COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701

WASTEWATER RESIDUALS MANAGEMENT
TYPE V-GG PROCESSING FACILITY
HOUSTON, HARRIS COUNTY, TEXAS

TECHNICALLY COMPLETE COMPILATION
MAJOR PERMIT AMENDMENT
MSW-2370A

ORIGINAL PERMIT ISSUED MARCH 14, 2012
LIMITED SCOPE AMENDMENT ISSUED JUNE 7, 2019 AND
PERMIT AMENDMENT APPLICATION SUBMITTAL FEBRUARY 9, 2021
APPLICATION REVISIONS DATED MAY 4, 2021, JULY 12, 2021, AUGUST 26, 2021
SEPTEMBER 1, 2021, OCTOBER 22, 2021 AND DECEMBER 1, 2021

FOR

WASTEWATER RESIDUALS MANAGEMENT, LLC
10217A WALLISVILLE ROAD
HOUSTON, TEXAS 77013

Prepared by:

Cook-Joyce, Inc.
812 W. 11TH Street
Austin, Texas 78701

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal (*Core Data Form should be submitted with the renewal form*) ☒ Other **Permit Major Amendment**

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN **6045421**		RN **102329240**

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	3/5/2021

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
Wastewater Residuals Management LLC	

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0801555107	32047087450		

11. Type of Customer:	☒ Corporation	☐ Individual	Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other		☐ Sole Proprietorship	☐ Other:

12. Number of Employees	13. Independently Owned and Operated?
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher	☐ Yes ☒ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator

☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:	10217A Wallisville Rd						
	City	Houston	State	TX	ZIP	77013	ZIP + 4

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(713) 828-5487		( ) -

SECTION III: Regulated Entity Information

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

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

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

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

WASTEWATER RESIDUALS MANAGEMENT

23. Street Address of the Regulated Entity: *(No PO Boxes)*	10217A Wallisville Rd							
	City	Houston	**State**	TX	**ZIP**	77013	**ZIP + 4**	
24. County	Harris							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**
Houston			TX		77013
27. Latitude (N) In Decimal:	29.799953		**28. Longitude (W) In Decimal:**	95.250642	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	47	59.830	95	15	2.3112

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4953		221320	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Municipal and Industrial Non-hazardous Wastewater Processing

34. Mailing Address:	**10217A Wallisville Rd**							
	City	**Houston**	**State**	**TX**	**ZIP**	**77013**	**ZIP + 4**	
35. E-Mail Address:	**houston@wastewaterts.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(713) 828-5487		**( ) -**

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☒ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
2370A				
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Brian Dudley, PE	**41. Title:**	Sr. Project Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 474-9097		( ) -	brian.dudley@cook-joyce.com

SECTION V: Authorized Signature

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

Company:	Wastewater Residuals LLC	**Job Title:**	CEO
Name *(In Print)*:	Darrell Rogers	**Phone:**	(713)582.2950
Signature:		**Date:**	7/10/21

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701

WASTEWATER RESIDUALS MANAGEMENT TYPE V-GG PROCESSING FACILITY
HOUSTON, HARRIS COUNTY, TEXAS
MAJOR PERMIT AMENDMENT MSW-2370A

ORIGINAL PERMIT ISSUED MARCH 14, 2012
LIMITED SCOPE AMENDMENT ISSUED JUNE 7, 2019 AND
PERMIT AMENDMENT APPLICATION SUBMITTAL FEBRUARY 9, 2021

FOR

WASTEWATER RESIDUALS MANAGEMENT, LLC
10217A WALLISVILLE ROAD
HOUSTON, TEXAS 77013

Prepared by:

Cook-Joyce, Inc.
812 W. 11TH Street
Austin, Texas 78701

STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER

J. Brian Dudley 12/1/21

TEXAS REGISTERED ENGINEERING FIRM F-883

12/1/21

TABLE OF CONTENTS

SECTION **PAGE**

PART I

FORM 650 PART I FORM FOR AMENDMENT APPLICATION

1.0 INTRODUCTION AND FACILITY SETTING 330.59(B) AND (C)(2) 1

1.1 ADJACENT PROPERTY OWNERSHIP 330.59(c)(3) 1
1.2 PROPERTY OWNER INFORMATION 330.59(d) 5
1.3 LEGAL STATUS AND EVIDENCE OF COMPETENCY 330.59(e) and (f) 5
1.4 APPLICANT'S STATEMENT AND APPOINTMENTS 305.44, 330.59(g) 7
1.5 NON-APPLICABLE REGULATORY SECTIONS 7

2.0 THE PROPOSED FACILITY AND EXISTING CONDITIONS SUMMARY 330.61(A) 1

2.1 SUMMARY TECHNICAL REPORT 1
2.2 WASTE ACCEPTANCE PLAN 330.61(b) 2
2.2.1 Prohibited and Unauthorized (Excluded) Wastes 4
2.3 FACILITY SETTING, 330.61(c-f) 5
2.4 IMPACT ON SURROUNDING AREA 330.61(g-h) 6
2.4.1 Land Use Setting 6
2.4.2 Growth Trends and Zoning 7
2.5 TRANSPORTATION 330.61(i), ... 7
2.6 GENERAL GEOLOGY AND SOILS STATEMENT, 330.61(j) 8
2.7 SURFACE WATER AND GROUNDWATER 330.61(k) 9
Site Specific Groundwater Conditions [330.61(k)(l)]: 9
Surface Water Near Site [330.61(k)(2)]: 9
Compliance with TPDES, and Clean Water Act [330.61(k)(3)]: 10
2.8 EXISTING AND ABANDONED OIL AND WATER WELLS 330.61(c and l) 10
2.9 FLOODPLAINS AND WETLANDS 330.61(m), 330.547, and 330.553 10
2.10 ENDANGERED SPECIES COMPLIANCE 330.61(n) and 330.551 11
2.12 COUNCIL OF GOVERNMENT REVIEW 330.61(p), REVIEW OF APPLICATION BY GOVERNMENTAL AGENCIES 39.103 (c) 11
2.13 EASEMENTS AND BUFFER ZONES 330.543 11
2.14 NON APPLICABLE REGULATORY SECTIONS 12

3.0 SITE PLAN 1

3.1 GENERAL FACILITY DESIGN 1
3.1.1 Facility Access Control, 330.63(b)(1) 1
3.1.2 Process Design and Flow 1
3.1.2.1 Process Flow 330.63(b)(2)(A), (B) 1
3.1.2.2 Ventilation and Odor Control 330.63(b)(2)(C) 3
3.1.2.3 Generalized Construction Details of Processing and Storage Units,330.63(b)(2)(D), (E), and (F) 4
3.1.2.4 Storage, Analysis and Disposition of Processed Materials 330.63(b)(2)(G) and (H), 330.63(d)(1)(C) 5
3.1.3 Sanitation and Water Pollution Control, 330.63(b)(3) AND (4) 7

12/1/21

3.1.4 Endangered Species Protection, 330.63(b)(5) 8
3.2 SITE DRAINAGE, 330.63(c) and 330.303 8
3.3 WASTE MANAGEMENT UNIT DESIGN AND SPILL PREVENTION/CONTROL, 330.63(d)(1)(A-c) and 330.227 8
3.5 POST-CLOSURE 330.63(i) and 330.463 10
3.6 NON APPLICABLE REGULATORY SECTIONS 10

4.0 SITE OPERATING PLAN, 330.65(A) AND (D) 1

4.1 WASTE ACCEPTANCE, DISPOSAL AND ANALYSIS 330.203, 330.205, and 330.207 1
4.1.1 Authorized Wastes 1
4.1.2 Prohibited Wastes 3
4.1.3 Waste Pre-Approval and Testing 4
4.1.4 Waste Acceptance Procedures 5
4.1.5 Processing Facility Operations Waste Analyses 5
4.1.6 Waste Storage and Disposal 6
4.1.7 Contaminated Water Management, 330.207 8
4.2 STORAGE CONTAINER REQUIREMENTS 330.209 and 330.211 8
4.3 RECORDKEEPING AND REPORTING 330.219 9
4.3.1 Operating Record 9
4.3.2 Manifest Retention 330.219(b)(8) and 312.145 10
4.3.3 Report Signatures 330.219(c) 13
4.4 FIRE PROTECTION PLAN, 330.221 13
4.5 SITE ACCESS AND CONTROL 330.223 and 330.237 15
4.6 UNLOADING OF WASTES AND INSPECTION OF INCOMING LOADS 330.225 15
4.7 SPILL PREVENTION AND CONTROL 330.227 17
4.8 OPERATING HOURS 330.229 17
4.9 SITE SIGN 330.231 18
4.10 CONTROL OF WINDBLOWN MATERIAL AND LITTER 330.233 18
4.11 MATERIALS ALONG THE ROUTE TO THE SITE AND CONTROL OF ACCIDENTAL SPILLAGE 330.235 18
4.12 equipment inspection and CONTINGENCY PLANS FOR OVERLOADING AND BREAKDOWN 330.241 19
4.13 SANITATION AND PERIODIC CLEANING 330.243 20
4.14 VENTILATION AND AIR POLLUTION CONTROL 330.245 20
4.15 HEALTH AND SAFETY PLAN 330.247 22
4.16 EMPLOYEE SANITATION FACILITIES, 330.249 23
4.17 NON APPLICABLE REGULATORY SECTIONS 23

9/1/21

LIST OF FIGURES

FIGURE	
1	VICINITY MAP
2	SITE LOCATION MAP
3	AERIAL PHOTOGRAPH
4	LAND USE MAP
5	LANDOWNER LOCATION MAP
6	FLOOD PLAIN MAP
7	WIND ROSE PLOT
8	TRAFFIC VOLUME MAP
9	SITE LAYOUT PLAN
9A	PHASE I LAYOUT AND PROPERTY BOUNDARY
9B	EQUIPMENT LOCATION PLAN
10	TANK DETAIL
11	PROCESSING UNIT DETAIL
12	PROCESSING AND UNLOADING AREA CROSS-SECTION
12A	SOLIDIFICATION BASIN
13	PROCESS FLOW DIAGRAM

LIST OF APPENDICES

APPENDIX

1 SURVEY PLAT WITH LEGAL DESCRIPTION, EXISTING FACILITY ELEVATIONS; SURVEY OF EXISTING FACILITIES AT THE SITE

2 WATER WELL SEARCH AND WELL REPORT

3 MISCELLANEOUS ITEMS

- NOTICE OF ENGINEER'S APPOINTMENT
- EVIDENCE OF LEGAL STATUS
- TPDES CERTIFICATION STATEMENT
- PROPERTY OWNER AFFIDAVIT
- EVIDENCE OF COMPETENCY INFORMATION
- LIQUID WASTE PROFILE FORM

4 SECONDARY CONTAINMENT CALCULATIONS

5 CLOSURE PLAN AND COST ESTIMATE

6 COORDINATION DOCUMENTATION

- TEXAS HISTORICAL COMMISSION LETTER
- TXDOT COORDINATION LETTER
- HOUSTON-GALVESTON AREA COUNCIL LETTER
- TEXAS PARKS AND WILDLIFE DEPARTMENT LETTER
- UNITED STATES FISH AND WILDLIFE SERVICES LETTER
- TCEQ AIR PERMITS EMAIL

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WASTEWATER RESIDUALS MANAGEMENT TYPE V-GG PROCESSING FACILITY HOUSTON, HARRIS COUNTY, TEXAS

MAJOR PERMIT AMENDMENT MSW-2370A

PART I FORM AND GENERAL INFORMATION PART I

ORIGINAL PERMIT ISSUED MARCH 14, 2012
LIMITED SCOPE AMENDMENT ISSUED JUNE 7, 2019 AND
PERMIT AMENDMENT APPLICATION SUBMITTAL FEBRUARY 9, 2021

FOR

WASTEWATER RESIDUALS MANAGEMENT, LLC
10217A WALLISVILLE ROAD
HOUSTON, TEXAS 77013

Prepared by:

Cook-Joyce, Inc.
812 W. 11TH Street
Austin, Texas 78701
Texas Registered Engineering Firm #F-883

9/1/21

Facility Name: Wastewater Residuals Management
Permittee/Registrant Name: Wastewater Residuals Management LLC
MSW Authorization #:2370A
Initial Submittal Date: 2/9/2021
Revision Date: 7/12/2021

Texas Commission on Environmental Quality

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

1. Reason for Submittal

☐ Initial Submittal ☒ Notice of Deficiency (NOD) Response

2. Authorization Type

☒ Permit ☐ Registration

3. Application Type

☐ New Permit ☒ Permit Major Amendment ☐ Permit Major Amendment (Limited Scope)

☐ New Registration

4. Application Fees

Amount

☒ $2,050 for Permits and Permit Amendments ☐ $150 for Registrations

Payment Method

☐ Check ☒ Online through ePay portal <https://www3.tceq.texas.gov/epay/>

If paid online, enter ePay Trace Number: **582EA000419187**

5. Application URL

Is the application submitted for a Type I Arid Exempt (AE) or Type IV AE facility?

☐ Yes ☒ No

If the answer is "No", provide the URL address of a publicly accessible internet web site where the application and all revisions to that application will be posted.
http://**cook-joyce.com/permits/**

6. Application Publishing

Party Responsible for Publishing Notice:

☒ Applicant ☐ Agent in Service ☐ Consultant

Contact Name: **Darrell Rogers** Title: **CEO**

7. Alternative Language Notice

Is an alternative language notice required for this application? (For determination refer to Alternative Language Checklist on the Public Notice Verification Form TCEQ-20244-Waste)

☒ Yes ☐ No

8. Public Place Location of Application

Name of the Public Place: **Pasadena Public Library: Central**

Physical Address: **1201 Jeff Ginn Memorial Dr**

City: **Pasadena** County: **Harris** State: **TX** Zip Code: **77506**

(Area code) Telephone Number: **(713) 477-0276**

9. Consolidated Permit Processing

Is this submittal part of a consolidated permit processing request, in accordance with 30 TAC Chapter 33?

☐ Yes ☒ No ☐ Not Applicable

If “Yes”, state the other TCEQ program authorizations requested:

10. Confidential Documents

Does the application contain confidential documents?

☐ Yes ☒ No

If “Yes”, cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked “CONFIDENTIAL.”

11. Permits and Construction Approvals

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act	☐	☐	☒
Underground Injection Control Program under the Texas Injection Well Act	☐	☐	☒
National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under Texas Water Code, Chapter 26	☐	☐	☒
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA). Nonattainment Program under the FCAA	☐	☐	☒
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA	☐	☐	☒
Ocean Dumping Permits under the Marine Protection Research and Sanctuaries Act	☐	☐	☒
Dredge or Fill Permits under the CWA	☐	☐	☒
Licenses under the Texas Radiation Control Act	☐	☐	☒
Other (describe)	☐	☐	☐
Other (describe)	☐	☐	☐
Other (describe)	☐	☐	☐
Other (describe)	☐	☐	☐

12. General Facility Information

Facility Name: Wastewater Residuals Management

Contact Name: **Darrell Rogers** Title: **CEO**

MSW Authorization No. (if available): **2370A**

Regulated Entity Reference No. (if issued)*: RN**102329240**

Physical or Street Address (if available): **10217A Wallisville Rd**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77013**

(Area Code) Telephone Number: **(713) 828-5487**

Latitude (Degrees, Minutes Seconds): **29o47'59.83"N**

Longitude (Degrees, Minutes Seconds): **95o15'02.31"W**

Benchmark Elevation (above mean sea level): **38**ft.

Provide a description of the location of the facility with respect to known or easily identifiable landmarks: **2000 ft north of Wallisville Rd and west of Hunting Bayou**

Detail access routes from the nearest United States or state highway to the facility: **From I-610, travel northeast 1.2 miles on Wallisville Rd**

*If this number has not been issued for the facility, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Facility as the Regulated Entity.

13. Facility Type(s)

☐ Type I ☐ Type IV ☒ Type V

☐ Type I AE ☐ Type IV AE ☐ Type VI

14. Activities Conducted at the Facility

☒ Storage ☒ Processing ☐ Disposal

15. Facility Waste Management Unit(s)

☐ Landfill Unit(s)
☐ Class 1 Landfill Unit(s)
☒ Process Tank(s)
☒ Storage Tank(s)
☐ Tipping Floor
☐ Storage Area
☐ Container(s)
☐ Roll-off Boxes
☐ Surface Impoundment
☐ Incinerator(s)
☐ Autoclave(s)
☐ Refrigeration Unit(s)
☐ Mobile Processing Unit(s)
☐ Type VI Demonstration Unit
☐ Compost Pile(s) and/or Vessel(s)
☐ Other (specify):
☐ Other (specify):
☐ Other (specify)

16. Description of Proposed Facility or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or permit conditions if the application is for an amendment.

Increased maximum daily waste acceptance rate; revised list of acceptable wastes; additional waste storage tanks, processing methods and processing areas; revised permit boundary; revised spill containment; and revised closure cost estimate.

17. Facility Contact Information

Site Operator (Permittee/Registrant) Name: Wastewater Residuals Management LLC

Customer Reference No. (if issued)*: CN**604542167**

Contact Name: **Darrell Rogers** Title: **CEO**

Mailing Address: **10217A Wallisville Rd.**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77013**

(Area Code) Telephone Number: **(713) 828-5487**

Email Address: **houston@wastewaterts.com**

TX Secretary of State (SOS) Filing Number: **801555107**

*If the Site Operator (Permittee/Registrant) does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Site Operator (Permittee/Registrant) as the Customer.

Operator Name[1]: As Above

Customer Reference No. (if issued)*:

Contact Name: Title:

Mailing Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address:

TX SOS Filing Number:

[1]If the Operator is the same as Site Operator/Permittee type "Same as "Site Operator (Permittee/Registrant)".
*If the Operator does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Operator as the customer.

Consultant Name (if applicable): Cook-Joyce, Inc

Texas Board of Professional Engineers Firm Registration Number:

Contact Name: **Brian Dudley** Title: **Sr. Project Engineer**

Mailing Address: **812 W. 11th St, Ste 205**

City: **Austin** County: **Travis** State: **TX** Zip Code: **78701**

(Area Code) Telephone Number: **(512) 474-9097**

Email Address: **brian.dudley@cook-joyce.com**

Agent in Service Name (required only for out-of-state):

Mailing Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address:

18. Facility Supervisor's License

Select the Type of License that the Solid Waste Facility Supervisor, as defined in 30 TAC Chapter 30, Occupational Licenses and Registrations, will obtain prior to commencing facility operations.

☐ Class A ☒ Class B

19. Ownership Status of the Facility

☐ Corporation	☐ Limited Partnership	☐ Federal Government
☐ Individual	☐ City Government	☐ Other Government
☐ Sole Proprietorship	☐ County Government	☐ Military
☐ General Partnership	☐ State Government	☒ Other (specify): **LLP**

Does the Site Operator (Permittee/Registrant) own all the facility units and all the facility property?

☒ Yes ☐ No

If "No", provide the information requested below for any additional ownership.

Owner Name:

Street or P.O. Box:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address:

20. Other Governmental Entities Information

Texas Department of Transportation District: Houston District

District Engineer's Name: **Eliza Paul, P.E**

Street Address or P.O. Box: **7600 Washington Ave.**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77007**

(Area Code) Telephone Number: **713-802-5000**

Email Address: **eliza.paul@txdot.gov**

The Local Governmental Authority Responsible for Road Maintenance (if applicable): Houston Public Works Department

Contact Person's Name: **Carol Haddock, P.E., Directo**

Street Address or P.O. Box: **611 Walker**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77002**

(Area Code) Telephone Number: **832-395-2500**

Email Address: **publicworks@houstontx.gov**

City Mayor Information

City Mayor's Name: **Sylvester Turner**

Office Address: **P.O. Box 1562**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77251**

(Area Code) Telephone Number: **713-837-0311**

Email Address: **mayor@houstontx.gov**

City Health Authority: Houston Health Department

Contact Person's Name: **Stephen L. Williams, Director**

Street Address or P.O. Box: **8000 North Stadium Dr**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77054**

(Area Code) Telephone Number: **832-393-5169**

Email Address: **webadmin@houstontx.gov**

County Judge Information

County Judge's Name: **Lina Hidalgo**

Street Address or P.O. Box: **1001 Preston, Suite 911**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77002**

(Area Code) Telephone Number: **713-274-7000**

Email Address: **judge.hidalgo@cjo.hctx.net**

County Health Authority: Harris County Public Health Department

Contact Person's Name: **Gwen Sims, Deputy Director**

Street Address or P.O. Box: **2223 West Loop South**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77027**

(Area Code) Telephone Number: **832-927-7487**

Email Address: **gsims@hcphes.org**

State Representative Information

District Number: **142**

State Representative's Name: **Harold V. Dutton, Jr.**

District Office Address: **8799 North Loop East Fwy, Suite 200**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77029**

(Area Code) Telephone Number: **713-692-9192**

Email Address: **harold.dutton@house.texas.gov**

State Senator Information

District Number: **6**

State Senator's Name: **Carol Alvarado**

District Office Address: **4450 Harrisburg, Stuite 400**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77011**

(Area Code) Telephone Number: **713-926-6257**

Email Address: **carol.alvarado@senate.texas.gov**

Council of Government (COG) Name: Houston-Galveston Area Council

COG Representative's Name: **Chuck Wemple**

COG Representative's Title: **Executive Director**

Street Address or P.O. Box: **3555 Timmons Ln, #120**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77027**

(Area Code) Telephone Number: **713-627-3200**

Email Address: **Charles.wemple@h-gac.com**

River Basin Authority Name: San Jacinto River Authority

Contact Person's Name: **Jace A. Houston**

Watershed Sub-Basin Name: **Lake Houston**

Street Address or P.O. Box: **1108 E Canal**

City: **Highlands** County: **Harris** State: **TX** Zip Code: **77562**

(Area Code) Telephone Number: **281-843-3300**

Email Address: **Jhouston@sjra.net**

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

☒ Yes ☐ No

U.S. Army Corps of Engineers

The facility is located in the following District of the U.S. Army Corps of Engineers:

☐ Albuquerque, NM ☒ Galveston, TX

☐ Ft. Worth, TX ☐ Tulsa, OK

Local Government Jurisdiction

Within City Limits of: **Houston**

Within Extraterritorial Jurisdiction of:

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing or disposal of municipal or industrial solid waste?

☐ Yes ☒ No

If "Yes", provide a copy of the ordinance or order as an attachment.

Signature Page

I, Darrell Rogers., CEO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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

Signature: _____ Date: 10/13/21

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Darrell Rogers
On this 13th day of October, 2021
My commission expires on the 18th day of May, 2025

_____
Notary Public in and for
Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

MICHELLE R. ROGERS
Notary Public, State of Texas
Comm. Expires 05-18-2025
Notary ID 131136821

Signature Page

I, Robert Schima, CFO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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

Signature: _____ Date: September 1, 2021

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Robert Schima
On this 1st day of September, 2021
My commission expires on the 18th day of May, 2021

Michelle R Rogers
Notary Public in and for
Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

MICHELLE R. ROGERS
Notary Public, State of Texas
Comm. Expires 05-18-2025
Notary ID 131136821

Signature Page

I, Robert Schima, CFO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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Signature: _____ Date: 8/24/21

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Robert Schima

On this 24th day of August, 2021

My commission expires on the 22nd day of April, 2023

_____
Notary Public in and for

Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

AMANDA KING
Notary ID #130185253
My Commission Expires
April 22, 2023

Signature Page

I, Darrell Rogers., CEO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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

Signature: Darrell Rogers Date: 7/10/21

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Darrell Rogers
On this 10th day of July, 2021
My commission expires on the 18th day of May, 2025
Michelle R Rogers
Notary Public in and for
Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

MICHELLE R. ROGERS
Notary Public, State of Texas
Comm. Expires 05-18-2025
Notary ID 131136821

Signature Page

I, Darrell Rogers., CEO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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Signature: _____ Date: 4/28/21

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Darrell Rogers

On this 28th day of April, 2021

My commission expires on the 5th day of May, 2021

_____
Notary Public in and for

Harris County, Texas

(Note: Application Must Bear Signature & Seal of Notary Public)

Signature Page

I, Darrell Rogers., CEO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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Signature: _____ Date: 3/2/2021

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Darrell Rogers
On this 2 day of Mar, 2021
My commission expires on the 18 day of May, 2021

_____
Notary Public in and for
Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

MICHELLE R ROGERS
Notary Public, State of Texas
Comm. Expires 05-18-2021
Notary ID 13113682-1

Signature Page

I, Darrell Rogers., CEO,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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

Signature: _____ Date: 2/5/2021

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

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

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Darrell Rogers
On this 5th day of February, 2021
My commission expires on the 18th day of May, 2021

_____
Notary Public in and for
Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

Part I Attachments

(See Instructions for P.E. seal requirements.)

Required Attachments	**Attachment No.**
Supplementary Technical Report	**Part II**
Property Legal Description	**1**
Property Metes and Bounds Description	**1**
Facility Legal Description	**1**
Facility Metes and Bounds Description	
Metes and Bounds Drawings	
On-Site Easements Drawing	
Land Ownership Map	**Fig 5**
Land Ownership List	**Part I**
Electronic List or Mailing Labels	**Transmittal**
Texas Department of Transportation (TxDOT) County Map	**Fig 1**
General Location Map	**Fig 2**
General Topographic Map	**Fig 2**
Verification of Legal Status	**4**
Property Owner Affidavit	**Appendix 3**
Evidence of Competency	**Appendix 3**

Additional Attachments as Applicable- Select all those apply and add as necessary

☒ TCEQ Core Data Form(s)	
☐ Signatory Authority Delegation	
☒ Fee Payment Receipt	**Transmittal**
☐ Confidential Documents	
☐ Waste Storage, Processing and Disposal Ordinances	
☐ Final Plat Record of Property	
☐ Certificate of Fact (Certificate of Incorporation)	
☐ Assumed Name Certificate	

1.0 INTRODUCTION AND FACILITY SETTING 330.59(B) AND (C)(2)

This Application has been developed for the 30 TAC §330 Type V Permit Major Amendment for the Wastewater Residuals Management (WRM) Processing Facility (MSW-2370). The facility is located within an existing industrial wastewater treatment plant facility (WQ0003987000). It originally operated as part of the industrial wastewater treatment permit, and when TCEQ policy required a separate MSW authorization for grease trap waste processing within wastewater plants, MSW-2370 was obtained on March 14, 2012.

The site is a 1.25-acre tract located within the City of Houston in Harris County, Texas. The facility is located approximately one mile east on Wallisville Road from East Loop Freeway 610, at latitude 29°47'59"N and longitude 95°15'02" W. The TXDOT general county map of the facility and surrounding area is provided at two scales as Figures 1 and 2. All maps in this application are the latest revisions.

1.1 ADJACENT PROPERTY OWNERSHIP 330.59(C)(3)

An Adjacent Landowners Map showing property owners within ¼ mile of the facility is included as Figure 5. The names and addresses of the landowners are listed below with the corresponding numbers on the figure.

