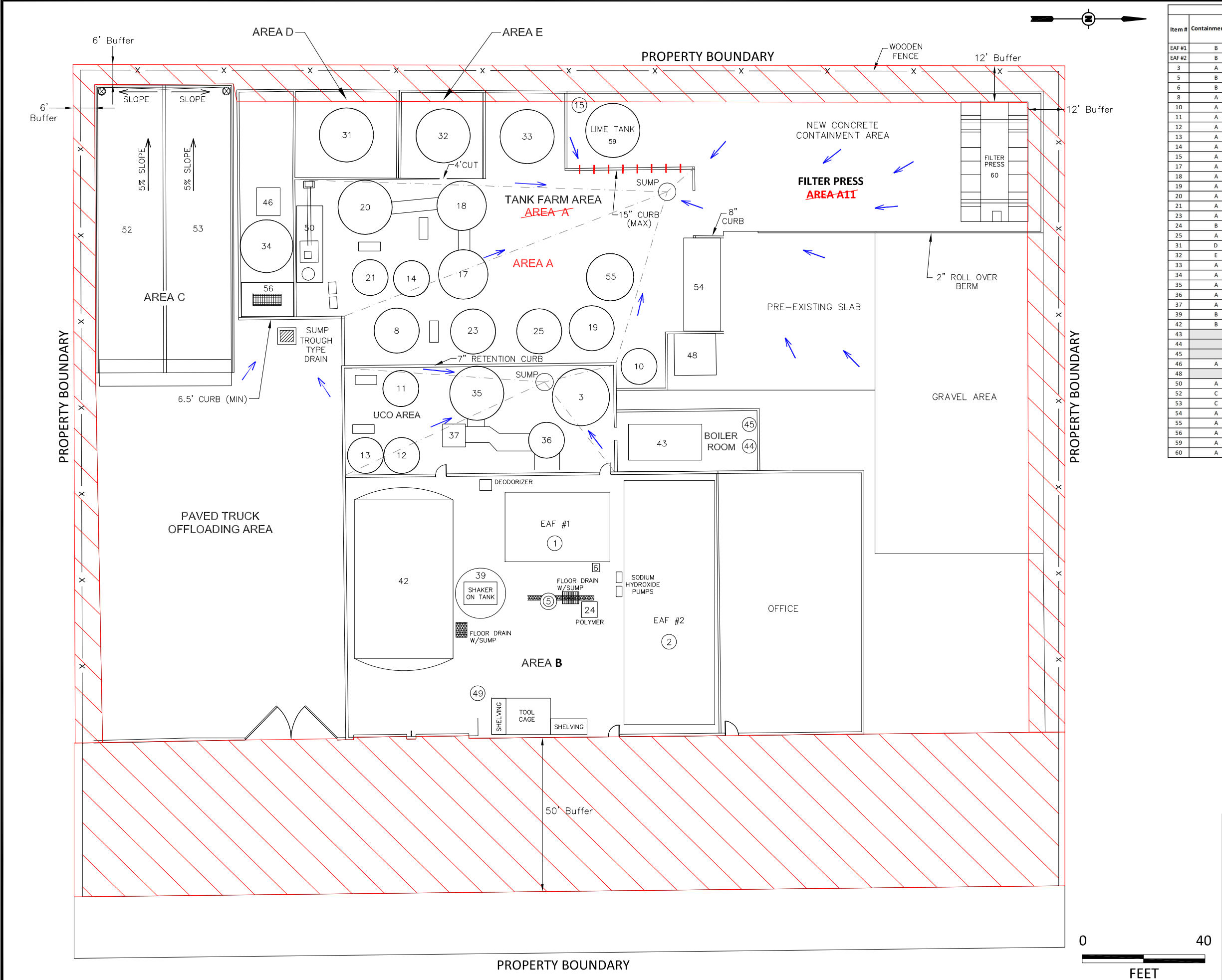
Approved: DWH

Dwg. No.: 00002100-06

Figure 3

Appendix D-1

Figure II-A Redline



Tank and Equipment Schedule						
Item #	Containment Area	Equipment Placement	Size	Units	Equipment Type	Function
EAF #1	B	On Ground	11,500	gallons	Entrapped Air Floatation Tank	Grease Trap Treatment
EAF #2	B	On Ground	6,000	gallons	Entrapped Air Floatation Tank	Grease Trap Treatment
3	A	On Ground	15,000	gallons	Processing Tank	Grease Trap Treatment
5	B	On Ground	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
6	B	On Ground	550	gallons	Poly Tank	Transfer Tank
8	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
10	A	On Ground	10,000	gallons	Storage Tank	Wastewater Sludge Holding
11	A	On Ground	10,000	gallons	Storage Tank	Yellow Grease Finished Product Storage
12	A	Elevated	6,000	gallons	Processing Tank	Yellow Grease Processing
13	A	Elevated	6,000	gallons	Storage Tank	Yellow Grease Offload
14	A	On Ground	10,000	gallons	Storage Tank	Brown Grease Storage
15	A	On Ground	360	gallons	Polymer Tote	Chemical Storage
17	A	Elevated	24,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
18	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
19	A	Elevated	8,000	gallons	Storage Tank	Wastewater or Sludge Holding
20	A	Elevated	18,000	gallons	Storage Tank	Offloading/Wastewater/Sludge Holding
21	A	On Ground	10,000	gallons	Storage Tank	Brown Grease storage
23	A	On Ground	10,000	gallons	Storage Tank	Wastewater or Sludge Holding
24	B	On Ground	275	gallons	Polymer Tote	Treatment
25	A	On Ground	12,500	gallons	Storage Tank	Wastewater or Sludge Holding