Owner Name	Owner Address
0 - FIDELITY NATIONAL BANK	9100 AIRPORT BLVD HOUSTON, TX 77061-3404
1 - TOTAL SERVICE SUPPLY INC	513 VORTEX DR NEW IBERI, LA 70560-9821
2 - DOMINATION FABRICATION & WELDING	11035 N H ST LAPORTE, TX 77571-9126
3 - RODRIGUEZ JOEL L	12454 DIAKOVIC DR HOUSTON, TX 77015-3323
4 - DOMINATION FABRICATION & WELDING	11035 N H ST LAPORTE, TX 77571-9126
5 - RODRIGUEZ JOEL L	12454 DIAKOVIC DR HOUSTON, TX 77015-3323
6 - HARRIS COUNTY FLOOD CONTROL PROPERTY MGMT	9900 NORTHWEST FWY HOUSTON, TX 77092-8601
7 - RODRIGUEZ JOEL L	12454 DIAKOVIC DR HOUSTON, TX 77015-3323
8 - KATY SANDERS	PVT CEMETERY HOUSTON, TX 77000
9 - OATES CEMETERY	N WALLISVILLE RD HOUSTON, TX 77029
10 - WASTE MANAGEMENT TX INC.	PO BOX 1450 CHICAGO, IL 60690-1450
11 - EMPIRE LANDS COMPANY LTD.	10043 WALLISVILLE RD HOUSTON, TX 77013-4615
12 - ACKER FAMILY PTNRSHP LTD.	10043 WALLISVILLE RD HOUSTON, TX 77013-4615
13 - EMPIRE LAND CO INC.	PO BOX 15235 HOUSTON, TX 77029
14 - HARRIS COUNTY FLOOD CONTROL PROPERTY MGMT	9900 NORTHWEST FWY HOUSTON, TX 77092-8601
15 - EMPIRE LANDS COMPANY LTD.	10043 WALLISVILLE RD HOUSTON, TX 77013-4615
16 - RODRIGUEZ JOEL	3901 TRAIL MOBILE DR HOUSTON, TX 77013-4615
17 - EMPIRE LANDS COMPANY LTD.	10043 WALLISVILLE RD HOUSTON, TX 77013-4615
18 - RODRIGUEZ JOEL	3901 TRAIL MOBILE DR HOUSTON, TX 77013-4615
19 - ACKER FAMILY PTNRSHP LTD.	10043 WALLISVILLE RD HOUSTON, TX 77013-4615
20 - GONZALES BERNARD	10217 WALLISVILLE RD UNIT C HOUSTON, TX 77013-4115

21 - RECYCLING TECHNOLOGY CONSULTANTS LLC.	3635 TRAIL MOBILE DR HOUSTON, TX 77013-3863
22 - VELEZ SERGIO	PO BOX 741109 HOUSTON, TX 77274-1109
23 - VELEZ SERGIO	PO BOX 741109 HOUSTON, TX 77274-1109
24 - LEY STEPHEN W % RICE TRUST INC TR	PO BOX 2666 HOUSTON, TX 77252-2666
25 - ALANIS ROGELIO & ERIKA	4110 WIPPRECHT ST HOUSTON, TX 77026-3948
26 - RUSTLING WIND LLC	207 BLUE POINT RD KEHAM, TX 77565-2369
27 - RUSTLING WIND LLC	207 BLUE POINT RD KEHAM, TX 77565-2369
28 - DANIEL MARY LOVE	7815 ETHEL ST HOUSTON, TX 77028-4405
29 - JAMCAR PARTNERS LTD	2003 WILSON RD HUMBLE, TX 77396-1540
30 - OLDROY ROBERT	10504 NEEDHAM ST HOUSTON, TX 77013-3208
31 - PEREZ RAFAEL	21307 BLISSFIELD LN KATY, TX 77456-5604
32 - GREEN RAMOS FRANCINE	13102 TURNBRIDGE TRL HOUSTON, TX 77065-5052
33 - PEREZ RAFAELN JR	21307 BLISSFIELD LN KATY, TX 77456-5604
34 - OLDROY ROBERT	10504 NEEDHAM ST HOUSTON, TX 77013-3208
35 - GONZALES ESTEBAN	7316 ½ AVE I HOUSTON, TX 77011-2838
35A - COOPER JERY L	13510 ADELIE WESTFIELD RD HOUSTON, TX 77039-3006
36 - MENDEZ MAYRA A & SAUL A	922 GARRETT DR MAGNOLIA, TX 77354-4942
37 - VELEZ SERGIO	PO BOX 24764 HOUSTON, TX 77229-4764
38 - NEEDHAM LAND LLC	111 E JERICHO TPKE FL2 MINEOLA, NY 11501-3145
39 - SALAZAR JUAN A & NORELIA	12722 COOLGREEN ST HOUSTON TX 77013-4508
40 - VELEZ SERGIO	PO BOX 24764 HOUSTON, TX 77229-4764
41 - VELEZ SERGIO	PO BOX 24764 HOUSTON, TX 77229-4764

42 - MUSETTI CARLOS E JR	4202 OATES RD HOUSTON, TX 77013-4114
43 - CITY OF HOUSTON, NEEDHAM ST	PO BOX 1562 HOUSTON, TX 77251-1562
44 - NOLAZCO ALEJANDRO & VERONICA P	9930 COBB COVE LN HOUSTON, TX 77044-4503
45 - NOLAZCO ALEJANDRO & VERONICA P	9930 COBB COVE LN HOUSTON, TX 77044-4503
46 - CEMETERY	ADDRESS UNKNOWN HOUSTON, TX 77000
47 - K7 CONSTRUCTION LLC	PO BOX 96005 HOUSTON, TX 77213-6005
48 - VELEZ SERGIO	PO BOX 24764 HOUSTON, TX 77229-4764
49 - COLLINS GILES	10425 NEEDHAM ST HOUSTON, TX 77013-3205
50 - CORBIN VIOLA EATMAN ET AL	ADDRESS UNKNOWN
51 - CENTERPOINT ENERGY HOU ELE	PROPERTY TX DEPT 38TH FLR HOUSTON, TX 77251-1475
52 - WILLIAM LEEANNA	ADDRESS UNKNOWN
53 - COLLINS HUBERT D ET AL	7510 VERDING ST BAYTOWN, TX 77521-1116
54 - WILLIAMS MARIE MCBRIDE GUESSNAMAE	4305 GUESSNA ST HOUSTON, TX 77013-3201
55 - ESPINOZO DIANA LEY % RICE TRUST INC TR	PO BOX 2666 HOUSTON, TX 77232-2666
56 - COOPER JERY L	13510 ADELIE WESTFIELD RD HOUSTON, TX 77039-3006
57 - WALLISVILLE PARTNERY LTD	10077 WALLISVILLE RD HOUSTON, TX 77013-4615
58 - WALLISVILLE PARTNERY LTD	10077 WALLISVILLE RD HOUSTON, TX 77013-4615
59 - HADASSAH REALTY WALLISVILLE HOUSTON ADA COMPLIANT LIMITED PARTNERSHIP %DALFEN AMERICA CORP	100-4444 RUE SAINT-CATHERINE O WESTMOUNT QC H3Z 1R2 CANADA
60 - WASTEWATER RESIDUALS MGMT LLC	4920 HOLLY ST BELAIRE, TX 77401-5715

61 - VELEZ SERGIO	PO BOX 24764 HOUSTON, TX 77229-4764
62 - VILLATORO PEDRO	15731 BERTASZ DR HOUSTON, TX 77049-1167
63 - WALLISVILLE PARTNERS LTD	10077 WALLISVILLE RD HOUSTON, TX 7713-4615
64 - WASTEWATER RESIDUALS MGMT LLC	4920 HOLLY ST BELAIRE, TX 77401-5715
65 - EMPIRE LAND CO INC.	PO BOX 15235 HOUSTON, TX 77220-5235
66 - NEEDHAM LAND LLC	111 E JERICHO TPKE FL 2 MINEOLA, NY 11501-3145
67 - PHILLIPS JEWEL P	3351 ARBORST HOUSTON, TX 77011-6351
68 - ALLEN JUDY LEY % RICE TRUST INC TR	PO BOX 2666 HOUSTON, TX 77252-2666
69 - COLLINS ELMER LEE % ELMER LEE COLLINS	4004 COLVIN ST HOUSTON, TX 77013-3408
70 - WILSON NANEY LEY	4544 POST OAK PLACE DR STE 375 HOUSTON, TX 77027-3120
71 - WILLIAM MARSH RICE UNIVERSITY TREASURER'S OFFICE / JANIE WRIGHT	6100 MAIN ST #MS91 HOUSTON, TX 77005-1827
72 – TRAIL MOBILE LAND CO	12219 MAPLE ROCK DR HOUSTON, TX 77077-2532
73 - VELASQUEZ NORMA C GALVAN JOSE	4002 SAN PEDRO ST HOUSTON TX 77013-3843
74 - DARAN BLANCA	3922 SAN PEDRO ST HOUSTON TX 77013-3841
75 - LOPEZ VICTOR M & GLADYS A	911 BERWYN HOUSTON TX 77037
76 - SANTILLIAN MISAEL & CONSUELO	19219 KELLY PINES CT HUMBLE TX 77346-4001
77- SANTILLAN MISAEL	3910 SAN PEDRO ST HOUSTON TX 77013-3841
78 - CORONADO APOLONIA % VICTOR CORONADO ESTATE OF	3906 SAN PEDRO ST HOUSTON TX 77013-3841
79 - VILLEGAS JAMIE A JR & MARIA	3902 SAN PEDRO ST HOUSTON TX 77013-3841
80 - LUCIO MARIA LUISA	3834 SAN PEDRO ST HOUSTON TX 77013-3839
81 - JUANOPULOS JOHN	3602 MANITOU DR HOUSTON TX 77013-3610

82 - ELIZANDO MARY A	3826 SAN PEDRO ST HOUSTON TX 77013-3839
83 - BORREGO MARIA L	15331 HARRIS CANYON LN CYPRESS TX 77429-5820
84 - STAPLETON ROY L & ADELA C	3818 SAN PEDRO ST HOUSTON TX 77013-3839
85 - MUNOZ JUANA	3814 SAN PEDRO ST HOUSTON TX 77013-3839
86 - SOSA MARIA	3810 SAN PEDRO ST HOUSTON TX 77013-3839
87 - VASQUEZ EVANGELINA	3806 SAN PEDRO ST HOUSTON TX 77013-3839
88 - VITELA HECTOR G JR	2305 ASHLAND HOUSTON TX 77008-2038
89 - MARTINEZ SANTIAGO	3734 SAN PEDRO ST HOUSTON TX 77013-3838
90 - MARTINEZ ALFREDO	3730 SAN PEDRO ST HOUSTON TX 77013-3838
91 - HERNANDEZ ESTEBAN	3726 SAN PEDRO ST HOUSTON TX 77013-3838
92 - ALVIN S MOODY TRUST ET AL % MOODY LAW GROUP PLLC	3003 W ALABAMA HOUSTON TX 77098
93 - CAMPO ELSA ROMO J JESUS	13858 MAISEMORE RD HOUSTON TX 77015-2303

Note: For property locations, see Figure 5.

1.2 PROPERTY OWNER INFORMATION 330.59(D)

Wastewater Residuals Management, LLC is the current property owner, permittee and operator of the facility. A legal description and survey drawing of the site is contained in Appendix 1. The property owner affidavit is included in the Appendix 3 of this Application.

1.3 LEGAL STATUS AND EVIDENCE OF COMPETENCY 330.59(E) AND (F)

Evidence of the legal status and competency information for Wastewater Residuals Management is contained in Appendix 3.

The minimum number of staff required to operate the facility is two, a plant supervisor to ensure conformance with the design and operational standards and a full-time employee assigned as the operator of the facility. The staff have the following duties:

Plant Supervisor, whose duties will include:

1. managing the overall facility and being the contact person for regulatory compliance matters;

2. assuring that sufficient personnel and equipment are available to provide facility operation in accordance with the site design criteria, Site Operating Plan and the TCEQ regulations;

3. supervising all activities to ensure the safety of all persons on the site including personnel training and quality control monitoring of the processing operations;

4. manifesting the wastes handled at the facility and complying with the requirements of record keeping;

5. supervising the processing of material and equipment inspections;

6. assuring that information in the Operating Record is complete, reports are submitted to TCEQ as required, and coordination occurs with other regulatory agencies;

Facility Operator, whose duties will include:

1. accepting waste, conducting process operations and handling the processed waste in accordance with the rules explained in Part IV, 'Site Operating Plan" of this application;

2. taking necessary steps to ensure that trucks bringing waste to the site are properly secured in order to prevent the escape of its load by spilling and reporting violators to proper law enforcement officers;

3. performing routine facility maintenance activities;

4. cleaning up spilled materials, cleaning all working surfaces that come in contact with waste, and cleaning tanks/tank trucks.

At least one of the company managers, supervisors or operators will have a solid waste facility supervisor license, as defined in 30 TAC 30. A Class B license is currently required. At least one employee will also receive hazardous waste screening training. The personnel will also have the training and the experience necessary to operate the equipment at the site. The Site Operating Plan (Part IV of this Application) provides guidance on operating procedures for the site management and operating personnel in adequate detail to allow the personnel to conduct the day-to-day operation in accordance with the permit requirements.

1.4 APPLICANT'S STATEMENT AND APPOINTMENTS 305.44, 330.59(g)

The certification statement (Statement of Applicant) required by 305.44 is included in the Part I form of this Application. The Notice of Appointment of Cook-Joyce, Inc. and Intera as engineers for this permit Application, is included as Appendix 3.

1.5 NON-APPLICABLE REGULATORY SECTIONS

The following rules are not applicable to this Type V facility.

- §330.59(d)(2)(B), since no waste will remain after closure;
- §330.59(f)(5), applicable only for landfill permit applications;
- §330.59(f)(6), applicable only for mobile liquid waste processing units; and
- §330.59(h)(2), applicable only for a registration over a closed MSW landfill.

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701

WASTEWATER RESIDUALS MANAGEMENT TYPE V-GG PROCESSING FACILITY
HOUSTON, HARRIS COUNTY, TEXAS

MAJOR PERMIT AMENDMENT MSW-2370A

GENERAL INFORMATION
PART II

ORIGINAL PERMIT ISSUED MARCH 14, 2012
LIMITED SCOPE AMENDMENT ISSUED JUNE 7, 2019 AND
PERMIT AMENDMENT APPLICATION SUBMITTAL FEBRUARY 9, 2021

FOR

WASTEWATER RESIDUALS MANAGEMENT, LLC
10217A WALLISVILLE ROAD
HOUSTON, TEXAS 77013

Prepared by:

Cook-Joyce, Inc.
812 W. 11TH Street
Austin, Texas 78701
Texas Registered Engineering Firm #F-883

12/1/21

2.0 THE PROPOSED FACILITY AND EXISTING CONDITIONS SUMMARY 330.61(A)

This permit amendment contains upgrades to enhance facility operations, an expanded list of wastes authorized for processing, a new maximum daily waste acceptance rate, and an expanded MSW permit boundary.

2.1 SUMMARY TECHNICAL REPORT

Wastewater Residuals Management (WRM) proposes to construct upgrades and continue operating the Wastewater Residuals Management Processing Facility at 10217A Wallisville Road in Houston, Harris County, Texas. The facility will receive and process municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, lint and oil/water separator waste; and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges.

Operations will occur at the existing Permitted Type V MSW-2370 facility, where the liquid waste will be unloaded, stored and processed to recover grease and other solids. The facility is also within an existing permitted industrial wastewater treatment plant facility (WQ0003987000). This processing facility originally operated as part of the industrial wastewater treatment permit, and when TCEQ policy required a separate MSW authorization for grease trap waste processing withing wastewater plants, MSW-2370 was obtained on March 14, 2012.

The site is well suited for the processing facility, as it is located within a long-established industrial area and south of the closed Bluebonnet MSW landfill. Nearby material salvage, equipment storage, truck parks and other industry, soil excavation pits, and Hunting Bayou provide a wide buffer to residential land use. This location has been the site of wastewater treatment since the early 2000's. It is compatible with surrounding land use. Traffic generated by the Type V processing business is not expected to exceed 85 vehicles per day.

The proposed facility will be authorized by an amendment to TCEQ municipal solid waste permit MSW-2370, as required by 30 TAC §330.7(a). Type V facility permit rules are applicable as defined in 30 TAC § 330.5(a)(3). The facility will have a full build-out capacity to process 400,000 gallons per day of any mix of authorized liquid wastes. All waste unloading, tank storage and

waste processing will be on concrete slabs that control spilled waste and rainfall runoff. The processing of waste involves treatment, stabilization and dewatering of the liquid. Grease may be recovered which is brown grease that can be recycled into energy related products or other beneficial use products. Other solids will be disposed at an authorized compost facility, processor or Houston area MSW landfill. The liquid effluent will be discharged to the adjacent permitted industrial wastewater treatment plant or alternatively discharged to the City of Houston sewer in accordance with a wastewater discharge permit that would be obtained from the City or transported to another authorized processing or disposal facility. Grit trap waste will either be handled separately from other wastes, or it will be tracked through the process so that recovered grit trap solids or liquids will not be transported to a compost facility.

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

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

There are no site-specific conditions that require special design considerations and possible mitigation of conditions identified in 30 TAC §330.61(h) – (o).

2.2 WASTE ACCEPTANCE PLAN 330.61(B)

This facility is part of an industrial wastewater treatment facility that also has a separate MSW processing permit because some MSW waste-streams are accepted. The waste materials that will be processed at the facility are municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, lint and oil/water separator waste; and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges within about 200 miles of Houston, Texas. This area includes the Houston Metropolitan Area, which is predicted to grow

at a rate of 1.3% per year. Liquid waste will be delivered to the facility by independent transporters or by trucks affiliated with WRM. No waste will be accepted from unregistered transporters. Each incoming load will be manifested and visually screened by trained employees for unauthorized or prohibited material before processing.

This facility will accept and process authorized liquid wastes for the purpose of separation into solids and liquid. There will be a solids transport staging area consisting of a drainage-controlled slab to manage transport of grit and other processed solids. The total waste stream may be composed of any percentage of the above listed waste streams, consisting of large solids, fine particles, grease and water. BOD (Biological Oxygen Demand), COD (BioChemical Oxygen Demand) and pH do not impact the treatment of the material. No other usual constituents in these wastes will impact the design or operation of the facility. General descriptions of the authorized wastes follow.

WRM will accept and process non-hazardous grease and grit trap waste. Grease trap waste is material collected in and from a grease interceptor in the sanitary sewer service line of a commercial, institutional, or industrial food service or processing establishment, including the solids resulting from dewatering processes. Grit trap waste includes waste from interceptors in the drains prior to entering the sewer system at maintenance and repair shops, automobile service stations, car washes, and other similar establishments. Lint waste is from an interceptor at a laundry. Since the municipal and commercial businesses that transport these wastes to WRM do not normally generate waste streams that contain hazardous constituents, it is unlikely hazardous waste will be contained in this waste.

Grease and grease trap waste is composed of food grease, dirt, 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 waste contains floating matter made up primarily of animal and vegetable grease and oil, settled food particles, and wastewater containing large amounts of dissolved and suspended food matter. Grease may also be referred to as yellow, brown, white, or black. The waste is typically characterized by high levels of BOD (500 to 25,000 mg/L +), TSS (0.5% to 8%) and with pH levels generally in the 4.0 to 6.0 range.

Grit Trap Waste is composed of wastes periodically removed from primary grit traps for domestic wastewater treatment facilities, car washes, service stations, etc. typically consists of heavy particles of sand, dirt and silt. The waste is characterized by high levels of BOD (500 to 5,000 gm/L), TSS (0.2% to 8%), and pH levels generally in the 6.0 to 9.0 range.

Septic tank waste includes wastes pumped from septic tanks used by residential units, schools, motels/hotels, restaurants and other commercial and industrial establishments, and sewage and wash waters from holding tanks, lift stations or similar systems. Septage is composed of sewage products, inert materials and related trash. Septage waste is periodically removed depending on the capacity of the septic tank, the usage, and the solids content of the waste. The waste is typically characterized by high levels of BOD (300 to 500mg/L) and TSS (0.3% to 6%) with pH levels generally in the 5.5 to 7.0 range.

Water/wastewater sludge is typically composed of 1-4% solids with the remainder being water. Food wastes are variable and may be beverages or other foods containing water and oils.

The amount of waste that WRM will treat each day can be composed of any mixture of allowable wastes and is limited to the daily maximum limit specified in the Waste Acceptance Plan of this permit.

2.2.1 Prohibited and Unauthorized (Excluded) Wastes

Prohibited and unauthorized (excluded) wastes are all wastes which are not municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, lint and oil/water separator waste; and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges including:

- regulated hazardous waste as defined in §330.3;
- polychlorinated biphenyls (PCB) waste as defined in accordance with 40 CFR Part 761; radioactive waste as defined in Chapter 336;
- radioactive wastes; and

- unidentified wastes.

If an incoming load is suspected or confirmed as containing an unauthorized, unknown, hazardous or PCB waste, the material will not be unloaded, and the transporter will remove the material from the site. If the operator becomes aware that hazardous wastes have been inadvertently accepted, he will immediately contain the accepted material by terminating process flow and will return the material to the transporter or generator, if practical, or contact a company licensed and permitted to handle and dispose of such materials. The TCEQ will be immediately notified if any prohibited or unauthorized wastes are accidentally accepted. Records of the notification will be kept on the site operating record and will include the date and time of notification, the individual contacted, and the information reported.

2.3 FACILITY SETTING, 330.61(C-F)

Maps showing the facility's general proximity to surrounding features are provided as Figures 1 and 2. An aerial photograph is presented as Figure 3. Figure 4 shows area land use including schools, churches, ponds, lakes, residential, commercial, and recreational areas within one mile of the facility. The land use throughout the area is primarily industrial and commercial. The nearest residential area is about ¼ of a mile west of the existing facility. North of the facility is a large wooded area approximately 75 acres. This wooded property, which is owned by the City of Houston, is described as "undevelopable" land by the Houston-Galveston Area Council (as shown on Figure 4). Other "undevelopable" land shown on Figure 4 (to the west and northwest of the wooded property) contain a Waste Management landfill and its apparent water filled borrow pit. The site is well suited for the processing facility, as it is located within a long-established industrial area and south of the closed Bluebonnet MSW landfill. Nearby material salvage, equipment storage, truck parks and other industry, soil excavation pits, and Hunting Bayou provide a wide buffer to residential land use. No airports are located within 6 miles of the site. The closest airport to the site, the Hobby International Airport, is located approximately 10 miles away to the south of the facility. This location has been the site of wastewater treatment since the early 2000's. It is compatible with surrounding land use.

No archaeological sites, historical sites or sites with exceptional aesthetic qualities have been identified adjacent to the facility. The facility is surrounded by wastewater plant operations and

parking lots. A coordination letter was submitted to the Texas Historical Commission (THC) with the original permit application with no response that historical properties would be affected.

A topographic map is presented as Figure 2, and a wind rose plot depicts the prevailing southerly wind direction in Figure 7. The site layout plan is contained in Figure 9.

Runoff from the site generally flows north and eastward and drains into Hunting Bayou adjacent to the WWTP tract and the facility.

2.4 IMPACT ON SURROUNDING AREA 330.61(G-H)

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

2.4.1 Land Use Setting

The land use within one mile of the site is generally described in Section 2.3 above and is shown in Figure 4. The nearest residential area is about ¼ of a mile west of the existing facility. North of the facility is a large wooded area that is approximately 75 acres.

There are no structures or inhabitable buildings within 500 feet of the facility. The approximate number of residence and businesses within one mile of the site and approximate distances to significant land usages is in the table below:

Land Use Type within 1 Mile (approximate):		
Number of businesses: 65		
Number of residences: 490		
Nearest:	Distance:	Location:
Residence	1,600 ft	San Pedro St., Houston, TX 77013
Business	1,325 ft	10203 Wallisville Rd, Houston, TX 77013
		Sun Packing
		Empire Trucking
		EZ Waste
School	3,000 ft	Oates Elementary School

		1004 Wallisville Rd, Houston, TX 77013
Major Medical Facility	4 miles	Lyndon B. Johnson General Hospital 5656 Kelly St, Houston, TX 77026
Church	2,000 ft	El Buen Samaratino Church 3602 San Pedro St, Houston, TX 77013
Recreational Facility	1 mile	Herman Brown Park, Houston, TX 77013
Cemetery	1.25 miles	Harris County Cemetery, Houston, TX 77013
Historical/Archaeological Site	none within 1 mile	

2.4.2 Growth Trends and Zoning

The facility is located within the city of limits of Houston. There is no zoning in the City of Houston. According to the Greater Houston Partnership (2018), the population of the City of Houston is expected to grow at a rate of 1.3% annually. Data from the 2000 U.S. Census Bureau interpreted by the City of Houston shows that faster growth has occurred in the north and west sections of the City than in the east and south. Growth on the east side of Houston where the facility is located has been slow or has shown negative trends in growth. The industrial nature of the area has been established for many years. In the immediate area, the prevailing development potential appears to be trucking and warehouses.

2.5 TRANSPORTATION 330.61(i),

Because this is a Type V facility, impacts to airports are not applicable.

The facility is located on Zaballos Court, a two lane all weather roadway on a 60 foot wide public easement with a 24 foot concrete or aggregate driving surface. The roadway has adequate turning radii. Zaballos Court is located approximately 1 mile east of East Loop Freeway 610 on the north side of Wallisville Road. Facility access is indicated on the Site Location Map included as Figure 2. Trucks enter the facility through the wastewater plant gate on Zaballos Court and will exit through the same gate (Figure 9A). Internally, trucks may enter the MSW permit boundary via a driveway on the south side and exit through either the south or west

driveway. Internal drives have all weather driving surfaces. Figure 1 (Vicinity Map) and Figure 2 (Site Location Map) show local roads and highways in the area near the facility.

The expected life of the treatment facility was assumed to be at least 30 years. Based on data from the US Department of Transportation a linear growth trend was used to estimate the expected volume of traffic in the area. The most updated traffic and expected volumes for the streets around the facility are listed in the table below.

24 Hour Traffic Volume TXDOT Saturation Counts

Location	2006	2017	% Difference from 2006 to 2017	2050*
Wallisville Rd from Oates Rd to South Lake Houston Pkwy (veh/24 hr)	17160	20819	+17.6	31229
Oates Rd from Wallisville Rd to Needham St (veh/24 hr)	10850	10080	-7.1	15120
Wallisville Rd from East Loop 610 to Manitou Dr (veh/24 hr)	35040	23927	-31.7	35891

*Expected volume increase is assumed to be 50% since most of the area is currently developed and roadways are arterials serving primarily local land use.

The volume of site traffic on access roads within one mile of the facility may be up to about 75 vacuum trucks a day plus ten (10) employee/service vehicles, for a total of 85 vehicles per day.

Since the facility is preexisting and the volume of traffic will normally consist of only about 85 vehicles per day, no proposed roadway improvements are necessary.

2.6 GENERAL GEOLOGY AND SOILS STATEMENT, 330.61(j)

The Soil Survey of Harris County, Texas, (USDA Soil Conservation Service, August 1976) indicates that the soils in the area along Wallisville Road between Trailmobile Drive and Oates Road are of the Lake Charles-Bernard Association. According to the report, the Lake Charles-Bernard association is described as a "somewhat poorly drained, very slowly permeable, clayey and loamy soils." The specific soil mapping description for the site area is Bernard-Urban land complex (Bg). The soil is described as "friable, neutral, very dark gray clay loam about 6 inches thick. The layer below that is about 48 inches thick and consists of firm, neutral, very dark gray in the upper part and very firm, moderately alkaline, dark gray clay in the lower part. The next

layer is firm, moderately alkaline, gray clay that has distinct yellowish-brown mottles and a few calcium carbonate concretions." Bernard-Urban land complex is nearly level with slopes between 0 and 1 percent but averages about 0.5 percent.

Data for fault areas, seismic impact zones, and unstable areas are not applicable to this Type V facility.

2.7 SURFACE WATER AND GROUNDWATER 330.61(K)

Site Specific Groundwater Conditions [330.61(k)(l)]:

According to the Texas Water Development Board, the existing facility sits atop of the Gulf Coast Aquifer. The aquifer provides water to all parts of 54 counties and extends from the Rio Grande northeastward to the Louisiana-Texas border. Municipal and irrigation uses account for 90 percent of the total pumpage from the aquifer. The Greater Houston metropolitan area is the largest municipal user, where well yields average about 1,600 gal/min.

The Gulf Coast Aquifer Consists of four separate aquifers. First, the Chicot Aquifer consists of the Lissie, Willis, Bentley, Montgomery, and Beaumont formations, and overlying alluvial deposits. Second, the Evangeline Aquifer, which is contained within the Fleming and Goliad sands. Third, the Jasper Aquifer, which is primarily contained within the Oakville Sandstone. Lastly, the Catahoula restricted Aquifer contains ground water near the outcrop in sand layers. Of the Gulf Coast Aquifer group, the Chicot and Evangeline Aquifers are the groundwater source aquifers for the City of Houston. Primary usage has been for municipal and industrial supply.

Surface Water Near Site [330.61(k)(2)]:

The existing facility is located adjacent to Hunting Bayou and beyond a flood control easement extending 125 feet from the bayou centerline. According to the Harris County Flood Control District the Hunting Bayou watershed is located in central Harris County, northeast of downtown Houston and is almost completely contained within the city limits of Houston, Galena Park and Jacinto City. The watershed covers about 30 square miles and flows into the Houston Ship Channel via Hunting Bayou, the watersheds single primary stream. There are about 45 miles of open streams with the watershed, including the primary

stream and tributary channels. The population within the Hunting Bayou watershed is estimated by Harris County Flood Control to be just over 75,000.

Compliance with TPDES, and Clean Water Act [330.61(k)(3)]:

No portion of the process is subject to flooding or overflowing onto the site such that it could be carried away with TCEQ's design storm water flows. All process operations are carried out in areas protected by containment walls, curbs and/or roofs. Storm water collected in the containment areas is conveyed to the adjacent WRM Industrial Wastewater treatment plant. The treated wastewater is discharged into Hunting Bayou, as authorized by TCEQ permit WQ003987000.

WRM will obtain the appropriate TPDES or local government drainage permit coverage when required, as certified in Appendix 3.

2.8 EXISTING AND ABANDONED OIL AND WATER WELLS 330.61(c and l)

WRM has not encountered any abandoned water, oil or gas wells that are situated within the facility. There is an existing water well owned by the facility that is in-use on the property and shown on the site plan. A State of Texas Well Report from the Texas Water Development Board for the site well (#28559) is provided in Appendix 2. A radius search showing water wells within 0.5-mile of the facility that were permitted through the Harris-Galveston Subsidence District is also provided in Appendix 2. According to this search, the site well is the only well located within 500 feet of the facility. The two other wells identified in the search were each over 1,700 feet away from the facility. There are no other known water wells located within 500 feet of the facility and no known gas and oil wells located on the site.

2.9 FLOODPLAINS AND WETLANDS 330.61(M), 330.547, AND 330.553

The existing facility is not located in the 100-year flood zone and is indicated as Zone X (500-year flood zone) in the Federal Emergency Management Agency Flood Insurance Rate Maps Numbered 48201C0695M and 48201C0715M, both revised January 6, 2017 (see Figure 6). The site currently is fully developed as a processing facility, driveways, truck parking and office trailers. The office trailer may be moved to the adjacent wastewater treatment plant in the future. The site is fully developed as an existing MSW Type V and industrial wastewater treatment

facility and no areas meeting the requisite characteristics for wetlands under federal, state or local criteria were observed on the MSW site.

2.10 ENDANGERED SPECIES COMPLIANCE 330.61(N) AND 330.551

As described above, the site currently is fully developed. The redeveloped facility and the operation of the facility will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species. Copies of correspondence sent to the Texas Parks and Wildlife Department and the United States Fish and Wildlife Services with the original permit are provided in Appendix6.

2.11 TEXAS HISTORICAL COMMISSION REVIEW 330.61(o)

The Texas Historical Commission (THC) was sent a review letter regarding the existence of known prehistoric or historical culture resources which would be affected by the existing facility. A copy of the letter is provided in Appendix 6.

2.12 COUNCIL OF GOVERNMENT REVIEW 330.61(P), REVIEW OF APPLICATION BY GOVERNMENTAL AGENCIES 39.103 (C)

The Houston-Galveston Area Council (H-GAC) is the State designated planning agency for solid waste management issues in the region. The H-GAC was notified prior to submittal of the application and comment was requested. A letter has also been sent to the Texas Department of Transportation (TxDOT). Copies of the letters are provided in Appendix 6.

Any additional documentation in response to the letters will be forwarded to the TCEQ during its review of this Application or placed in the Operating Record.

2.13 EASEMENTS AND BUFFER ZONES 330.543

There are no easements on the site

The owner or operator shall maintain a minimum separating distance of 50-feet between feedstock or final product storage areas; solid waste storage, processing units within and adjacent to the facility boundary on property owned or controlled by the owner or

operator. This separating distance is satisfied because the MSW facility is surrounded by at least 50 ft of property owned or controlled by the operator.

2.14 NON APPLICABLE REGULATORY SECTIONS

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

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WASTEWATER RESIDUALS MANAGEMENT
TYPE V-GG PROCESSING FACILITY
HOUSTON, HARRIS COUNTY, TEXAS

MAJOR PERMIT AMENDMENT MSW-2370A

SITE DEVELOPMENT PLAN
PART III

ORIGINAL PERMIT ISSUED MARCH 14, 2012
LIMITED SCOPE AMENDMENT ISSUED JUNE 7, 2019 AND
PERMIT AMENDMENT APPLICATION SUBMITTAL FEBRUARY 9, 2021

FOR

WASTEWATER RESIDUALS MANAGEMENT, LLC
10217A WALLISVILLE ROAD
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3.0 SITE PLAN

The Site Layout Plan is included as Figure 9 of this report. The site may include an office building at the west side of the facility, or the office may be located on the adjacent WWTP site. All unloading, loading and processing will be done on slabs designed to contain the wastes. Storm water run-on and run-off is controlled at all waste handling areas.

3.1 GENERAL FACILITY DESIGN

3.1.1 Facility Access Control, 330.63(b)(1)

Access will be controlled to prevent entry of livestock, to protect the public from exposure to potential health and safety hazards, and to discourage unauthorized entry or uncontrolled disposal of solid waste or hazardous materials. Access to the site is controlled by a minimum six foot high chain link fence on the north and east sides of the processing facility. To the west and south lies the industrial wastewater plant which has the same type access control fence at its boundary. Thus, an access control fence encircles the processing and wastewater treatment facilities and contains an automatic vehicular gate on the south side. The gate will be locked or disabled at all times when the facility is closed and not attended. Solid metal privacy fences may be installed along fence sections facing the bayou. An internal fence may be constructed between MSW and wastewater plant operations but is not required.

Access to the facility is limited to employees and authorized visitors. Non-affiliated users, shippers, and visitors are allowed access only when employees are present. All users must present personal or company identification when asked. The facility will not receive or process hazardous waste. The facility will display a sign stating the site name, permit number, and hours and days of operation. The details of site sign requirements are listed in Section 4.9.

3.1.2 Process Design and Flow

A process flow diagram for the facility is included as Figure 13.

3.1.2.1 Process Flow 330.63(b)(2)(A), (B)

The facility will ultimately have capacity to accept a maximum of 400,000 gallons per day of any mix of authorized liquid wastes for processing. Phase I operations will commence upon Permit Amendment approval and will include liquid waste receipt and storage, treatment processing,

flocculation/filtration, solids removal equipment, and wastewater handling prior to discharge to the adjacent WWTP. Phase II operations will add waste storage tanks with additional treatment processing locations and equipment. Grit trap waste may be processed using Phase I or Phase II equipment, but will either be handled separately from other wastes, or it will be tracked through the process to ensure that recovered grit trap solids or liquids will not be transported to a compost facility. Any authorized liquid waste may be processed in either the Phase I or II operations. Equipment could include heated tanks or other processes to allow decanting and recovery of brown grease.

PHASE I PROCESSING

Liquid wastes are primarily received at the unloading slab and unloaded into a screened receiving pit to remove larger solids and debris before it is transferred to the waste storage tanks. The debris is placed in a container and transported to an authorized landfill, processing or compost facility either separately or combined with other recovered solids. Grit trap wastes, which are not appropriate for ultimate disposition at a compost facility, may be unloaded at a separate slab or receiving pit. Some wastes (typically septic waste and raw sewage) may be pumped directly to the wastewater treatment plant without further processing.

At the waste storage tanks, the liquid and fine waste particles are mixed and stabilized to an acceptable pH through the addition of hydrated lime during processing. In the tanks, natural gravity separation may occur with grease waste concentrated at the top with solids settling to the bottom. The middle may be relatively dilute wastewater that may be decanted from the tank and transferred to the wastewater treatment plant without processing. Heated tanks may also be used to separate and decant grease for recovery as marketable brown grease. The processed waste is pumped through a polymer injection system and into a processing unit (typically a specialized 30 cy rolloff container) where flocculation/filtration takes place. Solids flocculate and separate from liquids and are retained in the unit. The liquid (filtrate) drains through filter panels and ports in the unit's walls and into a sump on the underlying slab. The filtrate is pumped to adjacent WWTP. Other configurations of the flocculation/filtration processing unit may be used so long as the volumes of the wastes are consistent with financial assurance and spill containment calculations. A belt press, centrifuge or other equipment may also be used to separate solids.

There will be a solids transport staging area consisting of a drainage-controlled slab to manage transport of grit and other processed solids. The solids will be transported to an authorized landfill, processing or compost facility in the roll-off processing unit or a more efficient over-the-road container. Landfilled solids will have all free liquid removed and will comply with landfill waste acceptance criteria.

A drainage-controlled solidification basin may be provided where solids such as sawdust are mixed with processed waste when needed so that transported solids will not contain free liquids. The location will be adjacent to the transport staging area shown on Figure 9. The basin is a reinforced concrete structure with its base set about 5 feet below grade and having sidewalls that extend to 2-3 feet above grade. It may have a center wall running the length of an approximate 16 x 24 ft basin which divides it into two parallel basins.

Grit trap wastes will be unloaded and handled separately unless they are tracked through the process so that recovered solids are not transported to a compost facility. Processing will occur similar to other wastes. Grit and lint trap waste may also be dewatered on draining slabs with controlled runoff and runon.

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

PHASE II OPERATIONS

In Phase II, up to 3 additional waste storage tanks may be added and up to 3 additional rolloff processing units may be used to process the wastes. Other processing equipment may be added as described in Phase I operations. Spill containment and closure cost estimates associated with each Operating Phase are contained in Appendix 5.

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

Because of the nature of the waste material handled at the facility, the facility is permitted by rule and does not require a site-specific air permit (30 TAC 106.532). Odor will be controlled at this facility through moving wastes expeditiously through the process and off-site, minimizing contact between unprocessed waste and air and by following good housekeeping practices including

regular washdown of surfaces contacting waste and cleanup of spilled waste. If airflow is limited over the surface of liquid as waste is transferred and processed, then odors will not be mixed with large volumes of air and widely distributed throughout the site.

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

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

Tanks and equipment used at the facility are presented in the following table(see figure 9B for locations):

Unit Name	Maximum Number	Maximum Size	Materials of Construction	Function
PHASE I				
1.Heated Brown Grease Holding Tanks	optional	12,000 gal/each	Steel	Storage of recovered grease for recycling
2.Shaker Screens and Unloading Hoppers	2			Screen debris from the liquid waste
3.Waste Storage Tanks	6	20,000 or 30,000 gal/each (see note below)	Steel	Waste and effluent storage, wastewater buffering
4.pH Adjustment System and Caustic Supply Tank	1	7500 gal	HDPE or Fiberglass	Wastewater buffering
5.Polymer Injection System	2	1000 gal	HDPE or Fiberglass	flocculant storage and injection into waste stream

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

NOTE: See Appendices 4 and 5 for conditions where 30,000 gallon tanks may be used.

All concrete slabs, curbs and walls contain steel reinforcement. A representative storage tank and processing unit are illustrated in Figures 10 and 11, respectively.

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

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

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

Processed Wastewater

Effluent from the processing operation will be discharged to the adjacent industrial WWTP (Permit No. WQ0003987000). The water may also be discharged to the City sewer in accordance with a City industrial wastewater discharge permit or transported to another authorized treatment or disposal facility.

Processed Waste Solids

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

The solids will be taken to an authorized compost facility, processor or one of the permitted MSW landfills located in the Houston area. Typically, the dewatered material will be on-site no more than 48 hours, except over weekends, when it may be onsite for 72 hours. Post-processing holding time will not exceed 7 days unless the material is reprocessed. The solids content of the wastes being processed will vary from 1% to over 25%, depending on waste type and source. An average 13% solids content can be conservatively assumed for an estimate of the maximum amount of solids which may be produced daily from a mixed waste stream. Assuming an average solids content of 13%, the quantity of processed waste solids expected at maximum production is 257 cy/day (average wastes processed = 400,000 gallon/day → 53,475 cf/day x 0.13 typical avg. solids content = 6950 cf/day = 257 cy/day).

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

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

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

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

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

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

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

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

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

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

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

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

No special design is required for endangered species protection at the site. See Section 2.8 for additional information.

3.2 SITE DRAINAGE, 330.63(C) AND 330.303

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

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

3.3 WASTE MANAGEMENT UNIT DESIGN AND SPILL PREVENTION/CONTROL, 330.63(D)(1)(A-C) AND 330.227

Unprocessed and processed waste liquids will be stored in enclosed tanks at the facility. The number and size of tanks used for processing and storage have been selected to provide the facility with the capacity to process all the waste received each day. With equipment that can process the daily peak plant capacity of 400,000 gal/day, the holding time of solid waste is minimized. The liquid waste, which may be capable of creating public health hazards or nuisances, will be stored in tanks and processed or transferred promptly. It will not be allowed to result in nuisances or public health hazards.

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

Spill Prevention and Control

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

Each area has been designed to contain a spill equal to the capacity of the largest tank within the area along with managing the 25-year, 24-hour rainfall event storm volume. The calculations for spill containment are included in Appendix 4 of this report.

Storage tank Areas -- The storage tank areas (Area 4 in Phase I, with additional tanks in Area 5 during Phase II) contain a concrete slab and perimeter walls that have sufficient capacity to contain a spill from the largest storage tank of 20,000 (or 30,000) gallons and the 25 year, 24 hour storm. If 30,000 gallon tanks are used, then spill containment walls must be higher as described in Appendix 4. The Areas are displayed in Appendix 4, Figure 4-1, and Appendix 1 contains a Figure showing existing facility elevations.

Unloading and Processing Areas -- Truck unloading of incoming liquid waste will primarily occur at the Area 1 unloading slab and receiving pit. Generally, grit and lint unloading may occur at Areas 3, 5 and 6 in Phase 1 with additional unloading and processing anticipated at Area 7 in Phase 2. Unloading and processing slabs incorporate rollover curbs, walls and sloped slabs to control runon, runoff and spills. Each Area has sufficient capacity to contain a spill. To collect the spill as well as rainfall which may occur during and after a spill, each slab slopes towards a sump where the liquid is collected and flows by gravity pipe to a lift station, which then automatically pumps to the wastewater treatment plant. Redundant pumps and a backup electrical generator will assure that the system is continually operational, and it will be able to immediately and reliably control and contain spills and contaminated water from leaving the facility.

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

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

Additionally, a cost estimate for closure actions is contained in Appendix 5. The financial assurance will be established in this amount and maintained for closure of the facility in accordance with TAC Chapter 37, Subchapter R, including annual inflation adjustments as required by TCEQ. Use of 30,000 gallon tanks will require a 305.70(j) non-notice modification if they increase the total storage volume above the total volume in the closure cost estimate.

3.5 POST-CLOSURE 330.63(I) AND 330.463

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

3.6 NON APPLICABLE REGULATORY SECTIONS

- §330.63(b)(2)(I), applicable only for transfer stations;
- §330.63(c)(1) and (2), applicable only for landfills;
- §330.63(d)(2), applicable only for incineration units;
- §330.63(d)(3), applicable only for facilities having a surface impoundment;
- §330.63(d)(4)-(7) and (9), applicable only for facilities other than Type V;
- §330.63(e), geology report applicable only for landfills and compost units;
- §330.63(f), groundwater sampling and analysis applicable only for landfills and some composting facilities;
- §330.63(g), applicable only for landfills' gas management plans;
- §330.305, applicable only for landfills;
- §330.307, applicable only for landfills;
- Subchapter F, applicable for laboratory analyses submitted for TCEQ decision-making. This facility will conduct some waste-related sampling for record purposes and will use EPA approved methods as described in Section 3.1.2.4, however, no reporting for decision-making is required;
- Subchapter H, applicable only to facilities with liners, which does not include this facility; and
- Subchapter J, applicable only to facilities with groundwater monitoring, which does not include this facility.

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WASTEWATER RESIDUALS MANAGEMENT
TYPE V-GG PROCESSING FACILITY
HOUSTON, HARRIS COUNTY, TEXAS

MAJOR PERMIT AMENDMENT MSW-2370A

SITE OPERATING PLAN
PART IV

ORIGINAL PERMIT ISSUED MARCH 14, 2012
LIMITED SCOPE AMENDMENT ISSUED JUNE 7, 2019 AND
PERMIT AMENDMENT APPLICATION SUBMITTAL FEBRUARY 9, 2021

FOR

WASTEWATER RESIDUALS MANAGEMENT, LLC
10217A WALLISVILLE ROAD
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12/1/21

4.0 SITE OPERATING PLAN, 330.65(a) AND (d)

This Site Operating Plan (SOP) contains general instructions for facility management and personnel to operate the Wastewater Residuals Management Processing Facility in a manner consistent with the approved design and the TCEQ rules to protect human health and the environment and prevent nuisances. This plan will be used as part of personnel training. The Site Operating Plan will be retained as part of the Operating Record during the active life of the facility.

The SOP is Part IV of a MSW permit 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 includes provisions for facility management and operating personnel to meet the general and site-specific requirements of these rules.

Appendix 3 contains information regarding permit requirements under the Texas Pollution Discharge Elimination System and an Applicant's Certification that any TPDES requirement will be met. A site development permit will be obtained from the City of Houston and Harris County, as required, prior to new construction. A Houston wastewater discharge permit will be obtained if process wastewater is discharged to the City sewer in the future.

4.1 WASTE ACCEPTANCE, DISPOSAL AND ANALYSIS 330.203, 330.205, AND 330.207

Operations will be conducted so that only authorized wastes are accepted at the facility.

4.1.1 Authorized Wastes

The waste materials that will be processed at the facility are municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, lint and oil/water separator waste; and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges within about 200 miles of Houston, Texas. General descriptions of the authorized wastes are as follows.

WRM will accept and process non-hazardous grease and grit trap waste. Grease trap waste is material collected in and from a grease interceptor in the sanitary sewer service line of a commercial, institutional, or industrial food service or processing establishment, including the solids resulting from dewatering processes. Grit trap waste includes waste from interceptors in the drains prior to entering the sewer system at maintenance and repair shops, automobile service stations, car washes, wastewater treatment facilities and other similar establishments. Lint waste is from an interceptor at a laundry. Since the municipal and commercial businesses that transport these wastes to WRM do not normally generate waste streams that contain hazardous constituents, it is unlikely hazardous waste will be contained in this waste.

Grease and grease trap waste is composed of food grease, dirt, 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 waste contains floating matter made up primarily of animal and vegetable grease and oil, settled food particles, and wastewater containing large amounts of dissolved and suspended food matter. Grease may also be defined as defined as yellow, brown, white, black; sewage; or any other grease that does not contain petroleum products. The waste is typically characterized by high levels of BOD (500 to 25,000 mg/L +), TSS (0.5% to 8%) and with pH levels generally in the 4.0 to 6.0 range.

Grit Trap Waste is composed of wastes periodically removed from primary grit traps for wastewater treatment facilities, car washes, service stations, laundries, etc. It typically consists of heavy particles of sand, dirt and silt. The waste is characterized by high levels of BOD (500 to 5,000 gm/L), TSS (0.2% to 8%), and pH levels generally in the 6.0 to 9.0 range.

Septic tank waste includes wastes pumped from septic tanks used by residential units, schools, motels/hotels, restaurants and other commercial and industrial establishments, and sewage and wash waters from holding tanks, lift stations or similar systems. Septage is composed of sewage products, inert materials and related trash. Septage waste is periodically removed depending on the capacity of the septic tank, the usage, and the solids content of the waste. The waste is typically characterized by high levels of BOD (300 to 500mg/L) and TSS (0.3% to 6%) with pH levels generally in the 5.5 to 7.0 range.

Water/wastewater sludge is typically composed of 1-4% solids with the remainder being water. Food wastes are variable and may be beverages or other foods containing water and oils.

The amount of waste that WRM will treat each day can be composed of any mixture of allowable wastes and is limited to the daily maximum limit specified in the Waste Acceptance Plan of this permit. Usual constituents in these wastes are not limiting parameters that impact the design or operation of the facility.

4.1.2 Prohibited Wastes

Prohibited and unauthorized (excluded) wastes are all wastes which are not municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, lint and oil/water separator waste; and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges, including:

- regulated hazardous waste as defined in §330.3;
- polychlorinated biphenyls (PCB) waste as defined in accordance with 40 CFR Part 761;
- radioactive waste as defined in Chapter 336; and
- unidentified wastes.

If an incoming load is suspected or confirmed as containing an unauthorized, unknown, hazardous or PCB waste, the material will not be unloaded and the transporter will remove the material from the site. If the site operator becomes aware that hazardous wastes have been inadvertently accepted, he will immediately contain the accepted material by terminating process flow and will return the material to the transporter or generator if practical, or contact a company licensed and permitted to handle and dispose of such materials. The TCEQ will be immediately notified if any prohibited or unauthorized wastes are accidentally accepted. Records of the

notification will be kept in the site operating record and will include the date and time of notification, the individual contacted, and the information reported.

4.1.3 Waste Pre-Approval and Testing

All waste sources must be evaluated by facility staff and pre-approved prior to waste delivery to the facility except grease trap, septic, raw sewage, lift station, chemical toilet and food wastes. Shipments of these wastes are still subject to inspections and must be properly manifested. Pre-approval of these wastes is not deemed necessary because the characteristics of these nonhazardous wastes are well known and the wastes are easily recognizable by staff inspecting the arriving waste.

For waste pre-approval, the waste generator must submit a Liquid Waste Profile Form, waste sample and analytical information consistent with the following, except for the wastes listed in the above paragraph. With the Form, the generator is required to submit accurate descriptions of the waste, all relevant information necessary for proper material characterization and identification of known and suspected hazards. The generator also certifies that the waste is non-hazardous and does not meet the definition of a hazardous waste as outlined in 40 CFR Part 261 Subpart C (characteristic hazardous wastes) and Part 261 Subpart D (listed hazardous wastes). An example of the Form is included on Appendix 3, and all analysis records shall be maintained in the facility operating record for no less than three years.

A waste sample provided by the generator assists the facility in evaluating waste characteristics such as physical appearance, odor, pH, and percent solids. These characteristics are used to compare incoming waste shipments to the wastes originally approved in order to limit the risk of unauthorized wastes arriving at the facility. A waste sample also allows the facility to evaluate the treatability of the waste.

Waste information submitted to the facility, including analytical data and process knowledge, is used in the determination of whether the waste may be hazardous and to support the facility's decision whether it may be appropriately accepted. The parameters for hazardous waste determination include ignitability, corrosivity, reactivity, and toxicity and must be derived from a sample that is representative as defined in 40 CFR 261 -- Appendix 1 or by using an equivalent method. The facility will select constituents requiring analysis based upon the generator-supplied information and any other relevant and available information. Some of the required analyses may

be performed at the facility. An outside laboratory may be contracted for needed analytical testing not performed at the facility.

The Liquid Waste Profile Form information and process knowledge review and verification may occasionally provide sufficient information to make a waste characterization and waste acceptance determination without further analytical data. Examples are lint trap waste from a laundromat without dry cleaning activities or stormwater culvert cleanout water from a site without industrial or chemical handling activity.

Liquid Waste Profile Forms must be renewed at least every two years. Additionally, all changes occurring in the character of the waste (i.e., changes in the process or new analytical results) are to be identified by the generator and disclosed to the facility.

4.1.4 Waste Acceptance Procedures

The procedures for acceptance or rejection of incoming waste streams are as follows.

1. Except for certain wastes as listed in 4.1.3, a Liquid Waste Profile Form must have been submitted and accepted by the facility. The transporter may then deliver waste to the facility for processing.
2. Each arriving load will be observed by facility staff for appearance and odor and tested for pH prior to unloading.
3. The manifest or trip ticket for the incoming material will be collected and its information verified as described in Section 4.3.2.
4. Wastewater that has failed any inspection procedures will be rejected and not allowed to unload at the facility. Any rejected loads will be documented and kept with the manifest records.

4.1.5 Processing Facility Operations Waste Analyses

In accordance with 30 TAC 330.203 (c), analyses for wastes received will be made for benzene, lead, and total petroleum hydrocarbons (TPH). Grit trap wastes will be analyzed annually for BOD, total suspended solids, benzene, lead and TPH. Sampling and analyses conducted to satisfy this regulatory requirement will use EPA-approved methods, with the results maintained in the operating record.

Solids that are disposed at a municipal solid waste landfill will pass the Paint Filter Test, (EPA Method 9095) as described in “Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods” (EPA Publication Number SW-846). These solids will also be tested as sludges, requiring annual sampling by approved EPA methods and analysis for benzene, lead and total petroleum hydrocarbons (TPH). The following standards, set in the MSW regulations, will not be exceeded:

Contaminant	Total Limit	TCLP Limit	Test Method
Benzene	10 mg/kg	0.5 mg/L	EPA 8021B or 5035
Lead	30 mg/kg	1.5 mg/L	EPA6020
TPH	1500 mg/kg	Not Applicable	TX1005 (or app’d alternate)

Any exceedance of test results will be investigated so that waste disposal standards will not be violated. Alternate TPH test methods may be used which better distinguish between petroleum hydrocarbons and food greases and oils. Any other testing required by composting or landfill sites for waste classification will be followed and all records of analysis will be retained on-site for a minimum of three years.

Process wastewater sampling and testing will be conducted at least annually for TPH (EPA 1664A or TX1005); fats, oils, and greases (EPA 1664M or 413.1) and pH (EPA 9045/150.1 or 4500-H-B). Alternate EPA approved methods may be used.

Any wastewater authorizations, performance requirements and sampling results will be placed in the operating record at the site. Sampling records will be maintained for three years.

4.1.6 Waste Storage and Disposal

An ultimate maximum of 400,000 gal/day of liquid waste will be delivered to the facility by independent registered transporters or by trucks affiliated with Wastewater Residuals Management. The waste may be composed of any mixture of the types of wastes authorized for acceptance. Waste will not be accepted from unregistered transporters. The planned maximum

amount of unprocessed waste that will be stored in maximum 20,000 gallon tanks at any time on the site is 120,000 gallons in the six Phase I waste storage tanks, or 180,000 gallons in the nine Phase II waste storage tanks. (See Appendices 4 and 5 for spill containment requirements and possible financial assurance revision if 30,000 gallon tanks and storage in excess of these amounts are used.)