31	D	On Ground	20,300	gallons	Grit Processing AGT	Grit Trap Treatment
32	E	Elevated	18,000	gallons	Grit Processing AGT	Grit Trap Treatment
33	A	On Ground	12,000	gallons	Storage Tank	Wastewater or Sludge Holding
34	A	On Ground	24,000	gallons	Grit Processing AGT	Offloading/Grit Trap Treatment
35	A	On Ground	8,000	gallons	Odor Control Scrubber	Air Scrubber Vent Tank (Air Only)
36	A	On Ground	2,000	gallons	Odor Control Scrubber	Scrubber Intake Tank
37	A	On Ground	30	HP	Odor Control Scrubber	Scrubber Fan
39	B	Elevated	5	HP	Vibratory Screen	Grease Trap Treatment
42	B	Elevated	10,000	gallons	Storage Tank	Bar screen Offload Tank
43		On Ground	350	HP	Steam Boiler	In Tank Material Heating
44		On Ground	500	gallons	Boiler Feed Water Tank	Boiler Feed Water System
45		On Ground	14	gpm	Water Softener System	Boiler Feed Water System
46	A	On Ground	700	gallons	Dissolved Air Flotation	Grit Trap Treatment
48		Elevated	50	HP	Air Compressor	Facility Main Air Supply
50	A	Elevated	3,000	gallons	Vacuum Tank	Various
52	C	In Ground	10,000	gallons	Settling Pit	Solidification
53	C	In Ground	10,000	gallons	Settling Pit	Solidification
54	A	Elevated	175	gpm	Centrifuge	Brown Grease Recovery
55	A	Elevated	10,000	gallons	Centrifuge Feed Tank	Centrifuge Feed System
56	A	Elevated	400	gpm	Mechanical Processing	Mechanical Debris Screen
59	A	On Ground	6,150	gallons	Storage Tank	Lime Tank
60	A	Elevated	750	gallons	Filter Press	Filter Press

LEGEND

- Stormwater Flow Direction
- 1" Drain Hole
- Buffer Zone

Notes:

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Liquid Environmental Solutions
Dallas, Texas