The design capacity of the processing units exceeds the maximum waste acceptance rate for each Phase. The capacity is based on working two shifts with each of the units processing 2 batches daily. Each batch processes about 25,000 gallons of waste. Thus, the daily total processing capacity is 300,000 gal/day for Phase I (6 units x 2 batches x 25,000 gal/batch) and 450,000 gallons for Phase II (9 units x 2 batches x 25,000 gal/batch).

Typically, the dewatered material will be on-site no more than 48 hours, except over weekends, when it may be onsite for 72 hours. Post-processing holding time will not exceed 7 days unless the material is reprocessed. The solids content of the wastes being processed will vary from 1% to over 25%, depending on waste type and source. An average 13% solids content can be conservatively assumed for an estimate of the maximum amount of solids which may be produced daily from a mixed waste stream. Assuming an average solids content of 13%, the quantity of processed waste solids expected at maximum production is 257 cy/day (average wastes processed = 400,000 gallon/day → 53,475 cf/day x 0.13 typical avg. solids content = 6950 cf/day = 257 cy/day).

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

Any loaded solids containers will be covered. The solids will be taken to an authorized compost facility, processor or one of the permitted MSW landfills located in the Houston area. Grit trap waste will either be handled separately from other wastes, or it will be tracked through the process so that recovered grit trap solids or liquids will not be transported to a compost facility.

4.1.7 Contaminated Water Management, 330.207

All liquids resulting from the operation of the facility will be disposed of in a manner that will not cause surface water or groundwater pollution. The operator will provide for authorized disposal of wastewaters resulting from managing the waste or from cleaning and washing by discharge to the adjacent WWTP, City sewer or transport to a wastewater facility. Discharge to a septic system is prohibited.

Wastewaters discharged to the adjacent WWTP, City sewer or transported to a wastewater facility will not:

1. interfere with or pass-through the treatment facility processes or operations,

2. interfere with or pass-through its sludge processes, use, or disposal, or

3. otherwise be inconsistent with the prohibited discharge standards, including 40 Code of Federal Regulations Part 403, General Pretreatment Regulations for Existing and New Source Pollution.

Any requirements set by the receiving wastewater facility will be met.

Rainwater contact with municipal solid waste will be controlled. All loading/unloading and processing areas will be concrete surfaces and all areas containing wastes have the capacity to contain spills. Drains, collection sumps, pumps and/or vacuum trucks will be provided to recover contaminated water for proper disposal. Contaminated water will not be discharged without specific written authorization.

4.2 STORAGE CONTAINER REQUIREMENTS 330.209 AND 330.211

All tanks and containers storing wastes and recovered material at the site will be enclosed or covered so that they do not constitute a fire, safety or health hazard or provide food or harborage for animals and vectors. Reusable waste containers will be maintained in a clean condition so that they do not constitute a nuisance and to retard the presence of vectors. If a vector problem develops, a pest control service will be consulted and actions taken to eliminate the problem.

Control of odors, vectors, and windblown waste from the storage area will be maintained by keeping the waste containers covered and immediately cleaning up any spills on the concrete surfaces.

Storage containers will be provided of an adequate size and strength, and in sufficient numbers, to contain all solid waste that the facility generates in the period between collections.

Non-reusable containers must be of suitable strength to minimize animal scavenging or rupturing during collection operations. Containers to be emptied manually must be capable of being serviced without the collector coming into physical contact with the solid waste, and containers to be mechanically handled must be designed to prevent spillage or leakage during storage, handling and transport.

4.3 RECORDKEEPING AND REPORTING 330.219

A copy of the permit, the approved copy of the permit application, the approved site operating plan, and any other required plan and documents will be maintained at the facility or offsite at the main company office at all times. After completion of new construction, an as-built set of construction plans and specifications will be maintained at the facility. These documents will be considered as part of the operating record for the facility.

4.3.1 Operating Record

The following documents and records will be promptly recorded and retained either on site or offsite at the main company office (currently 12141 Wickchester Ln. Suite 325, Houston, TX 77079) by the owner/operator in the facility's operating record during the life of the facility including the post-closure care period:

Operating Record

Records To Be Maintained	**Rule Citation**
1. Application-related documents as described above	§330.219(a)
2. All location-restriction demonstrations.	§330.219(b)(1)

Records To Be Maintained	Rule Citation
3. Inspection records and training procedures.	§330.219(b)(2)
4. Closure plans and any monitoring, testing, or analytical data relating to closure requirements.	§330.219(b)(3)
5. All cost estimates and financial assurance documentation relating to financial assurance for closure.	§330.219(b)(4)
6. Copies of all correspondence and responses relating to the operation of the facility, modifications to the permit, approvals, and other matters pertaining to technical assistance.	§330.219(b)(5)
7. All documents, manifests, shipping documents, trip tickets, etc., involving special waste. Waste profile and analysis records are kept for three years.	§330.219(b)(6)
8. Any other document(s) as specified by the approved permit or by the executive director.	§330.219(b)(7)
9. Trip tickets (manifests) of §312.141 wastes received (kept for five years as described in Section 4.3.2, "Manifest Retention"); Other waste manifests, Profile Forms and analysis records (kept three years).	§330.219(b)(8)
10. Alternative schedules and notification requirements, if approved by the executive director.	§330.219(g)
11. Personnel operator licenses	§330.125(f)

The information contained in the operating record will be made available upon request for inspection by the TCEQ.

4.3.2 Manifest Retention 330.219(b)(8) and 312.145

Trip tickets and/or manifests will be retained on-site as required by 30 TAC §312.145 for sewage sludge, waste treatment sludge, domestic septage, chemical toilet waste, grit trap waste, or grease trap waste. Trip tickets are divided into five parts and records of trip tickets are maintained as follows: One part of the trip ticket will have the generator and transporter information

completed and is given to the generator at the time of waste pickup. The remaining four parts of the trip ticket will have all required information completely filled out and signed by the appropriate party before distribution of the trip ticket. One part of the trip ticket will be kept by WRM in its records; one part will be returned by the transporter to the person who generated the wastes within 15 days after the waste is received at the processing facility; one part will go to the transporter, who will retain a copy of all trip tickets showing the collection and disposition of waste; and finally, one part of the trip ticket must to go to the local authority, if needed. Paper or electronic copies of trip tickets will be retained for five years replacement redlinefor §312.145 wastes and three years for other wastes and be readily available for review by commission's staff or be submitted to the executive director upon request.

The wastes received at the facility shall be manifested. The manifests must have information required by TCEQ. The following information is expected:

Generator Information:

1. Name of the waste generator;

2. Physical address of the waste generator;

3. Telephone number of responsible party; and

4. Signature (with date) of waste generator.

Waste Profile:

1. Type of waste generated and removed;

2. Size of waste vessel;

3. Volume of waste removed; and

4. Hazardous Waste Disclaimer; requires the generator to certify that the waste does not meet the definition of a hazardous waste as outlined in 40 Code of Federal Regulation (CFR) Part 261 Subpart C and Part 261 Subpart D.

Transporter Information:

1. Name of the transporter;

2. Telephone number of the transporter;

3. TCEQ registration of the transporter;

4. Vehicle or disposal permit number of the transporter; and

5. Signature of the transporter (with date).

Processor Information:

1. Disposal or processing site;

2. Address of disposal or processing site;

3. Permit number of disposal or processing site; and

4. Signature (and date) of the site operator.

The material will be rejected if:

- Discrepancies on the manifest are found;

- visual inspection, odor and if necessary, subsequent analysis of the sample indicates a prohibited waste; or

- the waste can't be identified.

The facility must note any significant discrepancies on each copy of the trip ticket. Trip ticket discrepancies are differences between the type of waste designated on the trip ticket and the quantity or type of waste a facility actually received. Significant discrepancies in type are obvious differences that can be discovered by routine inspection. Upon discovering a significant discrepancy, the transporter must attempt to reconcile the discrepancy with the waste generator or WRM (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after delivering the waste, the transporter must immediately submit to the executive director a letter describing the discrepancy and attempts to reconcile it, and a copy of the trip ticket.

The facility will not accept waste from a transporter that is not registered.

4.3.3 Report Signatures 330.219(c)

The owner/operator or duly authorized representative as defined in 305.44(a) or 330.219(c) will sign all reports and other information requested by the Executive Director and the person signing a report will make the following certification, as required by 305.44(b):

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

If an authorization is no longer accurate because of a change in individual or position, a new authorization satisfying the requirements of 330.219(c) must be submitted to the executive director prior to, or together with, any reports, information, or applications to be signed by an authorized representative.

4.4 FIRE PROTECTION PLAN, 330.221

The local fire department will be informed of the location and processes used at the facility. Staff will be available to guide emergency personnel through the facility to help familiarize them with the process and system. The facility and its fire protection plan will comply with local fire codes. An adequate supply of water for firefighting is available from a fire hydrant located at Wallisville Road near the driveway to the facility. Pressurized water is also available at the facility from the onsite water well and water pipes from the WWTP containing treated and chlorinated water. In an emergency, the City of Houston Fire Department can be reached by dialing 911. Neighboring business phones and mobile phones can be used in the event of phone system failure. Type ABC hand-held fire extinguishers will be located at the office and near the truck unloading area and will be readily available for use on trash, flammable liquid or electrical fires.

All facility personnel will be trained in the contents of the fire protection plan, fire extinguisher use, and in communications and response in the event of a grease, grass, structural or equipment fire.

The liquid waste has sufficient water content to prevent an ignition hazard. During waste processing, generation of heat or flammable vapors is not significant. Never use water on a grease fire; use a Type ABC fire extinguisher.

Other measures and precautions to be followed at the facility to minimize the occurrence of fires include:

- Clean up any grease, oil and chemical spills immediately, and keep work areas free of any extra paper, boxes or rags.

- Don't string electrical cords across floors or walkways where they can be stepped on and frayed, exposing the facility up to the possibility of an electrical fire.

- De-energize machinery before any maintenance work is started and thoroughly inspect that equipment before the power is turned back on.

- Use caution when using tools that cause friction or sparks near flammable materials.

Procedures in the Event of a Fire

Staff will take the following steps if a fire is discovered:

- Contact the Local Fire Department by calling 911.

- Alert other facility personnel.

- Assess extent of fire, possibilities for the fire to spread, and alternatives for extinguishing the fire. If it appears that the fire can be safely fought with available fire fighting devices until arrival of the Local Fire Department, attempt to contain or extinguish the fire.

- It is not advisable to attempt to fight the fire alone. Personal protective equipment could be needed. Be familiar with the use and limitations of firefighting equipment available onsite.

- Upon arrival of Local Fire Department personnel, direct them to the fire and provide assistance as appropriate.

4.5 SITE ACCESS AND CONTROL 330.223 AND 330.237

Public access will be controlled to minimize unauthorized vehicular traffic, unauthorized and illegal dumping, and public exposure to hazards associated with waste management. An attendant will be on-site during operating hours. Access to the site is controlled by a minimum six foot high chain link fence and an automatic vehicular gate as shown on Figure 9A. The vehicular gate will be locked or disabled at all times when the site is closed and not attended.

Safe on-site access for commercial vehicles will be provided with a two way driveway approximately 24 ft wide and adequate turning radii off Wallisville Road. The facility provides vehicle parking for equipment, employees and visitors. Driveways and all areas used by vehicles will have an all-weather concrete or aggregate surface (generally crushed concrete). Vehicles typically will navigate the facility counter-clockwise through the on-site facility driveways. Driveways will accommodate 2-way commercial vehicle operation.

Facility traffic will travel on the all-weather access surfaces and should not track mud onto area roadways. If mud accumulates on the road from the site, it will be removed by the end of the day. Driveways will be maintained as necessary by grading or adding all-weather material to minimize depressions, ruts and potholes.

Dust generation is not anticipated due to slow truck speeds. However, in the event that dust control is needed, the driveway can be periodically sprayed with water. Care should be taken when applying water for dust control so that mud tracking problems do not occur on the public roadway that accesses the facility.

4.6 UNLOADING OF WASTES AND INSPECTION OF INCOMING LOADS 330.225

To help ensure that only authorized liquid waste is received, the facility has adopted the following procedures for receiving and unloading wastes:

- All customers using the facility will be informed that this facility accepts municipal or Class 2 or Class 3 nonhazardous industrial wastes comprised of grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; drinking water treatment and

wastewater treatment sludge; food waste; stormwater and groundwater collection/drainage system cleanout wastes, landfill and compost leachate and gas collection condensate, lint and oil/water separator waste; and other municipal and Class 2 or Class 3 nonhazardous industrial waste liquids and sludges. Receipt of any other waste could contaminate the end product and cannot be unloaded. Drivers will affirm that the incoming material is only a waste authorized to be received, and they will also be informed that laboratory tests may be conducted on the waste and their customers could be interviewed to confirm information contained on the manifest.

- A trained facility employee will be responsible for accepting and directing the transport of all wastes and being at the unloading area each time that waste is unloaded. The employee will observe all loads of material coming into the facility and inspect it for odor and appearance. If the load is characteristic of an authorized waste and appears to conform to the waste designated on the manifest, the vehicle will be directed to the appropriate area for unloading. Drivers may unload waste without a facility employee present if that driver has been properly trained by the facility operator regarding acceptable wastes, recordkeeping, waste storage operation and the Site Operating Plan.

- If the waste appears to be unrepresentative of the source designated on the manifest, or if the contents are determined to be incompatible with plant operations, the load will be refused and directed to an alternate site for disposal. The observation and analysis results will be documented and kept in the site records.

- Appropriate signs and all-weather access routes to the unloading area will be used to indicate where trucks can unload.

- The unloading or processing of any hazardous waste or prohibited material at this facility shall not be allowed. Any hazardous waste or prohibited material shall be returned promptly to the transporter or generator of the material.

- The unloading of liquid waste in unauthorized areas is prohibited. Any wastes deposited in unauthorized areas will be removed immediately and disposed of properly. The unloading of the waste will be confined to as small an area as practical. Liquid waste may only be unloaded at the truck unloading and processing slabs which contain spill containment.

- When grit trap waste is received, it will either be handled separately from other wastes, or it will be tracked through the process so that recovered grit trap solids or liquids will not be transported to a compost facility.

4.7 SPILL PREVENTION AND CONTROL 330.227

If a spill occurs in areas other than the unloading areas, the necessary steps that will be taken by facility personnel to control and contain the spill may include:

- Begin cleanup immediately. Confine it to a small area by using industrial absorbents or temporary containment devices;

- Recover the spill by a vacuum truck or pump it into an available facility tank as soon as possible;

- Contact a cleanup contractor if the spill is unmanageable;

- Never wash leaks, spills or used cleanup materials onto nearby ditches and water courses; and

- Dispose of all used cleanup materials in a garbage can or the municipal landfill.

Processing of material will be conducted only by trained facility personnel. Personnel will periodically inspect all connections and piping during facility operations. If leakage is detected, processing of waste material will be stopped and the leak will be repaired. Spilled material will be collected or stabilized with absorbent material. A supply of industrial absorbent and deodorant or bleach will be maintained on site.

4.8 OPERATING HOURS 330.229

Waste acceptance and processing operations, including transporting materials and heavy equipment operation, may occur 24-hours a day, 7-days a week. These waste acceptance and processing hours are needed because this facility serves food service businesses and restaurants, which are typically open seven days a week and late into the evenings. Grease trap pumping must occur at some facilities over the weekend or after normal operating hours, and this facility will provide a location for receipt of that waste. Acceptance of waste at theses expanded

hours may require handling, processing, and transport of materials using heavy equipment at all hours. This allows the facility to operate effectively without upset and interruption of waste management services.

4.9 SITE SIGN 330.231

The facility sign will be conspicuously displayed at all entrances to the facility through which wastes are received. It will measure at least four feet by four feet with letters at least three inches in height stating;

(a) site name and type;

(b) the actual waste acceptance hours and days;

(c) the permit number; and

(d) facility rules.

If waste will also be accepted by appointment during after-hours, it will be indicated on the site sign. A 24-hour emergency contact number and 911 emergency response numbers are also recommended for the sign. The facility sign will be readable from the facility entrance and will contain up-to-date information.

4.10 CONTROL OF WINDBLOWN MATERIAL AND LITTER 330.233

Liquid waste unloading and processing do not involve materials that are susceptible to becoming windblown litter, so special litter control practices would not be suitable or effective at the site. All driveways and other areas within the facility boundary, however, will be inspected daily for litter and other debris and if present, will be collected to minimize unhealthy, unsafe or unsightly conditions.

4.11 MATERIALS ALONG THE ROUTE TO THE SITE AND CONTROL OF ACCIDENTAL SPILLAGE 330.235

Since the facility receives liquid wastes in enclosed tanker trucks, spills of waste material along access routes aren't expected to occur, and if it occurs, it should be insignificant. Steps will be taken by the facility personnel in order to help ensure that trucks bringing waste to the site are properly secured in order to prevent any spillage. This includes:

- checking the valves are in the correct position before loading, unloading, or moving the vehicle;

- informing truck drivers about leaks observed in truck valves, hoses or pump. Also, recommending that discharge ports be equipped with a quick connect end cap, to help prevent leakage from the valve.

Each manifested load will be checked for completeness. Any violators whose manifests do not match up will be reported to the TCEQ and to proper law officials. These records will be kept on-site for at least three years. Roadside inspection for spilled liquids manifested to the site and cleanup of spilled wastes are typically not desired by TxDOT or the City because potential traffic disturbance by such actions outweigh the potential benefits. Roadside cleanup, however, will be conducted if requested by TxDOT or the City.

4.12 EQUIPMENT INSPECTION AND CONTINGENCY PLANS FOR OVERLOADING AND BREAKDOWN 330.241

Facility equipment, containment structures, and access control fencing will be inspected at least monthly for damage and improper operation. Maintenance and repairs will be performed when needed.

The design capacity of the facility will never be exceeded during operation. If the facility receives waste quantities that cannot be processed within a time frame to prevent the creation of odors, insect breeding or vector harboring, additional waste will not be received until the problem conditions are abated. The maximum storage time for unprocessed waste is 72 hours.

The maximum number, size, type, and function of the equipment to be utilized at the facility based on the estimated waste acceptance rate and other operational requirements are listed in Section 3.1.2 of this report. If a major mechanical breakdown or a significant work stoppage occurs which causes the waste storage tanks to become entirely filled, no additional material will be accepted. If there is an extended breakdown that would cause the facility to become inoperable for longer than 24 hours and if this delay would be predicted to cause unprocessed waste to stay on site for more than 72 hours, all the incoming material will be diverted to another approved facility.

In the event that a processing unit is inoperable and a replacement or duplicate unit is not available, material in excess of the amount capable of being processed by equipment on hand will not be accepted. Incoming loads which cannot be processed will be routed to another facility authorized by TCEQ.

If the units are operable but the transfer pump, processing equipment or the floor drainage system is inoperable, material may be received if storage capacity is available. If there is an extended breakdown, all the incoming material will be diverted to another approved facility. For breakdowns interrupting processing for longer than 72 hours, unprocessed waste can be processed by a mobile processor or transported to other liquid processing or solidification facilities.

4.13 SANITATION AND PERIODIC CLEANING 330.243

All working surfaces that come into contact with wastes shall be washed down on a weekly basis, generally at the completion of processing. If continual operations are conducted, exposed working surfaces that come in contact with waste material will be washed down at least two times per week. Wash waters used to clean tanks and tankers will be processed with waste materials or pumped to the WWTP. Wash waters shall not be allowed to accumulate on site without proper treatment to prevent the creation of odors or an attraction to vectors. All wash waters shall be collected and disposed of in an authorized manner.

4.14 VENTILATION AND AIR POLLUTION CONTROL 330.245

The facility will not cause or contribute to air pollution as defined in the Texas Clean Air Act. All in-plant driveways and work areas will be compacted, watered and cleaned as necessary to obtain maximum control of dust emissions. Vehicular speeds on non-paved areas will not be allowed to exceed 10 miles per hour.

All liquid and solid waste will be stored in odor retaining containers and vessels. Liquids will be pumped from the unloading pits into the storage tanks without exposure to the air. The storage tanks are enclosed tanks. Other odor controls are described in Section 3.1.2.2.

A deodorant such as a biological deodorant or bleach will be at the site at all times to treat accidental spills of waste.

The facility will control any ponded water onsite so that objectionable odors can be dealt with if they occur. Any ponded water will either be pumped dry or swept by a squeegee towards the drains. If necessary, a deodorant will be used. If nuisance odors are found to be passing the facility boundary, the facility operator may be required to suspend operations until the nuisance is abated.

All of the operations at the facility are covered by one of the following permits by rule:

- 30 TAC §106.472 (organic and inorganic liquid loading and unloading for tank trucks, drums; storage containers, reservoirs, tanks); and
- 30 TAC §106.532 (water and wastewater treatment units).

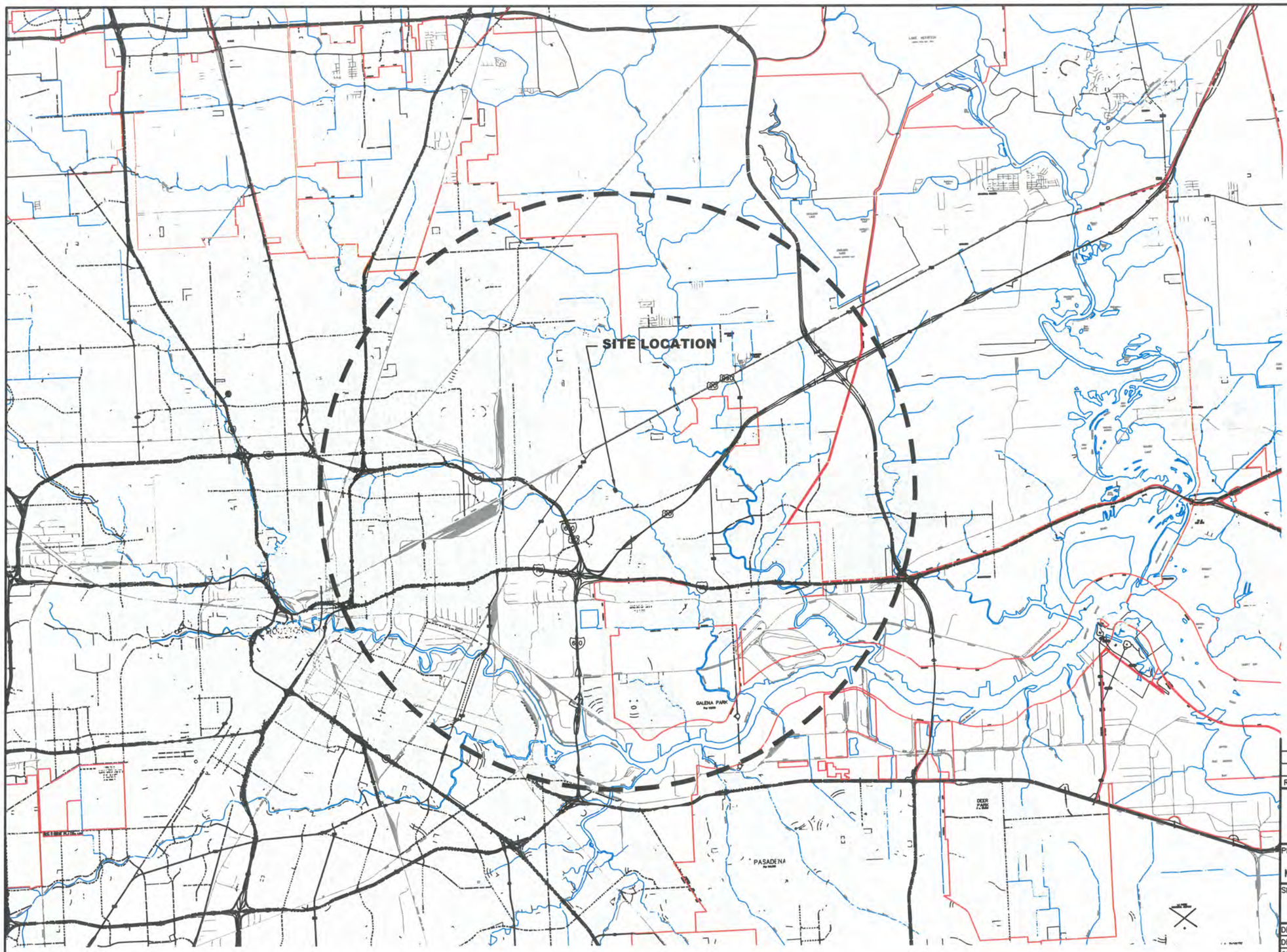
Application of the permits by rule have been coordinated with the TCEQ Air Permits Division as documented in Appendix 6. No further air quality registration with TCEQ is required.

As required under 30 TAC §101.201 - Emissions Event Reporting and Recordkeeping Requirements, the facility will promptly notify the TCEQ and local air pollution control programs of any emissions event that in any 24-hour period, results in an unauthorized emission from any emissions point equal to or in excess of the reportable quantity as defined in 30 TAC §101.1(89) (Reportable event). For emissions events that are not reportable, records will be maintained as required under 30 TAC §201(b)(2).

30 TAC 101.1(28) defines an emissions event as "Any upset event or unscheduled maintenance, startup, or shutdown activity, from a common cause that results in unauthorized emissions of air contaminants from one or more emissions points at a regulated entity". Emissions of air contaminants from the facility during normal operations are negligible and are permitted by rule via 30 TAC 106.532.

The facility does not anticipate any scheduled maintenance or startup and shutdown activity that will cause emissions in excess of the reportable quantity of an individual air contaminant. All equipment will be maintained in good operating condition and if any planned maintenance, start-up, or shutdown are foreseen that may cause excessive emissions, the TCEQ will be notified at least 10 days in advance (or soon as practical) per the requirements of 30 TAC 101.211 - Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping requirements.

FIGURES



NOTE:
1. THERE ARE NO AIRPORTS WITHIN 6 MILES OF THE FACILITY.
(VERIFIED 1/7/18: GEORGE BUSH INTERCONTINENTAL AIRPORT = 14.4 MILES, WILLIAM P. HOBBY AIRPORT = 10.6 MILES.

2 1 0 2
(SCALE IN MILES)

LEGEND
- 6-MILE RADIUS
- HIGHWAY
- CITY LIMITS

STATE OF TEXAS
J. BRIAN DUDLEY
59831
LICENSED
PROFESSIONAL ENGINEER
2/9/21

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BASE MAP SOURCE:
TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRIS)
TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT)
HARRIS COUNTY, MAY 2002

REV.	DATE	DESCRIPTION	DR BY	APP BY

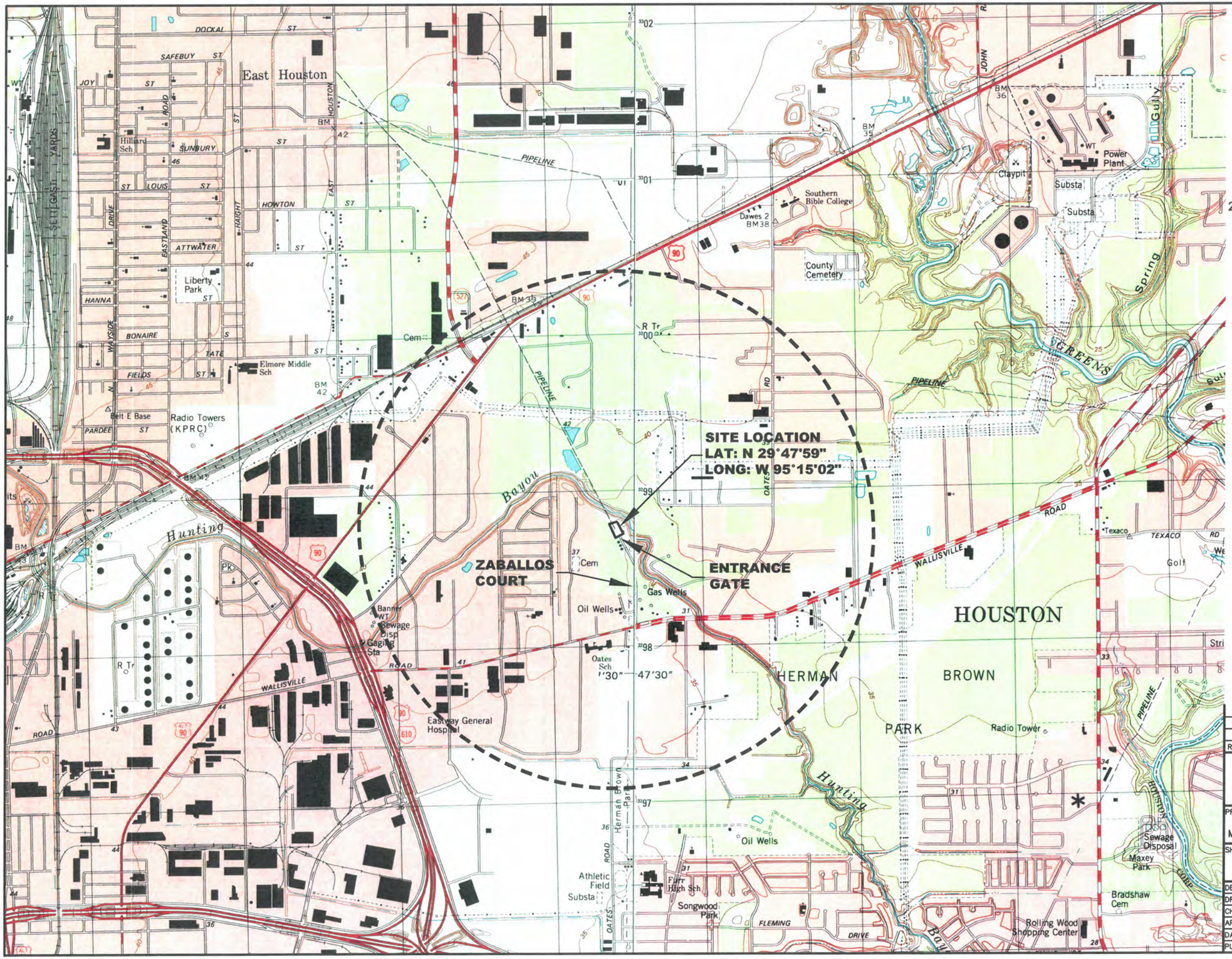
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
VICINITY MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043008
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 1
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043008 Fig 1 Vicinity Map.dwg, 2/9/2021 11:48:08 AM, 1:1



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J. BRIAN DUDLEY
59831
LICENSED
PROFESSIONAL ENGINEER
2/9/21

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BASE MAP SOURCE:
USGS 7.5 MIN TOPOGRAPHIC
JACINTO CITY QUADRANGLE; 1995
SETTEGAST QUADRANGLE; 1995

REV.	DATE	DESCRIPTION	DR BY	APP BY

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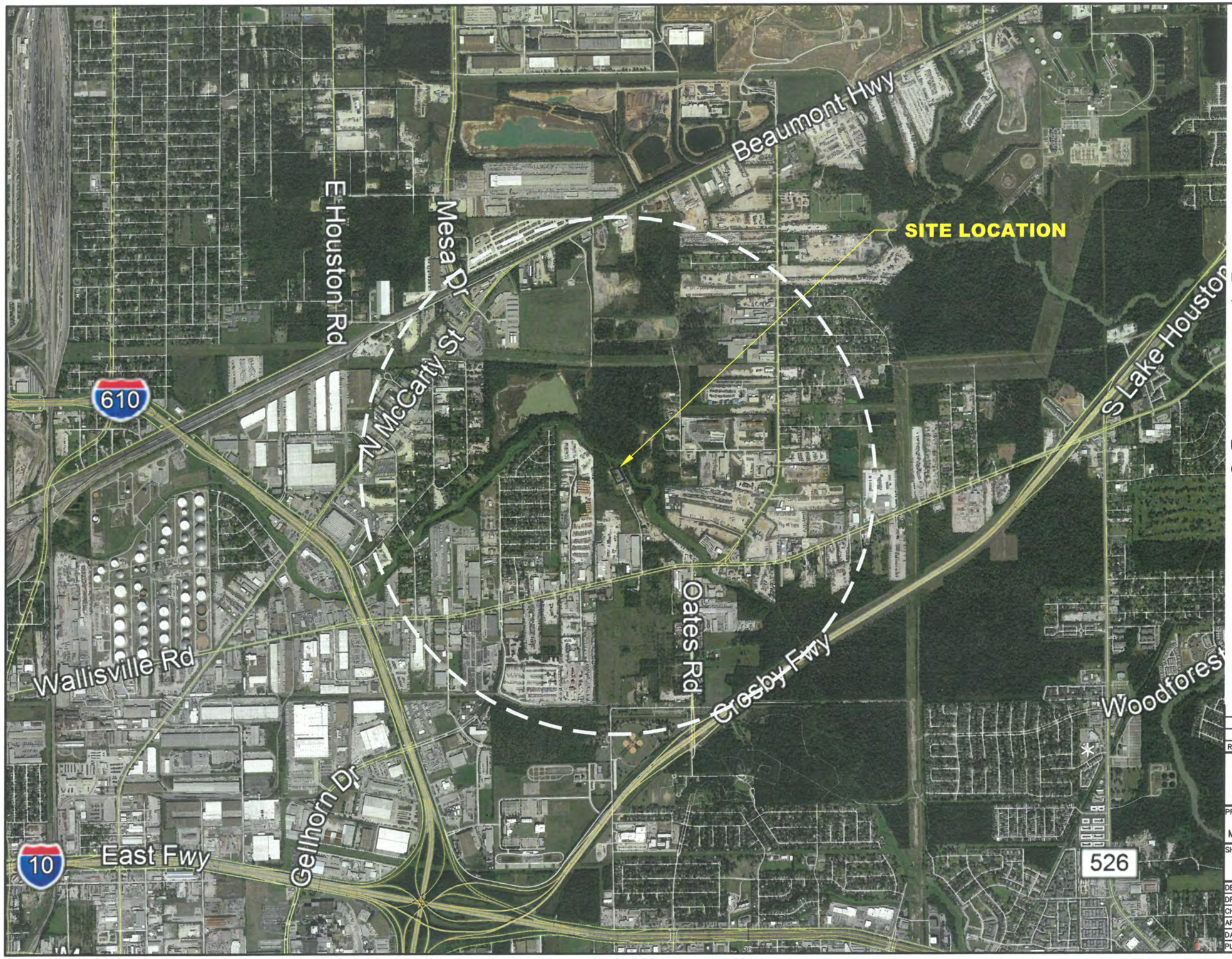
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
SITE LOCATION MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043025
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 2
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043028 Fig 2 Site Location Map.dwg, 2/9/2021 12:12:45 PM, 1:1



2000 1000 0 2000

(SCALE IN FEET)

LEGEND:

FACILITY BOUNDARY

1 MILE RADIUS

MAP SOURCE:

GOOGLE EARTH PRO, 10/28/2017

STATE OF TEXAS
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J. Brian Dudley 2/9/21

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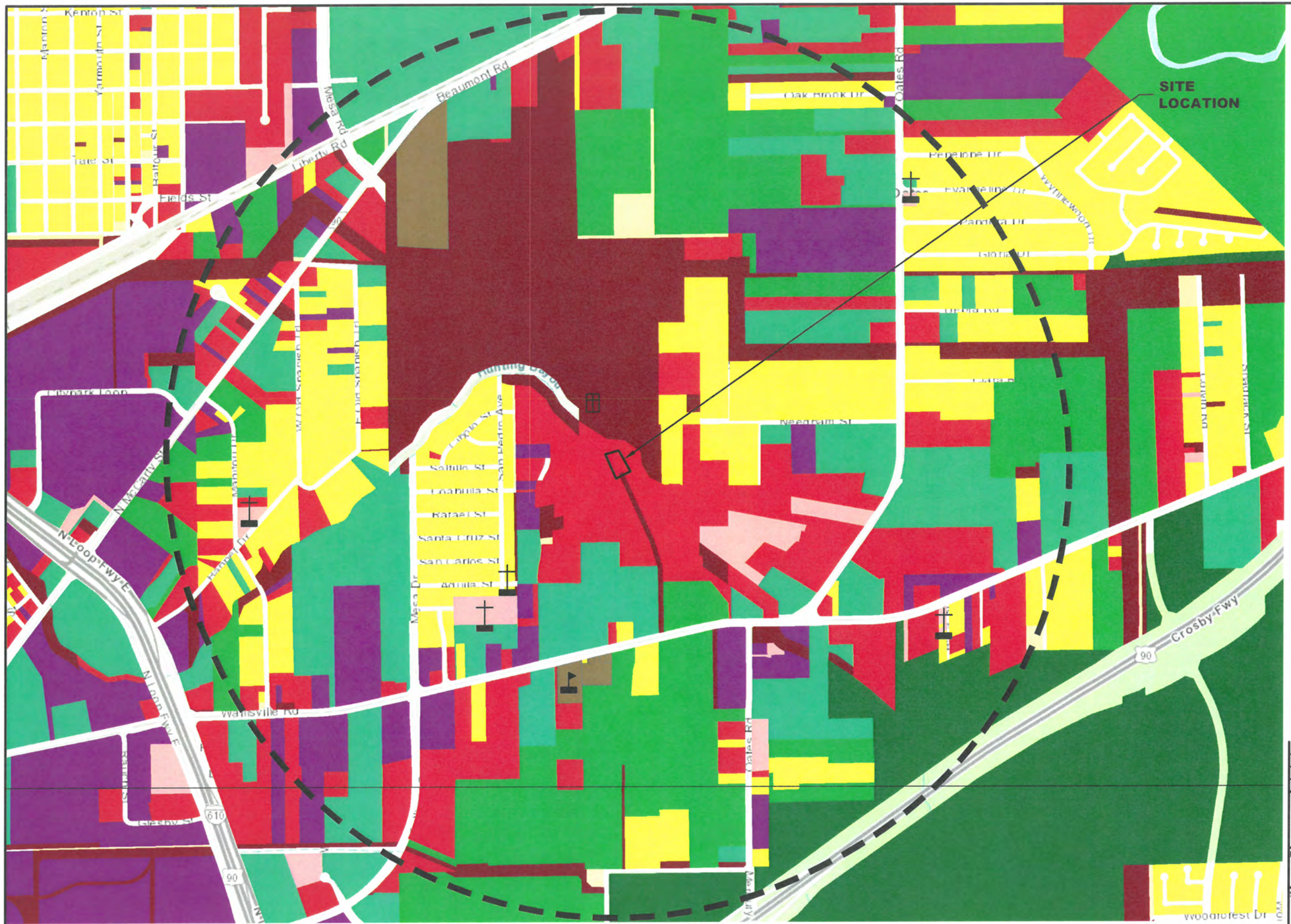
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
AERIAL PHOTOGRAPH

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043011
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 3
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043011 Fig 3 Aerial Photograph.dwg, 2/9/2021 11:50:33 AM, 1:1



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Houston-Galveston Area Council (H-GAC)
City of Houston, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | Houston-Galveston Area Council |

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REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
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812 WEST ELEVENTH 512-474-9097
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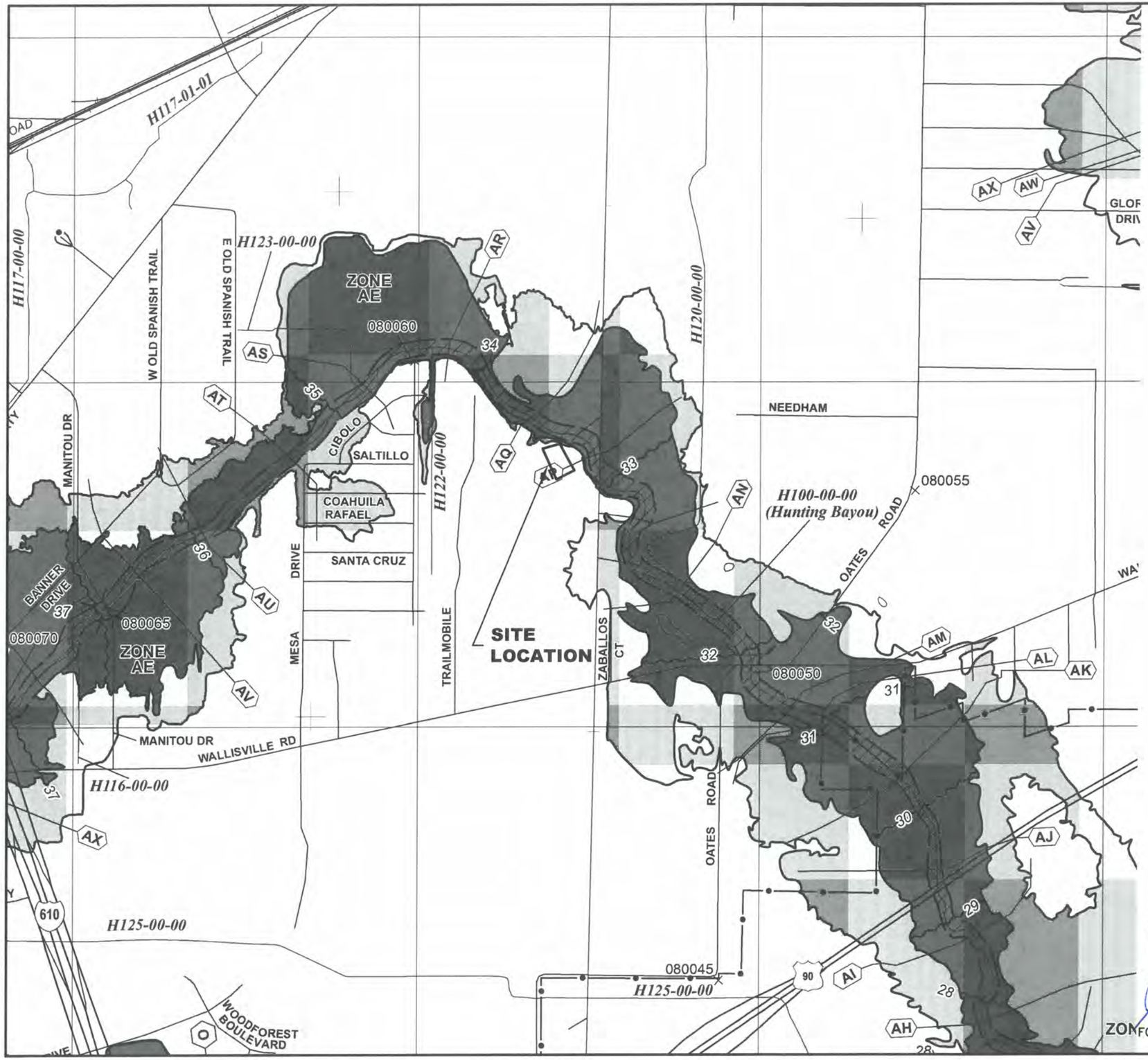
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
LAND USE MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043012
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 4
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043012 Fig 4 Land Use Map.dwg, 2/9/2021 12:20:49 PM, 1:1



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL. 987) — Base Flood Elevation line and value; elevation in feet* / Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- (A) — (A) Cross section Line
- (23) — (23) Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

1000 500 0
(SCALE IN FEET)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 48201C0695M
MAP REVISED JANUARY 6, 2017
Federal Emergency Management Agency

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 48201C0715M
MAP REVISED JANUARY 6, 2017
Federal Emergency Management Agency

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
FLOOD PLAIN MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043017
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 6
PURPOSE: PERMIT AMENDMENT			

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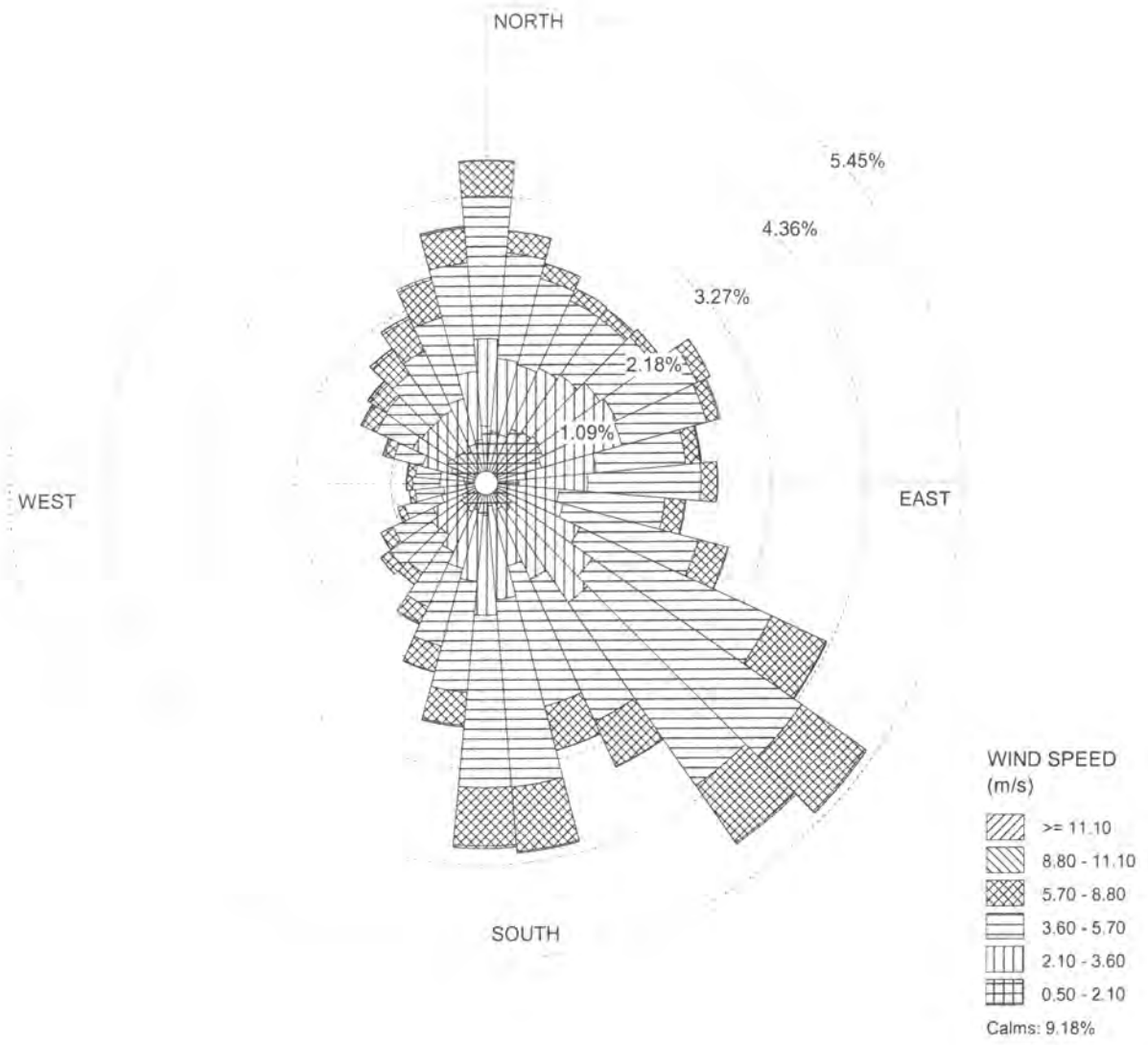
S:\CAD\Waste Water Residual Management\18043\18043017 Fig 6 Flood Plain Map.dwg, 2/9/2021 12:00:14 PM, 1:1

WIND ROSE PLOT:

Station #12960 - HOUSTON/INTERCONTINENTAL ARPT, TX

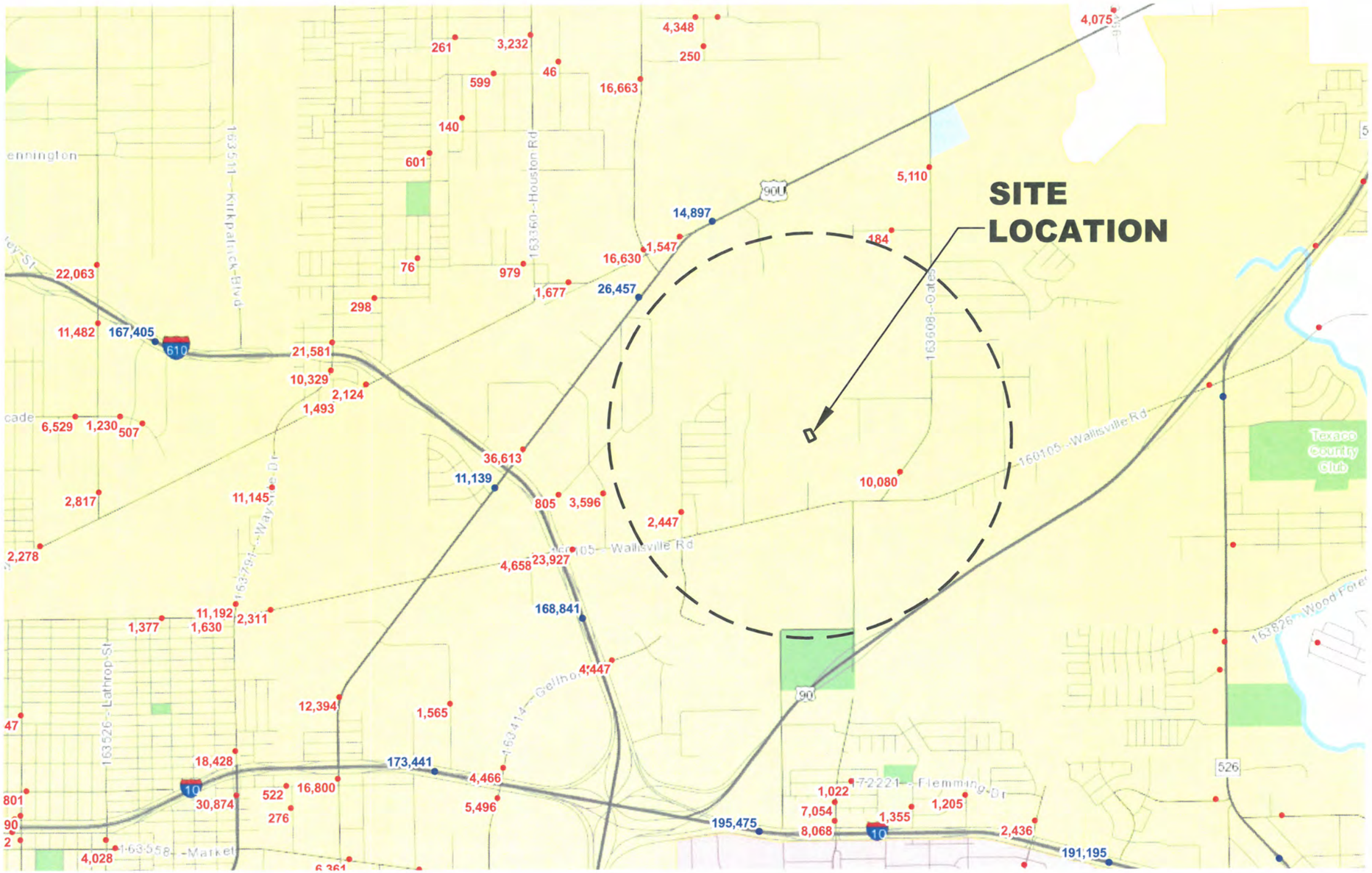
DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/1984 - 00:00** **End Date: 12/31/1992 - 23:00**	COMPANY NAME: **WASTEWATER RESIDUALS MANAGEMENT PERMIT AMENDMENT APPLICATION**	
		PROJECT NO.: **18043.01**	COOK-JOYCE INC.
	CALM WINDS: **9.18%**	TOTAL COUNT: **78912 hrs.**	
	AVG. WIND SPEED: **3.55 m/s**	DATE: **1/10/2019**	FIGURE NO.: 7

WRPLOT View - Lakes Environmental Software



LEGEND:

- AADT Annuals
- AADT Urbans 2016

MAP SOURCE:

TXDOT TPP Traffic Analysis Section

*AADTs include frontage road volumes where frontage roads are present

STATE OF TEXAS
J. BRIAN DUDLEY
59831
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2/9/21

REV.	DATE	DESCRIPTION	DR BY	APP BY

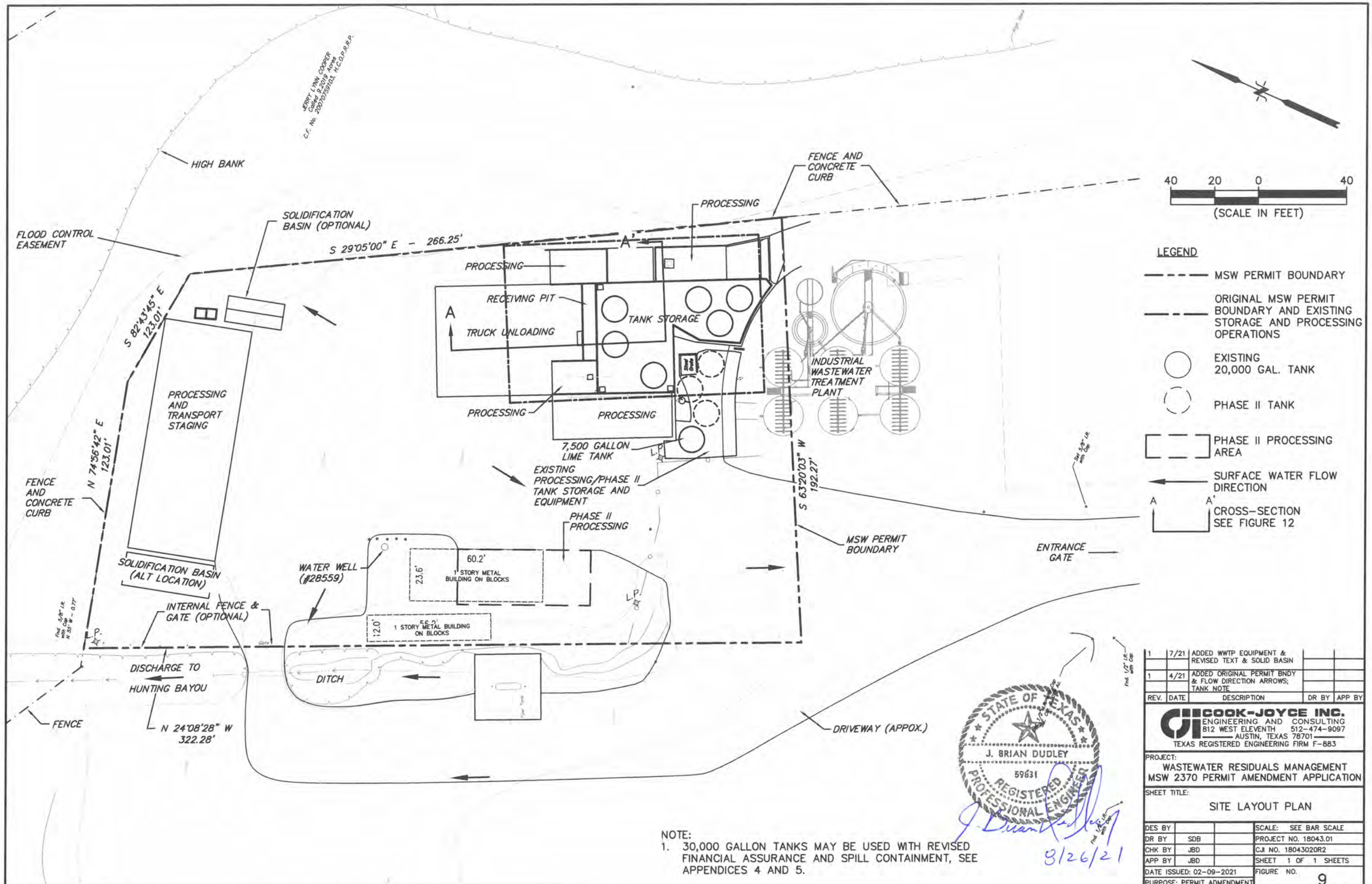
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
TRAFFIC VOLUME MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043016
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 8
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043016 Fig 8 Traffic Volume Map.dwg, 2/9/2021 11:58:56 AM, 1:1



NOTE:
1. 30,000 GALLON TANKS MAY BE USED WITH REVISED FINANCIAL ASSURANCE AND SPILL CONTAINMENT, SEE APPENDICES 4 AND 5.