Municipal Solid Waste (MSW) Permit 2069A
Permit Modification

General Facility Layout Map

Dallas County

CK ASSOCIATES
Environmental Consultants

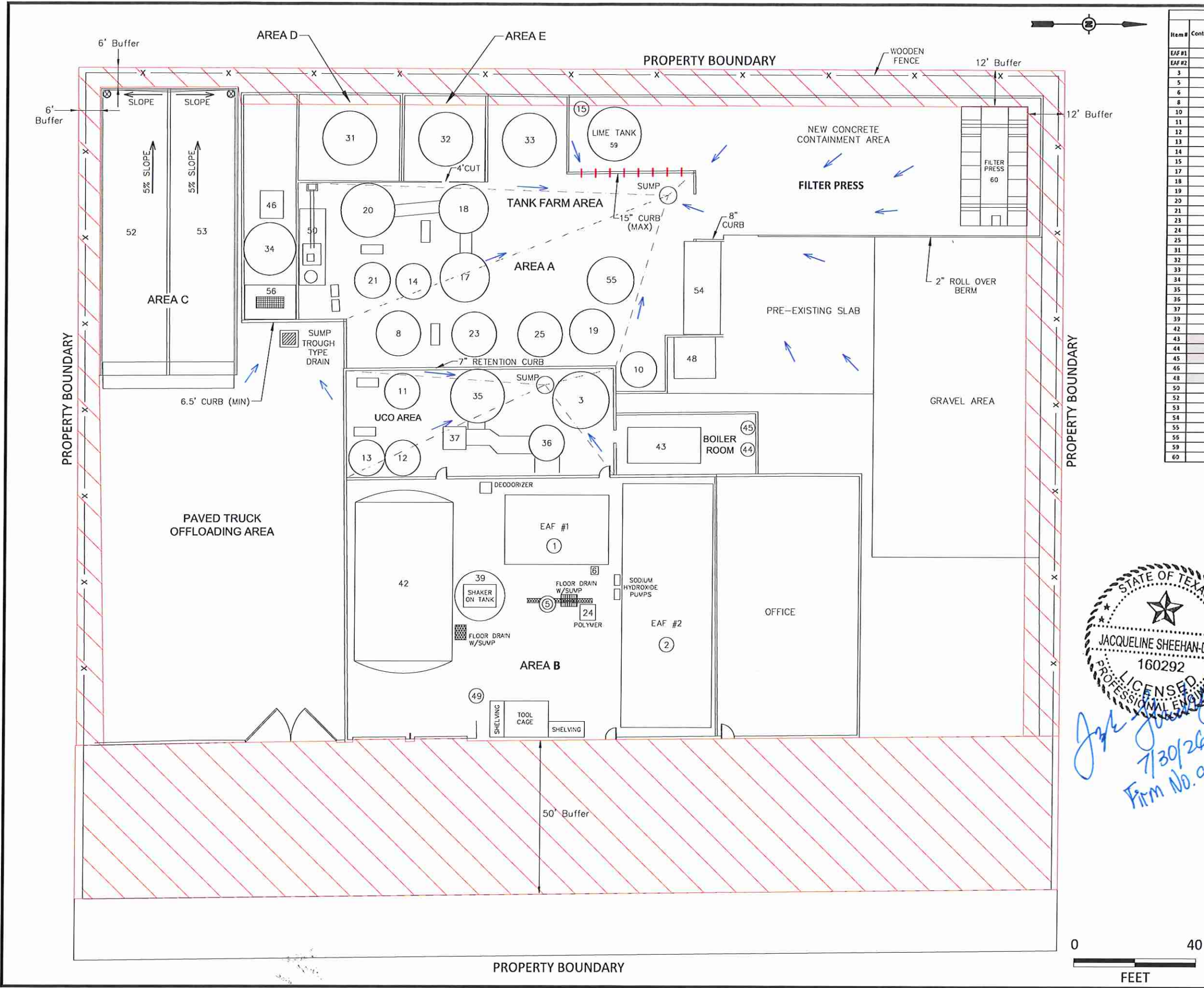
Drawn: CAL
Date: 7/29/2026
Dwg. No.: 00002100-01

Checked: JSD
Approved: BHR

Figure II-A

Appendix D-2

Figure II-A



Tank and Equipment Schedule						
Item #	Containment Area	Equipment Placement	Size	Units	Equipment Type	Function
EAF #1	B	On Ground	11,500	gallons	Entrapped Air Floation Tank	Grease Trap Treatment
EAF #2	B	On Ground	6,000	gallons	Entrapped Air Floation Tank	Grease Trap Treatment
3	A	On Ground	15,000	gallons	Processing Tank	Grease Trap Treatment
5	B	On Ground	2,500	gallons	Sodium Hydroxide Tank	Chemical Storage
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LEGEND

→ Stormwater Flow Direction

— 1" Drain Hole

Buffer Zone

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STATE OF TEXAS
JACQUELINE SHEEHAN-DEAN
160292
LICENSED PROFESSIONAL ENGINEER
7/30/26
Firm No. 9628

Liquid Environmental Solutions
Dallas, Texas

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Figure II-A