REV.	DATE	DESCRIPTION	DR BY	APP BY
1	7/21	ADDED WWTP EQUIPMENT & REVISED TEXT & SOLID BASIN		
1	4/21	ADDED ORIGINAL PERMIT BNDY & FLOW DIRECTION ARROWS; TANK NOTE		

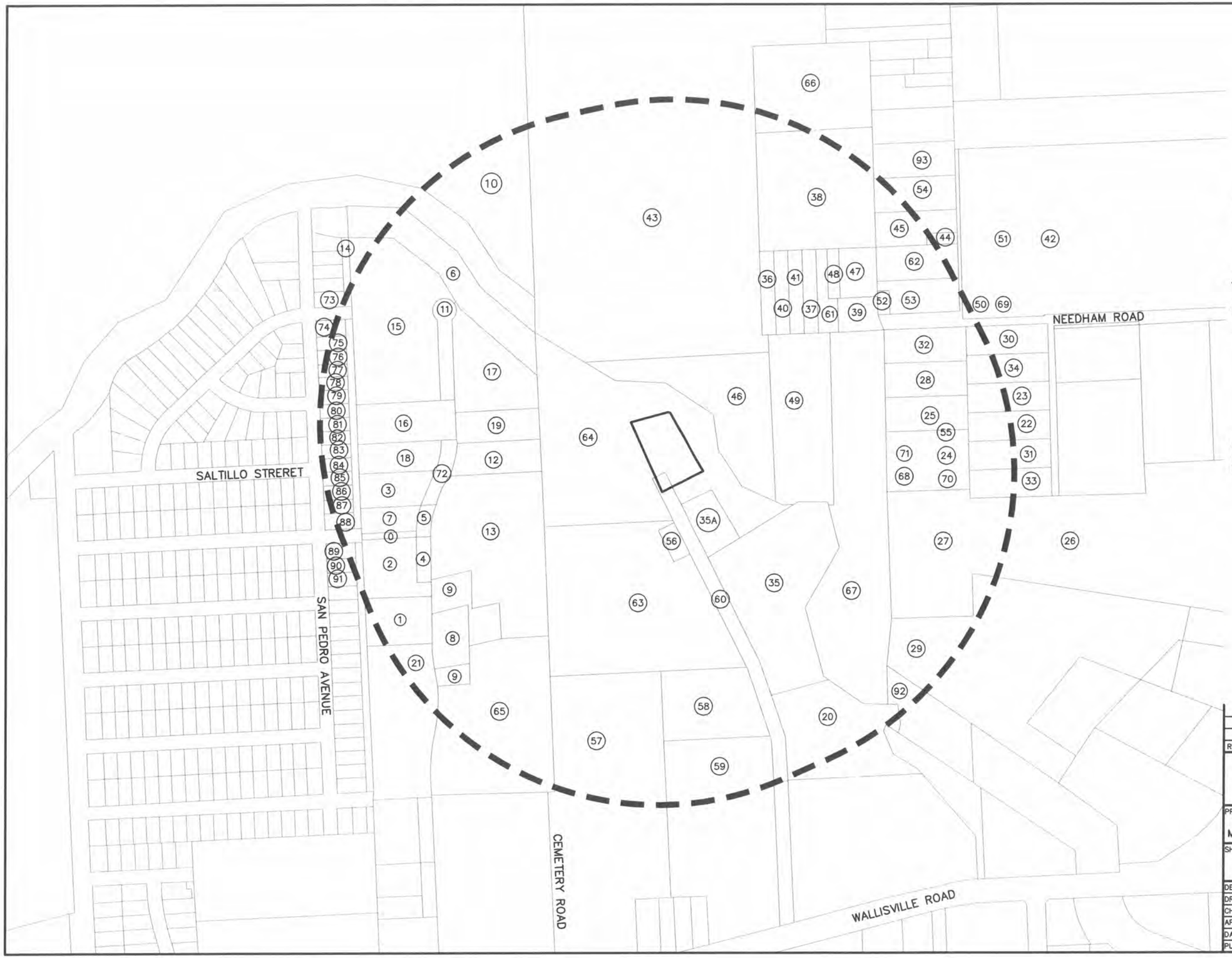
COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
SITE LAYOUT PLAN

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043020R2
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 9
PURPOSE: PERMIT ADMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043020R2 Fig 9 Site Layout Plan.dwg, 8/25/2021 11:18:39 AM



STATE OF TEXAS
J. BRIAN DUDLEY
59831
LICENSED
PROFESSIONAL ENGINEER

FOR PERMITTING PURPOSES ONLY
2/9/21

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
LANDOWNER LOCATION MAP

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043009
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 5
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043009 Fig 5 Landowner Location Map.dwg, 2/9/2021 11:49:29 AM, 1:1

PAVED TRAIL

HIGH BANK

MSW PERMIT AMENDMENT BOUNDARY

50 ft PERMIT BOUNDARY OFFSET

HUNTING BAYOU CENTERLINE

AMENDED MSW OPERATIONS

OFFICES

WASTEWATER RESIDUALS MGT. PROPERTY BOUNDARY

INDUSTRIAL WASTEWATER TREATMENT PLANTS

ENTRY GATE

N

100 50 0 100

(SCALE IN FEET)

LEGEND

- WASTEWATER RESIDUALS MGT. PROPERTY BOUNDARY
- MSW PERMIT AMENDMENT BOUNDARY
- FENCE
- 8' WIDE PAVED TRAIL

STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER

J. Brian Dudley
7/12/21

REV.	DATE	DESCRIPTION	DR BY	APP BY

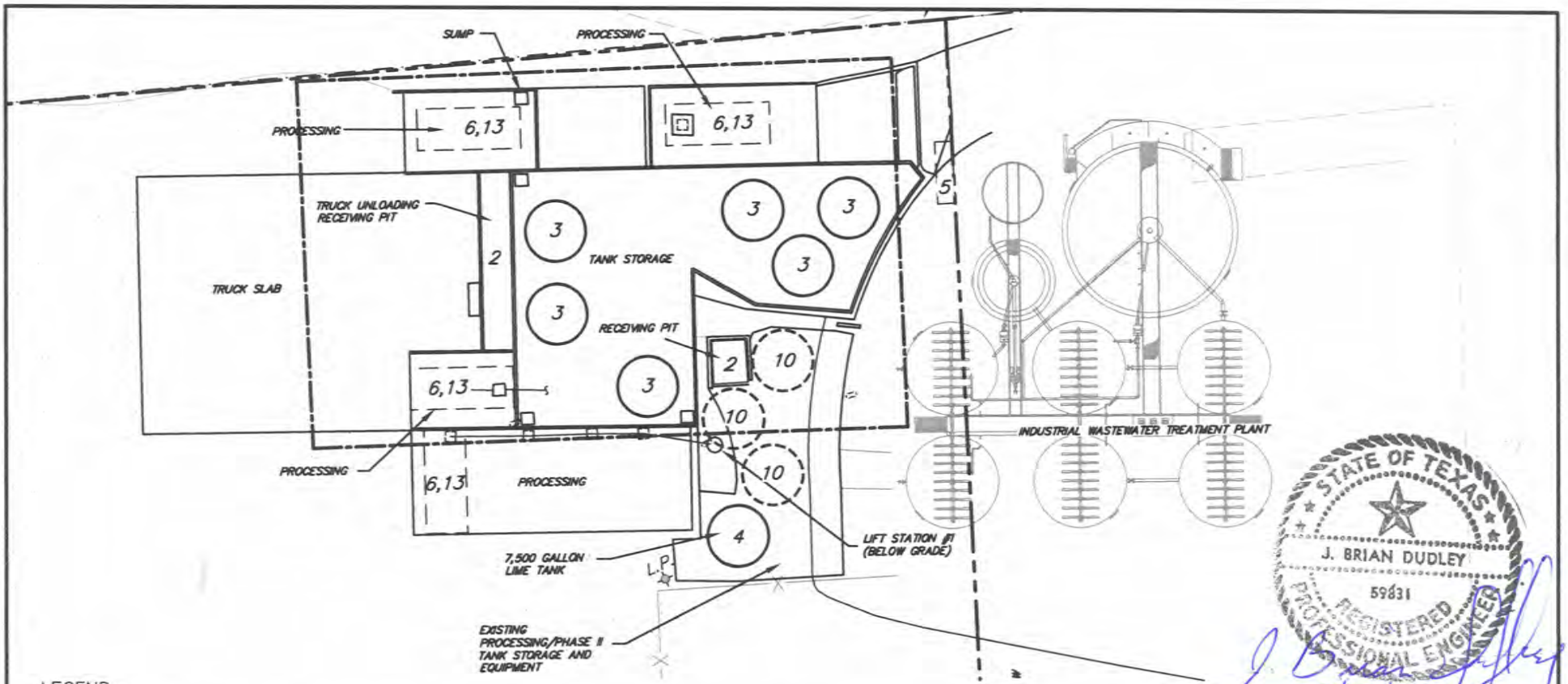
CJI INTERA
9600 GREAT HILLS PLAZA, SUITE 300W
AUSTIN, TEXAS 78759 USA 512-425-2000
TEXAS REGISTERED ENGINEERING FIRM F-4722

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
TCEQ MSW TYPE V PERMIT 2370

SHEET TITLE:
PHASE I LAYOUT AND PROPERTY BOUNDARY

DES BY	–		SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043031
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 07-12-2021			FIGURE NO. 9A
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043031 Fig 9A Phase I Layout and Property Boundary Fig 9A.dwg, 7/12/2021 11:35:20 AM, 1:1



LEGEND

- ORIGINAL PERMIT BOUNDARY
- AMENDED PERMIT BOUNDARY
- SUMPS CONNECTED TO LIFT STATION #1
- EXISTING (PHASE I) TANKS
- PHASE II TANKS
- 3 EQUIPMENT AS LISTED IN SECTION 3.1.2.3

NOTES:

1. POLYMER INJECTION SYSTEMS (ITEMS 5 AND 11) MAY ALSO BE LOCATED AT NORTH PROCESSING SLAB OR PHASE II PROCESSING SLAB (SEE FIG. 9).
2. OPTIONAL PORTABLE AND TRANSPORT EQUIPMENT NOT SHOWN (ITEMS 1, 7, 8, 9, 12, 14).
3. PROCESSING UNITS (ITEMS 6 AND 13) ARE PORTABLE AND LOCATION MAY VARY.

30 0 30

(SCALE IN FEET)

STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER

8/26/21

REV.	DATE	DESCRIPTION	DR BY	APP BY
1	8/21	ADDED SECTION NUMBERS		

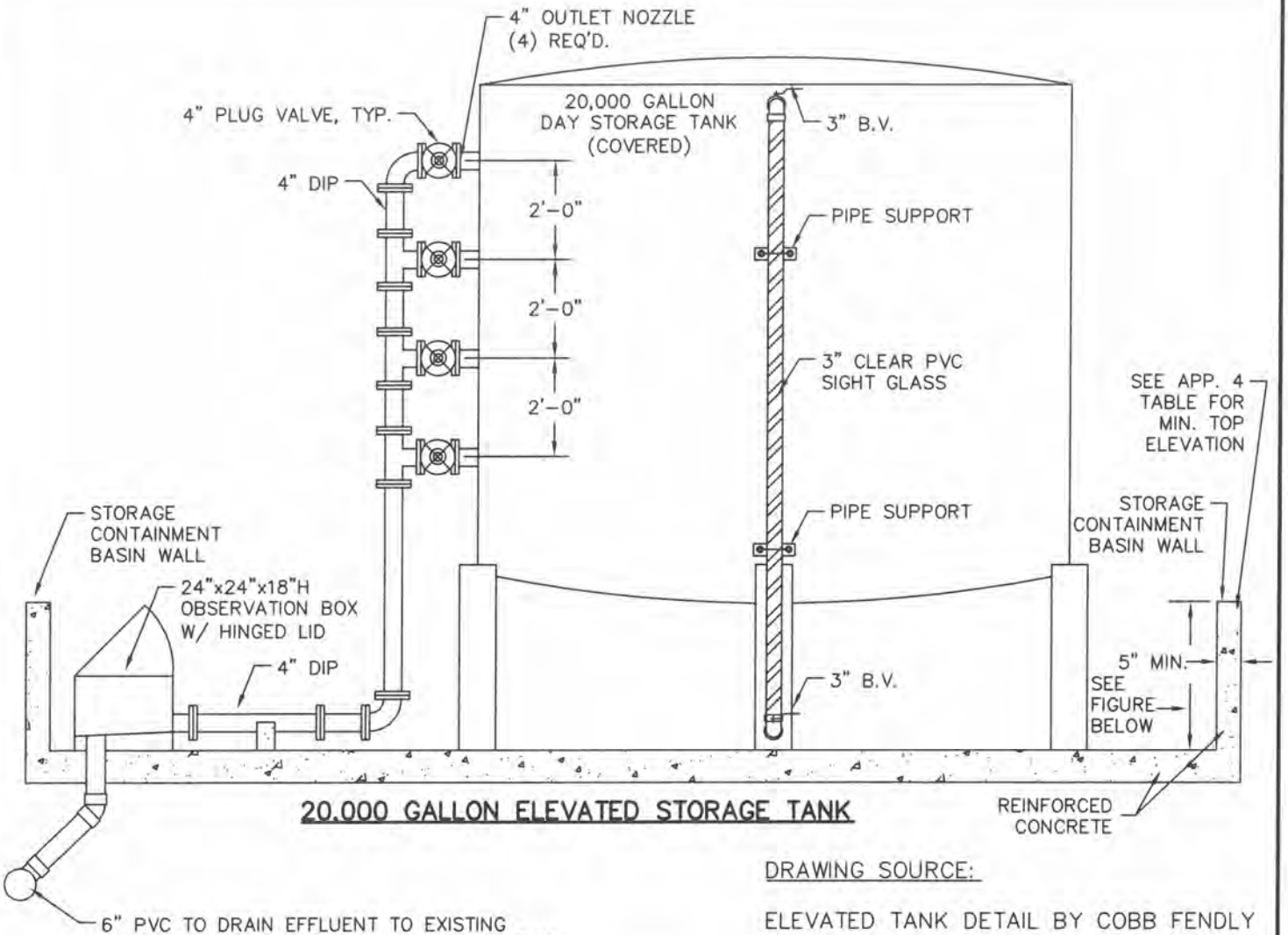
CJI INTERA
9600 GREAT HILLS PLAZA, SUITE 300W
AUSTIN, TEXAS 78759 USA 512-425-2000
TEXAS REGISTERED ENGINEERING FIRM F-4722

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
EQUIPMENT LOCATION PLAN

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043032R1
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 07-12-2021			FIGURE NO. 9B
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043032R1 Fig 9B Equipment Location Plan.dwg, 8/25/2021 11:19:20 AM

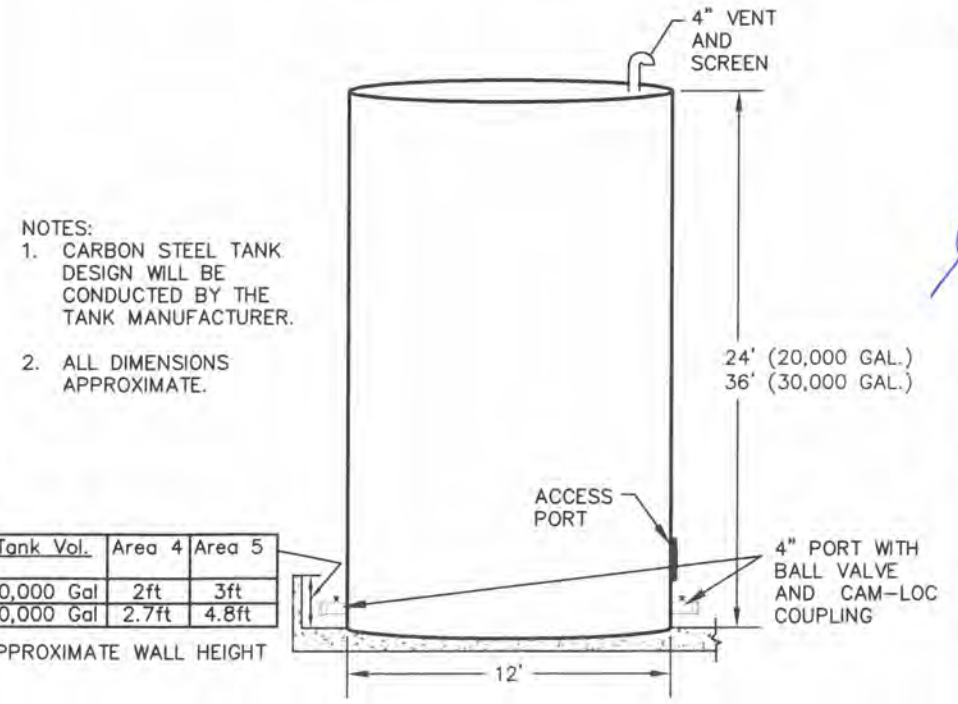


20,000 GALLON ELEVATED STORAGE TANK

DRAWING SOURCE:

ELEVATED TANK DETAIL BY COBB FENDLY 12/09/2013.

NOTE: CONCEPTUAL VIEWS ARE SHOWN, DETAILS MAY VARY.



NOTES:
1. CARBON STEEL TANK DESIGN WILL BE CONDUCTED BY THE TANK MANUFACTURER.
2. ALL DIMENSIONS APPROXIMATE.

Tank Vol.	Area 4	Area 5
20,000 Gal	2ft	3ft
30,000 Gal	2.7ft	4.8ft

APPROXIMATE WALL HEIGHT

20,000 AND 30,000 GALLON WORKING CAPACITY STORAGE TANK

8/20/21

J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS

REV.	DATE	DESCRIPTION	DR BY	APP BY
2	8/21	ADDED TABLE		
1	7/21	ADDED TEXT		

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

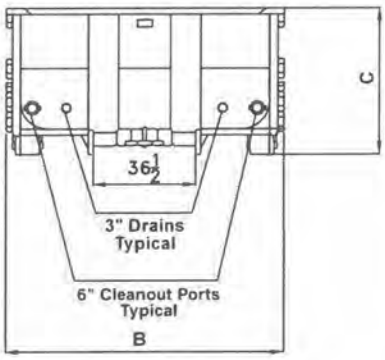
SHEET TITLE:
TANK DETAIL

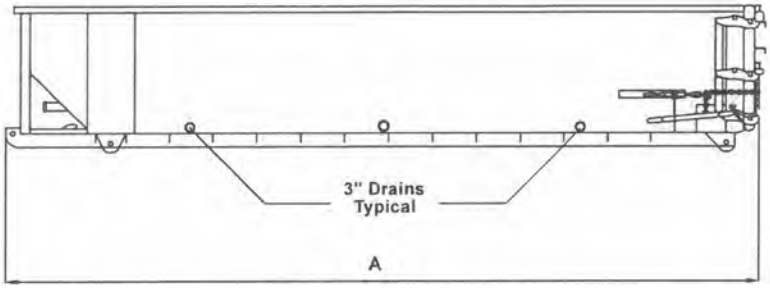
DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043022R2
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 10
PURPOSE: PERMIT ADMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043022 R2 Fig 10 Tank Detail.dwg, 8/25/2021 11:20:33 AM

Roll Off Container Filters

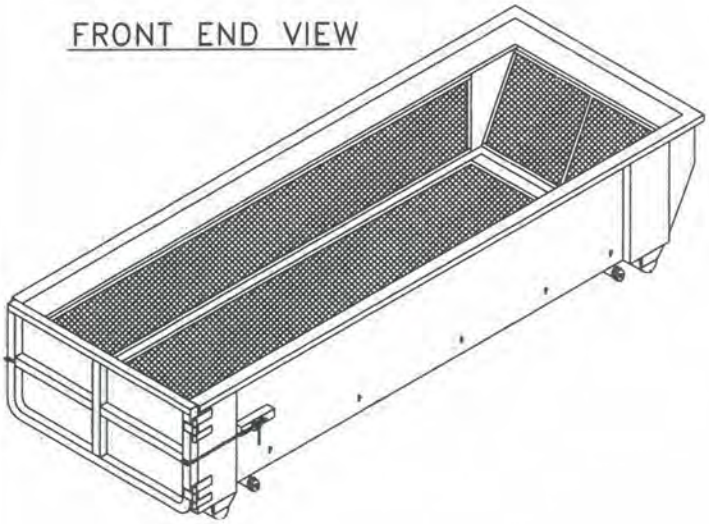
VOLUME	A	B	C
30 YD^3	271	90	71

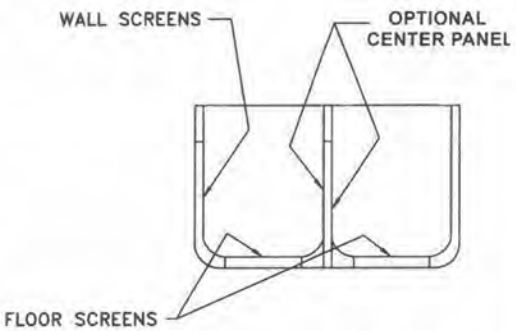




SIDE VIEW

FRONT END VIEW





TYP CROSS SEC

FILTER SCREEN DATA:

STANDARD APPLICATION OF FILTER MEDIA IS INSTALLED ON SIX SIDES WITH THE FOLLOWING: MONOFILAMENT-POLYESTER WITH PARTICULATE RETENTION RATED @ 330 MICRONS MAX. ATTACHED TO MEDIA BACKING WITH STAINLESS STEEL STUD BUTTON HEAD BOLTS & STAINLESS STEEL LOCKING CAP NUTS. ALL SCREENS TO BE MOUNTED FLUSH AND TIGHT WITH NO LEAKS FOR SOLIDS MIGRATION.

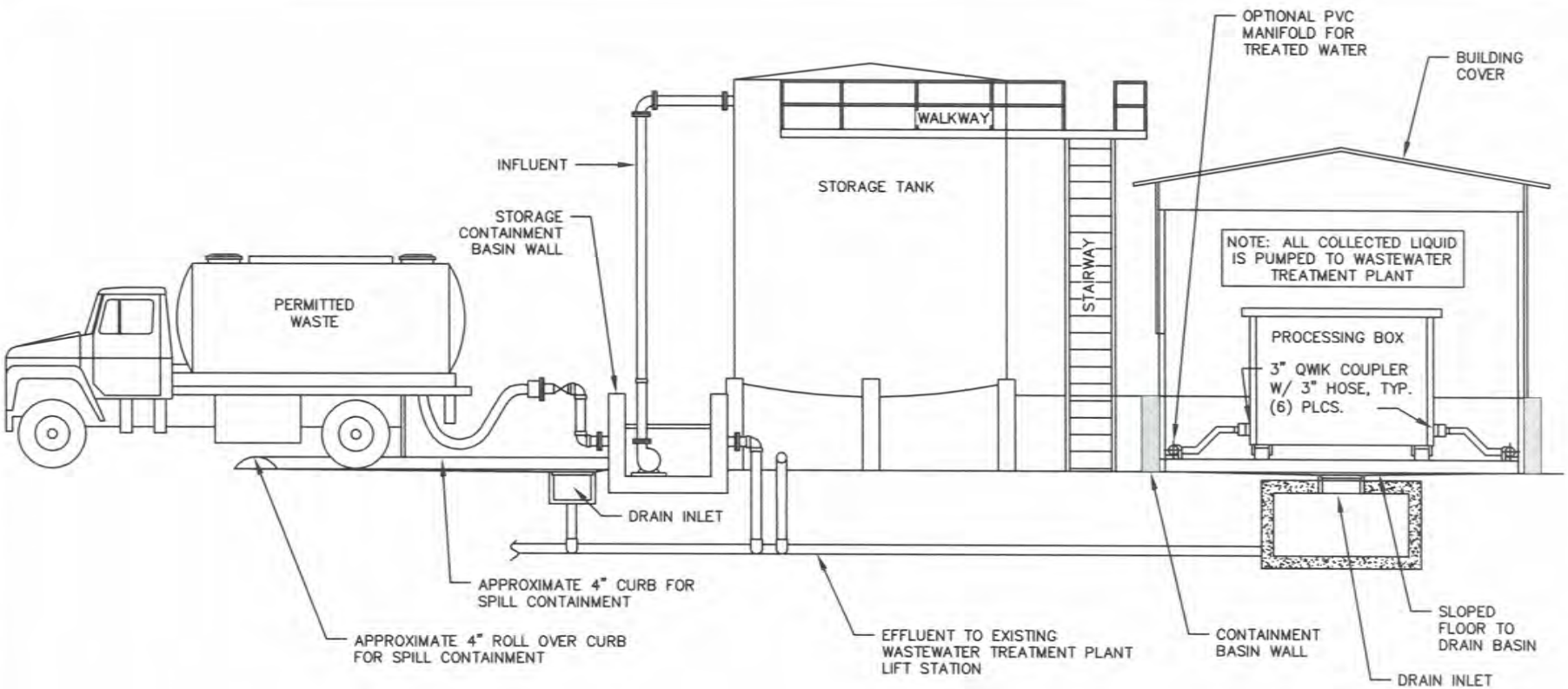
REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
PROCESSING UNIT DETAIL

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043023
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 11
PURPOSE: PERMIT ADMENDMENT			



REV.	DATE	DESCRIPTION	DR BY	APP BY
2	7/21	REVISED NOTES		
1	4/21	ADDED NOTES 2 & 3		

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
PROCESSING AND UNLOADING AREA
CROSS-SECTION A-A'

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043027R2
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 12
PURPOSE: PERMIT AMENDMENT			

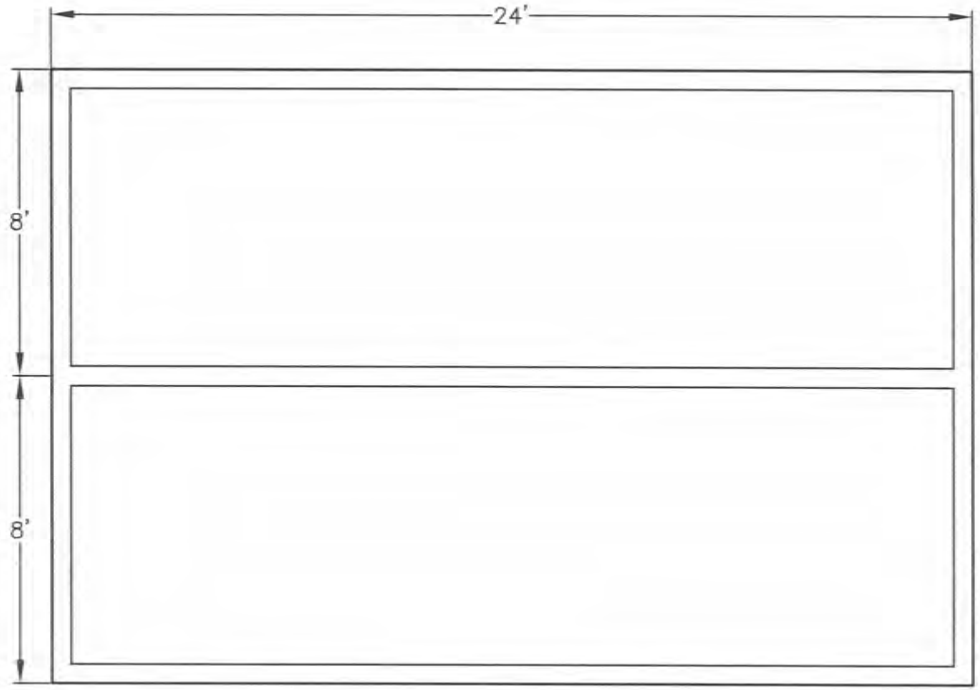
STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER

J. Brian Dudley 7/12/21

NOTES:

1. ALL PROCESSING AREAS WILL HAVE A BUILDING COVER OR WILL NOT BE OPERATED WITHOUT AUTOMATIC PUMPING TO WASTEWATER TREATMENT PLANT.
2. ALL SLABS AND WASTE STORAGE OR PROCESSING AREA WALLS WILL BE REINFORCED CONCRETE.
3. SEE FIGURE 9 FOR CROSS-SECTION A-A' LOCATION.

S:\CAD\Waste Water Residual Management\18043\18043027R2 Fig 12 General Profile of Process Equipment.dwg, 7/12/2021 9:47:40 AM, 1:1



DUAL SOLIDIFICATION BASIN

CROSS SECTION

STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER
8/26/21

NOTES:
1. ALL DIMENSIONS APPROXIMATE.
2. BASIN CONSTRUCTED OF REINFORCED CONCRETE OR STEEL

REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701
TEXAS REGISTERED ENGINEERING FIRM F-883

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

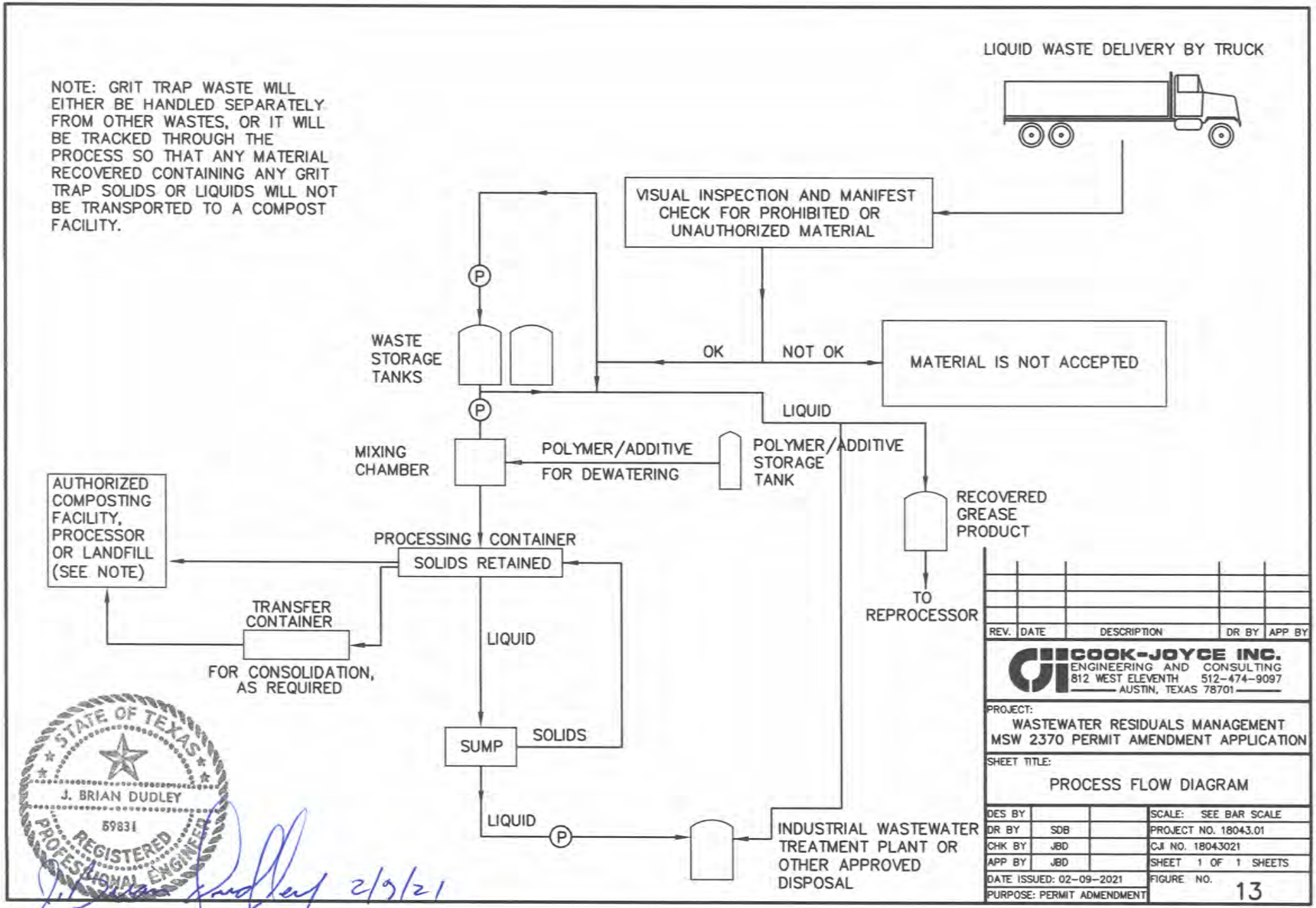
SHEET TITLE:
SOLIDIFICATION BASIN

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043033
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 08-23-2021			FIGURE NO. 12A
PURPOSE: PERMIT AMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043033 Fig 12A Solidification Basin.dwg, 8/25/2021 11:17:10 AM

S:\CAD\Waste Water Residual Management\18043\18043021 Fin 13 Process Flow Diagram.dwg 2/9/2021 12:02:51 PM 11

NOTE: GRIT TRAP WASTE WILL EITHER BE HANDLED SEPARATELY FROM OTHER WASTES, OR IT WILL BE TRACKED THROUGH THE PROCESS SO THAT ANY MATERIAL RECOVERED CONTAINING ANY GRIT TRAP SOLIDS OR LIQUIDS WILL NOT BE TRANSPORTED TO A COMPOST FACILITY.



REV.	DATE	DESCRIPTION	DR BY	APP BY

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
PROCESS FLOW DIAGRAM

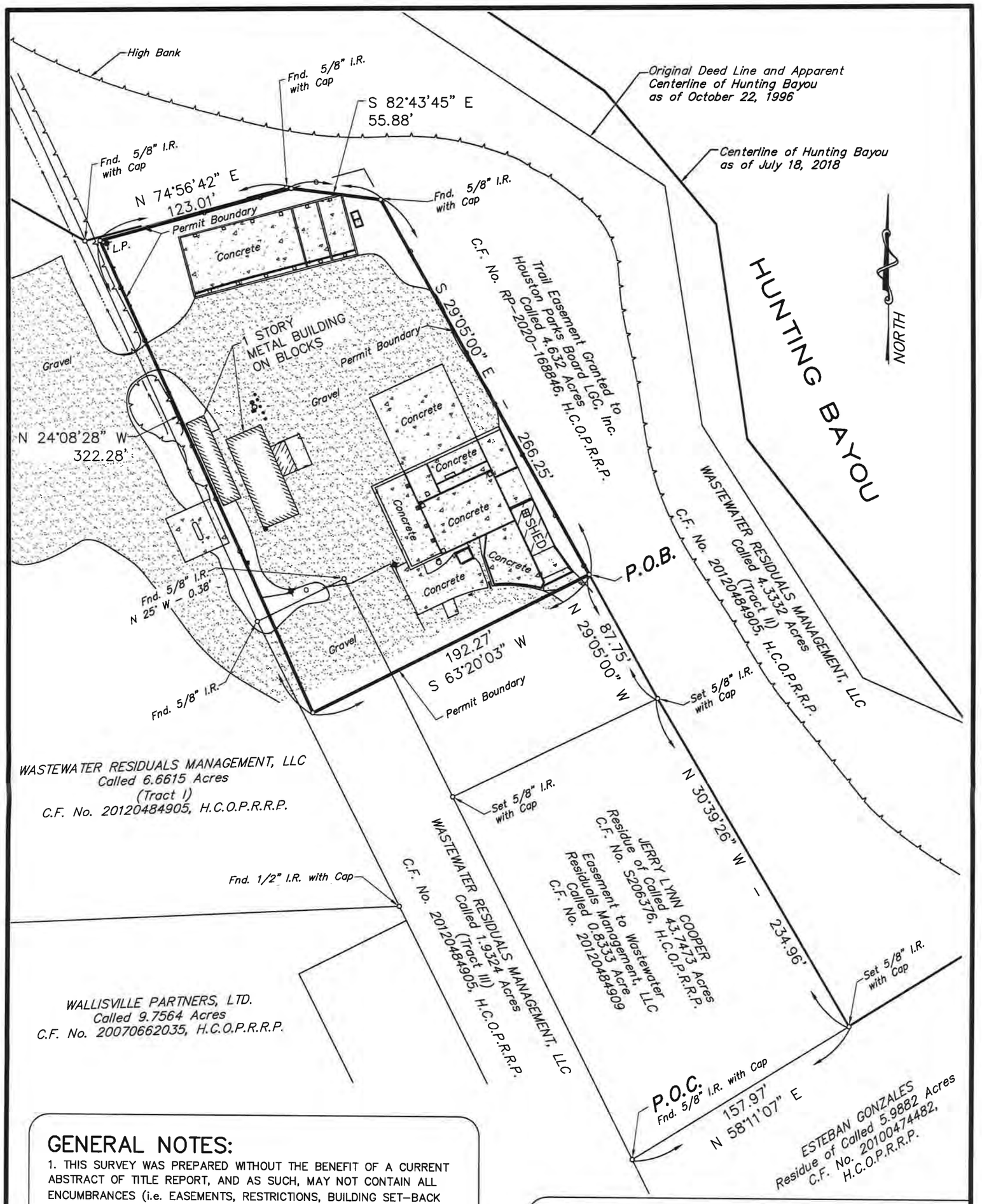
DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	JBD		CJI NO. 18043021
APP BY	JBD		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 13
PURPOSE: PERMIT ADMENDMENT			

STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER

2/9/21

APPENDICES

APPENDIX 1
SURVEY PLAT WITH LEGAL DESCRIPTION
SURVEY OF EXISTING FACILITIES AT THE SITE



GENERAL NOTES:

1. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT ABSTRACT OF TITLE REPORT, AND AS SUCH, MAY NOT CONTAIN ALL ENCUMBRANCES (i.e. EASEMENTS, RESTRICTIONS, BUILDING SET-BACK LINES, VARIANCES, BOUNDARY LINE AGREEMENTS, ETC.)

2. BEARINGS BASED ON THE TEXAS COORDINATE SYSTEM (NAD 83), SOUTH CENTRAL ZONE NO. 4204.

3. 10217 WALLISVILLE ROAD, HOUSTON, TX 77013

LEGEND:

I.R.	–	IRON ROD
C.F.	–	CLERK'S FILE
FND.	–	FOUND
P.O.B.	–	POINT OF BEGINNING
P.O.C.	–	POINT OF COMMENCING
H.C.D.R.	–	HARRIS COUNTY DEED RECORDS
H.C.O.P.R.R.P.	–	HARRIS COUNTY OFFICIAL PUBLIC RECORDS OF REAL PROPERTY

STATE OF TEXAS
REGISTERED
DANIEL N. PINNELL
5849
PROFESSIONAL
LAND SURVEYOR

01-07-2021

SURVEYOR'S SEAL

THE PINNELL GROUP
PROFESSIONAL LAND SURVEYORS

25207 OAKHURST DRIVE
SPRING, TEXAS 77386
281-363-8700
WWW.THEPINNELLGROUP.COM
FIRM REGISTRATION NO. 10039600

REVISIONS

SURVEY OF A PERMIT BOUNDARY CONTAINING 1.2478 ACRES OF LAND, OUT OF 4.3332 ACRES AND 1.9324 ACRES OF LAND, ALL SITUATED IN THE REELS AND TROBOUGH SURVEY, ABSTRACT NO. 59, HARRIS COUNTY, TEXAS.

SCALE: 1" = 60'	DATE: 12-30-2020	F.B. NO.: LEICA
DRAWN BY: KRS	CHECKED BY: DNP	JOB NO.: 10-260

FIELD NOTES OF 1.2478 ACRES OF LAND
(Page 1 of 2)

All that certain 1.2478 acres of land situated in the Reels & Trobough Survey, Abstract No. 59, Harris County, Texas, being out of the residue of a called 4.3332 acres of land (Tract II) and out of a called 1.9324 acres of land (Tract III), both being conveyed to Wastewater Residuals Management, LLC, as described in the deed recorded under Clerk's File No. 20120484905 of the Harris County Official Public Records of Real Property (H.C.O.P.R.R.P.), said 1.2478 acres being more particularly described by metes and bounds as follows:

COMMENCING at a 5/8 inch iron rod with cap found at the southernmost corner of a called 0.8333 acre of land granted as an easement to Wastewater Residuals Management, LLC, as described in the instrument recorded under Clerk's File No. 20120484909 of the H.C.O.P.R.R.P., same being the westernmost corner of the residue of called 5.9882 acres of land conveyed to Esteban Gonzales, as described in the deed recorded under Clerk's File No. 20100474482 of the H.C.O.P.R.R.P., and situated in the northeast line of said 1.9324 acres;

THENCE North 58 deg. 11 min. 07 sec. East, along and with the southeast line of the 0.8333 acre of land and the northwest line of said residue of 5.9882 acres, a distance of 157.97 feet to a 5/8 inch iron rod with cap set at the easternmost corner of the 0.8333 acre of land, same being the common southernmost corner of said 4.3332 acres and a trail easement (called 4.632 acres) granted to Houston Parks Board LGC, Inc., as described in the instrument recorded under Clerk's File No. RP-2020-168846 of the H.C.O.P.R.R.P.;

THENCE North 30 deg. 39 min. 26 sec. West, along and with the northeast line of the 0.8333 acre of land, same being the common southwest line of the 4.3332 acres and the trail easement, a distance of 234.96 feet to a 5/8 inch iron rod with cap set at the northernmost corner of the 0.8333 acre of land and a re-entrant corner in the 4.3332 acres;

THENCE North 29 deg. 05 min. 00 sec. West, over and across the 4.3332 acres, along and with said southwest line of the trail easement, a distance of 87.75 feet to a point at the easternmost corner and POINT OF BEGINNING of the herein described tract of land;

THENCE South 63 deg. 20 min. 03 sec. West, continuing over and across the 4.3332 acres, at a distance of 137.59 feet pass the middle southwest line of the 4.3332 acres and the northeast line of the 1.9324 acres, continuing over and across the 1.9324 acres in all a total distance of 192.27 feet to a point at the southernmost corner of the herein described tract of land;

THENCE North 24 deg. 08 min. 28 sec. West, continuing over and across the 1.9324 acres, at a distance of 66.24 feet pass the northwest line of the 1.9324 acres and the upper southeast line of the 4.3332 acres, continuing over and across the 4.3332 acres in all a total distance of 322.28 feet to a point at the westernmost corner of the herein described tract of land;

THENCE North 74 deg. 56 min. 42 sec. East, continuing over and across the 4.3332 acres, a distance of 123.01 feet to a point in the southwest line of the trail easement;

THENCE South 82 deg. 43 min. 45 sec. East, continuing over and across the 4.3332 acres, along and with the southwest line of the trail easement, a distance of 55.88 feet to a 5/8 inch iron rod with cap found at an angle point;

THENCE South 29 deg. 05 min. 00 sec. East, continuing over and across the 4.3332 acres, along and with the southwest line of the trail easement, a distance of 266.25 feet to the POINT OF BEGINNING and containing within these metes and bounds 1.2478 acres of land.

This tract of land has not been staked on the ground. This description is based on calculations prepared in the office of The Pinnell Group, LLC; filed in job number 10-260. Bearings based on the Texas Coordinate System (NAD83), South Central Zone No. 4204.

Daniel N. Pinnell
Registered Professional Land Surveyor
Texas Registration No. 5349

01-07-2021

The Pinnell Group, LLC
25207 Oakhurst Drive
Spring, TX 77386
281-363-8700
www.thepinnellgroup.com
FIRM Reg. #10039600

GENERAL NOTES:

1. ELEVATIONS SHOWN HEREON BASED ON HARRIS COUNTY FLOODPLAIN REFERENCE BENCHMARK NO. 080050, BEING A BRASS DISC LOCATED ON SOUTH SIDE OF WALLISVILLE BRIDGE OVER HUNTING BAYOU, ELEVATION 31.50 FEET, N.A.V.D. 1988, 2001 ADJUSTMENT.

2. DUE TO FLUCTUATING LEVELS OF EFFLUENT, SILT OR OTHER OBSTRUCTIONS COMMONLY FOUND IN MANY UNDERGROUND WET UTILITY STRUCTURES, THE INDICATED PIPE SIZES, MATERIALS AND FLOWLINE ELEVATIONS AS SHOWN HEREON ARE BASED ON VISIBLE OBSERVATIONS OF EXISTING CONDITIONS AT TIME OF SURVEY.

3. A TEXAS811 UTILITY LOCATE WAS NOT ORDERED IN CONJUNCTION WITH THE PREPARATION OF THIS SURVEY, AND AS SUCH, MAY NOT REFLECT ALL SUBSURFACE UTILITIES.

4. THE LOCATION OF ALL UNDERGROUND UTILITIES AS SHOWN HEREON (I.E. SANITARY, STORM, WATER, ELECTRIC, GAS, CABLE, ETC.) ARE APPROXIMATE AND ARE BASED ON VISIBLE EVIDENCE AND/OR DRAWINGS PROVIDED BY OTHERS.

5. BY GRAPHIC PLOTTING ONLY, THIS TRACT OF LAND LIES IN ZONE X (UNSHADED) "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN", ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP NO. 48201C0695 M; SAID MAP REVISED: JANUARY 6, 2017.

6. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT ABSTRACT OF TITLE REPORT, AND AS SUCH, MAY NOT CONTAIN ALL ENCUMBRANCES (i.e. EASEMENTS, RESTRICTIONS, BUILDING SET-BACK LINES, VARIANCES, BOUNDARY LINE AGREEMENTS, ETC.)

7. BEARINGS BASED ON THE TEXAS COORDINATE SYSTEM (NAD 83), SOUTH CENTRAL ZONE NO. 4204.

8. 10217 WALLISVILLE ROAD, HOUSTON, TX 77013

TEMPORARY BENCHMARK(S):

T.B.M. 'B' – 5/8 INCH IRON ROD WITH CAP STAMPED "PINNELL" SET IN GROUND LOCATED ON WEST SIDE OF DITCH LOCATED APPROXIMATELY 21 FEET WEST OF NORTHWEST CORNER OF METAL BUILDING ON BLOCKS, AS SHOWN HEREON. ELEVATION = 38.41 FEET.

LEGEND:

TC	–	TOP OF CURB
TW	–	TOP OF WALL
FL	–	FLOWLINE
T.G.	–	TOP OF GRATE
W.M.	–	WATER METER
G.I.	–	GRATE INLET
I.R.	–	IRON ROD
C.F.	–	CLERK'S FILE
L.P.	–	LIGHT POLE
RCP	–	REINFORCED CONCRETE PIPE
CMP	–	CORRUGATED METAL PIPE
CPP	–	CORRUGATED PLASTIC PIPE
PVC	–	POLYVINYL CHLORIDE
HDPE	–	HIGH DENSITY POLYETHYLENE
FND.	–	FOUND
R.O.W.	–	RIGHT-OF-WAY
F.E.M.A.	–	FEDERAL EMERGENCY MANAGEMENT AGENCY
H.C.D.R.	–	HARRIS COUNTY DEED RECORDS
H.C.M.R.	–	HARRIS COUNTY MAP RECORDS
H.C.O.P.R.R.P.	–	HARRIS COUNTY OFFICIAL PUBLIC RECORDS OF REAL PROPERTY

SYMBOL LEGEND

- ✦ – LIGHT STANDARD
- ▬ – WATER METER
- ■ – GRATE INLET
- ▪ – TELEPHONE PEDESTAL
- • – BOLLARD
- ☼ – WATER WELL

I HEREBY CERTIFY THIS PLAT TO BE A TRUE REPRESENTATION OF A FIELD SURVEY PERFORMED UNDER MY SUPERVISION.

Daniel N. Pinnell 01-07-2021

DANIEL N. PINNELL
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 5349

THE PINNELL GROUP
PROFESSIONAL LAND SURVEYORS
25207 OAKHURST DRIVE
SPRING, TEXAS 77386
281-363-8700
WWW.THEPINNELLGROUP.COM
FIRM REGISTRATION NO. 10039600

STATE OF TEXAS REGISTERED DANIEL N. PINNELL 5349 PROFESSIONAL LAND SURVEYOR

SURVEYOR'S SEAL

REVISIONS

TOPOGRAPHIC SURVEY OF A PORTION OF 6.6615 ACRES, 4.3332 ACRES AND 1.9324 ACRES OF LAND, ALL SITUATUED IN THE REELS AND TROBOUGH SURVEY, ABSTRACT NO. 59, HARRIS COUNTY, TEXAS.

SCALE: 1" = 20'	DATE: FEB–MAR 2020	F.B. NO.: LEICA
DRAWN BY: KRS	CHECKED BY: DNP	JOB NO.: 10-260

APPENDIX 2
WATER WELL SEARCH AND WELL REPORT

STATE OF TEXAS WELL REPORT for Tracking #28559

Owner:	WALLISVILLE WASTE WATER DISPOSAL FACILIT	Owner Well #:	No Data
Address:	6115 FOUNDERING KATY , TX 77449	Grid #:	65-14-6
Well Location:	10217 B WALLISVILLE RD HOUSTON , TX 77013	Latitude:	29° 48' 01" N
Well County:	Harris	Longitude:	095° 15' 04" W
Elevation:	No Data	GPS Brand Used:	315 MEGALLION GPS
Type of Work:	New Well	Proposed Use:	Industrial

Drilling Date:	Started: 10/29/2003 Completed: 10/30/2003
Diameter of Hole:	Diameter: 6 3/4 in From Surface To 385 ft
Drilling Method:	Mud Rotary
Borehole Completion:	Other: 2 STRING
Annular Seal Data:	1st Interval: From 0 ft to 370 ft with 18 (#sacks and material) 2nd Interval: From 10 ft to 0 ft with 10 (#sacks and material) 3rd Interval: No Data Method Used: HALLIBURTON Cemented By: SDI Distance to Septic Field or other Concentrated Contamination: 75 ft Distance to Property Line: 50 ft Method of Verification: No Data Approved by Variance: No Data
Surface Completion:	Surface Sleeve Installed

Water Level:	Static level: 135 ft. below land surface on 10/30/2003 Artesian flow: No Data
Packers:	K-PACKER 360
Plugging Info:	Casing or Cement/Bentonite left in well: No Data
Type Of Pump:	Submersible Depth to pump bowl: 200 ft
Well Tests:	Jetted Yield: 70 GPM with (No Data) ft drawdown after (No Data) hours

Water Quality:	Type of Water: No Data Depth of Strata: No Data Chemical Analysis Made: No Did the driller knowingly penetrate any strata which contained undesirable constituents: No
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:	**SCOTT DRILLING INC** **11923 GREEN PINE CIRCLE** **HOUSTON , TX 77066**
Driller License Number:	**4839**
Licensed Well Driller Signature:	**SCOTT ROBINSON**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking #28559) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft)	Description
0-35 CLAY	
35-50 SAND	
50-115 CLAY	
115-135 SAND	
135-295 CLAY	
295-310 SAND	
310-360 CLAY	
360-385 SAND	

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
4	**N**	**PVC CASING**	**0 370**
2.5	**" "**	**LINER**	**360 370**
" "	**"**	**SCREEN**	**370 385 .06**

Submitted from Web

Harris-Galveston Subsidence District

1660 West Bay Area Blvd.
Friendswood, TX 77546-2640
www.subsidence.org
Phone: (281) 486-1105 Fax: (281) 218-3700

COMPANY : WaterEngineers, Inc.

PROJECT NO.: 5003.1

Patrick Carrigan-Smith, E.I.T,

Due to the large volume of requests for well data, it has been necessary to standardize our output format.

The enclosed listing shows all the sites on which wells have been permitted by the district within 0.5 mile(s) of the following point in the order of distance from that center point, (i.e. closest to farthest):

LATITUDE	29	DEG	47	MIN	59	SEC
LONGITUDE	95	DEG	15	MIN	2	SEC

Please note: It is possible that some of these sites may not actually have a producing well on them. We do not guarantee that these are the only wells within the range specified, only that these are the wells that are permitted with the district within this range. We regret that we cannot customize our output to individual specifications and hope that the enclosed list will serve your needs.

REPORT HEADINGS :

LATITUDE/LONGITUDE - (degrees, minutes, seconds)

STATE#/YRDRLLD - State Map Reference (block, quad, ninth) / Year Drilled

DTFS/DEPTH - Depth To First Screen / Total Depth

DIST/ELEV - Distance from your Reference Point / Elevation in feet above sea

APPROXIMATE XX PUMPAGE - Approximate number of gallons pumped for given year

USE - Purpose of well (Agricultural, Industrial, Other, Public supply)

DIAM - Diameter of casing in inches

Sincerely,

Yolanda Toledo

Yolanda Toledo
Permit System Secretary and Cashier

HGCSD - WELL RADIUS LISTING

PROJECT NO.: 5003.1

WELL	OWNERS - NAME	LATITUDE / LONGITUDE	STATE NO / YRDRLLD	DTFS / DEPTH	DIST / ELEV	APPROX 2009 PUMPAGE / USE	DIAM
11495	SAC Holdings, LP	29-48-5 / 95-14-40	65-15-4 / ????	1 / 2	0.43 / 35	0 / D	4

1976	N/A	1977	N/A	1978	N/A	1979	N/A
1980	N/A	1981	N/A	1982	N/A	1983	N/A
1984	N/A	1985	N/A	1986	N/A	1987	N/A
1988	N/A	1989	N/A	1990	N/A	1991	N/A
1992	N/A	1993	N/A	1994	N/A	1995	N/A
1996	N/A	1997	N/A	1998	N/A	1999	N/A
2000	N/A	2001	N/A	2002	N/A	2003	N/A
2004	N/A	2005	N/A	2006	N/A	2007	N/A
2008	N/A	2009	N/A				

WELL	OWNERS - NAME	LATITUDE / LONGITUDE	STATE NO / YRDRLLD	DTFS / DEPTH	DIST / ELEV	APPROX 2009 PUMPAGE / USE	DIAM
9534	Peters, David	29-47-41 / 95-15-1	65-14-6	300	0.34 / 35	0 / P	4

1976	N/A	1977	N/A	1978	N/A	1979	N/A
1980	N/A	1981	N/A	1982	N/A	1983	N/A
1984	N/A	1985	N/A	1986	N/A	1987	N/A
1988	N/A	1989	N/A	1990	N/A	1991	N/A
1992	N/A	1993	N/A	1994	N/A	1995	N/A
1996	N/A	1997	N/A	1998	N/A	1999	N/A
2000	N/A	2001	N/A	2002	N/A	2003	N/A
2004	N/A	2005	N/A	2006	N/A	2007	N/A
2008	N/A	2009	N/A				

WELL	OWNERS - NAME	LATITUDE / LONGITUDE	STATE NO / YRDRLLD	DTFS / DEPTH	DIST / ELEV	APPROX 2009 PUMPAGE / USE	DIAM
9620	Wallisville Waste Water Disposal Facilities	29-48-0 / 95-15-3	65-14-6	335 / 350	0.03 / 35	0 / P	4

1976	N/A	1977	N/A	1978	N/A	1979	N/A
1980	N/A	1981	N/A	1982	N/A	1983	N/A
1984	N/A	1985	N/A	1986	N/A	1987	N/A
1988	N/A	1989	N/A	1990	N/A	1991	N/A
1992	N/A	1993	N/A	1994	N/A	1995	N/A
1996	N/A	1997	N/A	1998	N/A	1999	N/A
2000	N/A	2001	N/A	2002	N/A	2003	N/A
2004	5,800	2005	0	2006	0	2007	N/A
2008	N/A	2009	N/A				

Total 2009 pumpage for the above wells is 0

1976	N/A	1977	N/A	1978	N/A	1979	N/A
1980	N/A	1981	N/A	1982	N/A	1983	N/A
1984	N/A	1985	N/A	1986	N/A	1987	N/A
1988	N/A	1989	N/A	1990	N/A	1991	N/A
1992	N/A	1993	N/A	1994	N/A	1995	N/A
1996	N/A	1997	N/A	1998	N/A	1999	N/A
2000	N/A	2001	N/A	2002	N/A	2003	N/A
2004	5,800	2005	0	2006	0	2007	N/A
2008	N/A	2009	N/A				

APPENDIX 3
MISCELLANEOUS ITEMS

NOTICE OF ENGINEER'S APPOINTMENT

EVIDENCE OF LEGAL STATUS

TPDES CERTIFICATION STATEMENT

PROPERTY OWNER AFFIDAVIT

EVIDENCE OF COMPETENCY INFORMATION

LIQUID WASTE PROFILE FORM

Wastewater
Residuals
Management, LLC

10217 A, Wallisville Rd, Houston, TX 77013

February 9, 2020

Chance Goodin, Manager
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Notice of Engineer's Appointment

Dear Mr. Goodin:

This is to advise you that Wastewater Residuals Management (WRM) has duly appointed Cook-Joyce, Inc. (CJI) and Intera as the consulting and design Engineers for the purpose of submitting the supporting documentation for an application for a municipal solid waste permit amendment, including but not limited to engineering drawings, calculations, reports, planning material, plans and specifications, and other required documents for major amendment of the Type V-GG Processing Facility. These Engineering firms have experience in the design and construction of similar facilities. Brian Dudley P.E. will be the Project Engineer.

WRM has authorized these firms to act on our behalf during your review of the application and the supporting documentation for the major amendment to the Type V-GG Processing Facility. If you have any questions, please let me know.

Sincerely,

Darrell Rogers
CEO

Franchise Tax Account Status

As of : 12/07/2020 14:03:15

This page is valid for most business transactions but is not sufficient for filings with the Secretary of State

WASTEWATER RESIDUALS MANAGEMENT, LLC	
Texas Taxpayer Number	32047087450
Mailing Address	826 LINGER LN AUSTIN, TX 78721-3650
Right to Transact Business in Texas	ACTIVE
State of Formation	TX
Effective SOS Registration Date	02/23/2012
Texas SOS File Number	0801555107
Registered Agent Name	STEPHENSON FOURNIER, PLLC
Registered Office Street Address	3355 WEST ALABAMA, SUITE 640 HOUSTON, TX 77098

TPDES CERTIFICATION STATEMENT

On behalf of Wastewater Residuals Management, I, Darrell Rogers, CEO, certify that the appropriate Texas Pollutant Discharge Elimination System (TPDES) Permit coverage and any required local government stormwater permits will be obtained when required.

(Owner Signature)

2/5/2021
(Date)

Wastewater Residuals Management, LLC

Austin
826 Linger Ln
Austin, Texas 78721
512-973-8484

Beaumont
4895 Romeda Rd
Beaumont, Texas 77705
409-840-4620

Houston
10217 Wallisville Rd
Houston, Texas 77013
713-828-5487

Waste Profile

Generator Information

Site Name:_____

Site Address: _____

City, State, Zip: _____

_____

Contact Name: _____

Phone:_____

Email: _____

We accept only non-hazardous waste as outlined in 40 Code of Federal Regulation (CF R) Part 261 Subpart C (characteristic hazardous wastes) and Part 261 Subpart D (listed hazardous wastes).

Material Information

☐ Car Wash Girt ☐ Lint Trap ☐ WWTP Sludge ☐ WTP Sludge

☐ Other: Common Name: _____

Color:_____ Range of pH:_____ (If Known)

Has another disposal site refused this waste stream for any reason?

☐ Yes ☐ No ☐ N/A If Yes then why? _____

Has this waste source failed any City or State pre-treatment standards in the last 12 months?

☐ Yes ☐ No ☐ N/A

Description of Process Generating Waste Stream

By signing this Waste Profile form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 -- Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Wastewater Residuals Management, LLC.

I certify that the waste is non-hazardous and does not meet the definition of a hazardous waste as outlined in 40 Code of Federal Regulation (CF R) Part 261 Subpart C (characteristic hazardous wastes) and Part 261 Subpart D (listed hazardous wastes).

Name: _____

Title: _____

Company: _____

Date: _____

Sign in Box Below

APPENDIX 4
SECONDARY CONTAINMENT CALCULATIONS

8/26/21

APPENDIX 4

SECONDARY CONTAINMENT CALCULATIONS (330.227)

This Appendix presents the secondary containment for spilled waste and rainwater at the unloading, processing and waste storage tank areas shown in Figure 4-1. The areas are designed to control and contain spills and contaminated water from leaving the facility. Each area is designed to contain spilled waste equal to the capacity of the largest liquid storage vessel. Additionally, 11.8 inches of rain from the 25 year, 24 hour storm (NOAA, Atlas 14) is controlled by:

- preventing accumulation with a roof (Processing Area 2),
- providing full storage capacity at the area (Storage Tank Areas 4 and 5), or
- providing partial storage plus immediate drainage to a lift station that automatically pumps the liquid to the adjacent industrial wastewater treatment plant (WWTP) (Truck Unloading/Processing Area 1, and Processing Areas 3, 6 and 7). More specifically, the immediate drainage system is composed of the following:
    - Each operations area slab slopes to a sump that drains to one of two lift stations at the plant via either 6 or 8 inch gravity pipes.
    - Lift station 1 contains a 1420 gallon sump basin and serves all Areas except 6. Lift station 2 contains a 1915 gallon sump basin and serves Area 6. Each has two pumps with a combined capacity of up to 750 gallons per minute, automatic pump operation, and a backup electrical generator.
    - The lift station automatically transfers all liquids to the 45,000 gal equalization tank at the immediately adjacent WWTP. This tank always has capacity to receive the pumped liquids. From there, the liquid goes through the WWTP permitted by TCEQ.

The calculations for secondary containment volumes are included as Tables 1 and 2.

Truck Unloading and Processing Area 1

Containment Area 1 is composed of a truck unloading area and two processing bays. It is designed to contain a spill from a 5,000 gallon truck. A low curb is provided on the north side and short walls on the other sides. This area contains a sloped floor slab and sumps which drain to the 1420 gallon lift station as described above.

Processing Areas 2,3 6,7

The design conditions for the processing areas assume that a 4,847 gallon processing unit leaks and loses all of the liquid volume above the height of the released liquid contained inside the process area. Any other processing unit remains intact, and since it is elevated above the slab, its presence does not reduce the storage capacity within the containment. Processing is performed on curbed concrete slabs which have sufficient capacity to contain a spill and are sloped to sumps at each area. All sumps are connected to a lift station for transfer of liquids to the WWTP.

Storage Tank Areas 4 and 5

The design conditions assume that the largest 20,000 gallon (or 30,000 gallon) waste storage tank in each area leaks and loses all the liquid volume above the height of the released liquid contained inside the storage area. The other tanks remain intact. Some of the intact tanks are not elevated above the slab and the volumes of their footprint are subtracted from the storage calculations. The storage tanks are enclosed with a concrete wall which provides sufficient capacity to contain both the spilled volume of the largest tank and the 25 year, 24 hour storm.

Additional Containment to Prevent Offsite Runoff

For extra protection against contaminated water leaving the site and flowing to Hunting Bayou, a minimum one foot high concrete containment curb is constructed along the north and east fence line. The bayou is located about 150 ft beyond the curb. This curb will intercept and retain any spill or site stormwater before it leaves the permit area and flows toward Hunting Bayou. If water is retained in this location, it can be vacuumed and pumped with on-site pump trucks or portable pumps to the adjacent WWTP.

Containment Calculations and Configurations

Tables 1 and 2 show specifications and spill storage capacities of each containment area. The volumes were determined by Civil 3D modeling based on surveyed elevations of existing facilities, or physical measurements of the areas. All containment areas except Area 6 drain to a 1420 gallon sump located at Lift Station 1, where the liquid is pumped to the adjacent WWTP. Area 6 includes a 1915 gallon sump located at Lift Station 2, which pumps to the WWTP. Table 1 shows the description of the containment features while Table 2 shows the calculations and minimum required specifications. Unloading, processing and waste storage tank areas are shown in Figure 4-1. The Topographic Survey Figure in Appendix 1 of the Permit Amendment Application shows surveyed elevations for existing facilities.

Table 1: Containment Structures and Sump Volumes

A	B	C	D
Containment Area (See Fig. 4-1)	Containment Structures and Volume[4]	Sump Addition or Tank Obstruction Reduction Volume	Total Containment for the Area (Columns B+C)
1	.5' High Rollover Curb Min Top Curb Elev = 38.2' Approx . L20 /W58 (ft), Area = 1155 sf VOL = 825 cf/7593 gal[4]	+1420 gal[1]	9,013 gal
2	.43' High Rollover Curb Min Top Curb Elev = 36.6' Approx. L32 / W15 (ft), Area = 480 sf VOL = 367 cf/2747 gal	+718 gal[1] + 1420 gal = 2138 gal	4,885 gal
3	.41' Rollover Curb Min Top Curb Elev = 37.8' Approx. L54 / W20 (ft), Area = 1086 sf VOL = 814 cf/6092 gal	+1420 gal	7,512 gal
4	Approximate 2 Foot High Perimeter Walls[5,6] Top Elev = 39.1' Approx. L75 / W50 (ft)Area = 2701 sf VOL = 5238 cf/39,180 gal	+1420 ga sump - 5073 gal tank (3 @ 12'dia) = -3653 gall	35,527 gal
5	Approximate 3 Foot High Perimeter Walls[5,6] Top Elev = 41.2' Approx . L47 / W25 (ft), Area = 1220 sf VOL = 3780 cf/28274 gal	+800 gal[1] + 1420 gal = 2220 gal sumps - 6200 gal (2@ 12' DIA, 1 @6' DIA) = -3980 gal	24,294 gal
6	.22' High Rollover Curb Min Top Curb Elev = 38.9' Approx . L72 / W40 (ft), Area = 1356 sf VOL = 1026 cf/7676 gal	1915 gal[1]	9,591 gal
7	.3' High Rollover Curb Min Top Top Elev = 37.6' Approx . L60 / W25 (ft), Area = 1500 sf VOL = 756 cf/5656 gal	1420 gal	7,076 gal

Notes

1. Lift station 1 sump: 5' DIA x 9'-8" deep = (190 cf) = 1420 gal. Area 2 additional sump = 718 gal, Area 5 additional sump = 800 gal, Lift Sta 2 sump = 1,915 gal.
2. Pipe volumes in drainage system provide an additional factor of safety but are not included in these calculations.
3. See Figure 4-1 for containment area locations.
4. Volumes calculated by CAD methods (Civil 3d) from survey data.
5. If 30,000 gallon tanks are used that have the same 12 ft diameter as the 20,000 gal tanks, the higher walls described in Note 6 will provide additional spill storage capacity totaling 51,000 gallons in Area 4 and 39,000 gallons in Area 5.
6. If 30,000 gallon tanks are used, the Area 4 containment walls must have a 0.7 ft higher top elevation of 39.8. Area 5 must have 1.8 ft higher wall elevation of 43.0.

Table 2: Secondary Containment Calculations

A	B	C	D	E	F	G
Containment Area[2]	**Operations Type**	**Spilled Waste Volume Required (gal)**	**25 Year, 24 Hour Storm Volume (gal), (Area X 11.8 in rainfall)**	**Spilled Waste and Stormwater Volume to Manage[5] (gal) (Column C+D)**	**Containment Volume Provided in Area (gal) (Table 1, Column D)**	**Volume Exceeding Storage (gal) and Pump Time for Removal (min)**
1	Unloading/Processing	5000 [1]	8495	13495	9013	4482 / 6[6]
2	Processing	4847[1]	0 (roofed)	4847	4885	0
3	Processing	4847	7988	12835	7512	5323 / 7
4	Tank Storage	20000[3] 30000[4]	19867	39867 49867	40608 50897	0
5	Phase II Tank Storage	20000[3] 30000[4]	8974	28974 38974	29700 38981	0
6	Processing and Transport Storage	4847	9974	14821	9591	5230 / 7
7	Phase II Processing	4847	11033	15880	7076	8804 / 12

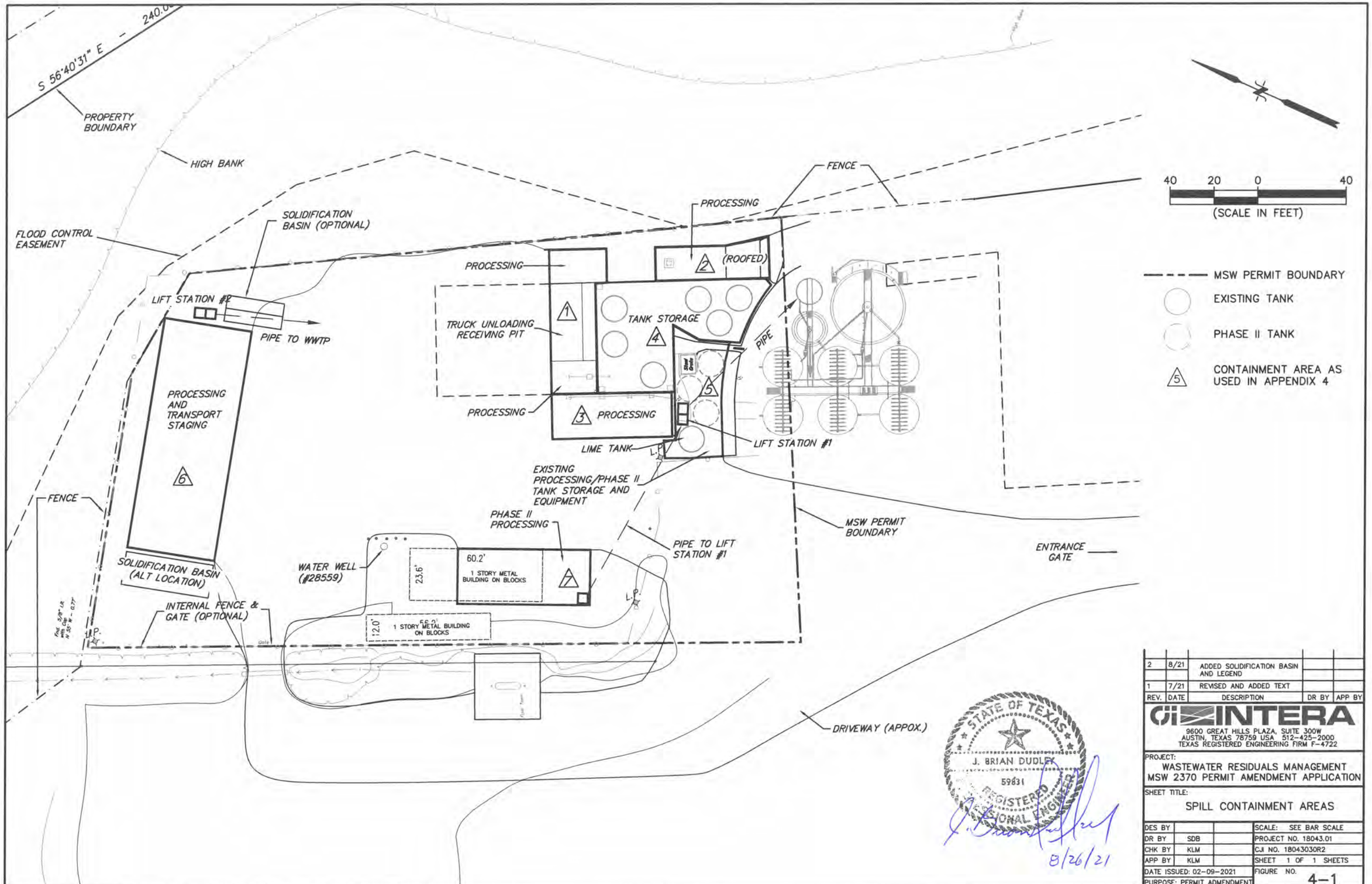
NOTES

1. Processing unit is a 30 CY rolloff container at 80% full = 4847 gal; semi tanker truck = 5000 gal
2. See Figure 4-1 for containment area location
3. Assumes largest tank is 20,000 gal
4. Assumes largest tank is 30,000 gal
5. Spill and stormwater is managed by either providing full storage volume in the area or providing spill volume within the area and automatic pumping to wastewater treatment plant.
6. Automatic pumps with backup power have capacity of up to 750 gpm.

Current and Phase II waste storage tanks are 20,000 gallon tanks. In the future, however, use of 30,000 gallon tanks could assist the ease of operations at high waste acceptance volumes. These tanks have the same 12 ft diameter, but are 50% taller (see Figure 10). Use of these tanks would require raising the top elevation of the containment walls by an additional 0.7 foot in Area 4 and 1.8 feet in Area 5 so that all spill and stormwater can be stored in the area. To use 30,000 gal tanks, the facility will provide an updated closure cost estimate and financial assurance if the tanks increase the total storage volume above the total volume in the existing closure cost estimate(see Section 4.1.1 and Appendix 5). The usual process to make the closure cost estimate change is a 305.70(j)(30) permit modification (see Appendix 5, Section 2.0).

Summary

All waste storage tank areas (Areas 4 and 5) contain sufficient storage capacity to contain spills and rainfall from the 25 year, 24 hour storm. All waste unloading and processing areas (Areas 1,2,3,6,7) contain sufficient storage capacity to contain spills and will control any additional liquid from rainfall from the 25 year, 24 hour storm by automatically pumping it to the adjacent WWTP during the course of the event. If any areas are provided with a constructed roof in the future, adequate containment will be provided by storage of the spill volume at the area, and additional storage or immediate drainage and pumping is not required since no significant rain volume will fall within the area.



REV.	DATE	DESCRIPTION	DR BY	APP BY
2	8/21	ADDED SOLIDIFICATION BASIN AND LEGEND		
1	7/21	REVISED AND ADDED TEXT		

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

PROJECT:
WASTEWATER RESIDUALS MANAGEMENT
MSW 2370 PERMIT AMENDMENT APPLICATION

SHEET TITLE:
SPILL CONTAINMENT AREAS

DES BY			SCALE: SEE BAR SCALE
DR BY	SDB		PROJECT NO. 18043.01
CHK BY	KLM		CJI NO. 18043030R2
APP BY	KLM		SHEET 1 OF 1 SHEETS
DATE ISSUED: 02-09-2021			FIGURE NO. 4-1
PURPOSE: PERMIT ADMENDMENT			

S:\CAD\Waste Water Residual Management\18043\18043030R2 Fig 4-1 Spill Containment Areas.dwg, 8/25/2021 11:17:47 AM

APPENDIX 5
CLOSURE PLAN AND COST ESTIMATE

FACILITY CLOSURE PLAN

1.0 CLOSURE REQUIREMENTS, 330.63(h), 330.459 and 330.461

No later than 90 days prior to the initiation of a final facility closure, Wastewater Residuals Management (WRM) shall, through a public notice in the newspaper(s) of largest circulation in the vicinity of the facility, provide public notice for final facility closure. This notice shall provide the name, address, and physical location of the facility, the permit number, and the last date of intended receipt of waste. WRM shall also make available an adequate number of copies of the approved final closure plan for public access and review. The facility will also provide a written notice to the TCEQ Executive Director of the intent to close the facility and will place this notice in the operating record.

Upon notification to the Executive Director, WRM will post a minimum of one sign at the main entrance and all other frequently used points of access for the facility notifying all persons who may utilize the facility or site of the date of closing for the entire facility or site and the prohibition against further receipt of waste materials after the stated date. To prevent the unauthorized dumping of solid waste at the closed facility, suitable barriers will be installed at all gates.

Within 10 days after completion of final closure activities of the facility, WRM will submit the certification of final closure and all necessary documents by registered mail.

All unprocessed, in-process, and processed material on-site will be evacuated to an authorized facility and remaining waste handling units and the loading/unloading/processing areas shall either be dismantled and removed off-site or decontaminated.

If there is evidence of release from the facility, the Executive Director may require an investigation into the nature and extent of the release and an assessment of measures necessary to correct an impact to groundwater.

WRM will complete final closure activities for the facility in accordance with the approved final closure plan within 180 days following the most recent acceptance of processed or unprocessed materials unless otherwise approved in writing by the executive director.

5/4/21

Within 10 days following completion of all final closure activities for the facility, WRM shall submit to the executive director a request for voluntary revocation of the facility permit and a documented certification, signed by an independent registered professional engineer, verifying that final closure has been completed in accordance with the approved final closure plan. The submittal to the executive director shall include all applicable documentation necessary for certification of final closure.

There will be no wastes remaining on-site after closure and no post-closure maintenance will be required.

2.0 CLOSURE COST ESTIMATE, 330.63 (j), 330.505

The following tables are a description of closure activities that would be required to be performed by a third party to close the facility. This closure cost estimate is the basis for the amount of financial assurance to be provided and assumes worst-case waste inventory conditions exist at the facility at the time of closure. The required documentation for financial assurance shall be submitted within 60 days of Permit Amendment approval and 60 days prior to initiation of Phase II operations. There are closure cost estimates included with this plan for both Phase I and II operations. The cost estimate representing actual conditions should be used at any time during the life of the facility. An increase in the closure cost estimate and the amount of financial assurance will be made if any changes to the facility conditions increase the maximum cost of closure at any time during the active life of the facility. This includes use of 30,000 gallon tanks if they increase the total storage volume above the total volume in the closure cost estimate. In this case, additional height of secondary containment walls must be in place at the tank areas as described in Appendix 4. The usual process to make the closure cost estimate change is a 305.70(j)(30) permit modification. The financial assurance will be established and maintained for closure of the facility in accordance with TAC Chapter 37, Subchapter R, including annual inflation adjustments as required by TCEQ. Continuous financial assurance coverage for closure must be provided until all requirements of the final closure plan have been completed and the site is determined to be closed in writing by the Executive Director. Closure activities would include at a minimum the following activities:

- Washdown of all process areas, disconnection of pumps and other equipment so unauthorized use could not occur: and

- Final cleanup of site litter and debris, securing the site and vector control.

CLOSURE COST ESTIMATE
WASTEWATER RESIDUALS MANAGEMENT TYPE V FACILITY (MSW 2370A), HOUSTON, TX

Wastewater Residuals Management – Permit No. 2370A
(Formerly TX Remediation)

Revised 15 October 2021

WRM - Phase I

CLOSURE ELEMENT DESCRIPTION	Unit Measure	Unit Cost	Number of Units	Total Cost
A. State administration of site closure				
1. Observe site and review file to determine closure activities	Hour	$125.00	16	$ 2,000
2. Prepare bid documents and procure bids	Hour	$125.00	20	2,500
3. Contract award and administration of contract	Hour	$125.00	16	2,000
			Subtotal Part A.	**$ 6,500**
B. General cleanup of the site and process unit(s)				
1. Waste Sampling / testing / classification				
a. Classification Sampling (4 samples)	Sample	$675.00	4	$ 2,700
b. Sampler Costs	Hour	$110.00	4	440
c. Sampling supplies /travel / per diem	Lump Sum	$250.00	1	250
2. Transport and/or disposal of waste at a properly authorized facility				
a. Unprocessed waste disposed	Gallon	$0.20	120,000	24,000
b. Used and unused polymer	Gallon	$0.20	2,000	400
c. pH adjustment and caustic supply tank	Gallon	$0.20	7,500	1,500
d. Liquid waste in piping/misc.	Gallon	$0.20	19,425	3,885
e. Processed Waste Material (6 dewatering box)	Unit	$650.00	6	3,900
f. Sump wastewater and Washdown water (2500 gal each to WWTP)	Gallon	$0.1100	5,000	550
g. Preparation of disposal paperwork	Hour	$70.00	2	140
3. General cleanup (washdown of concrete and units, disconnecting and storage of equipment)	Hour	$70.00	8	560
4. Vector control procedures	Lump sum	$500.00	1	500
			Subtotal Part B.	**$ 38,825**
C. Completion of cleanup				
1. Sign installation, securing buildings and access	Lump Sum	$1,500.00	1	1,500
2. Perform site inspection and prepare certification of work completion	Hour	$125.00	16	2,000
			Subtotal Part C.	**$ 3,500**
D. Contingency cost		15% of A.-C. Total		**$ 7,324**
		CLOSURE COST TOTAL (2021 Dollars)		**$ 56,149**

ASSUMPTIONS:

1. All costs reflect the work being performed by an independent third party contractor, administered by TCEQ.
2. No waste material will be accepted after the closure filing date.
3. Assume six liquid waste storage tanks are full with unprocessed waste (6 x 20,000 gallons = 120,000 gallons). Assume polymer injection system and tank are full with 2,000 gallons of liquid. Assume pH adjustment and caustic supply tank is full with 7,500 gallons of liquid. Assume an additional 15% of total volume of liquids for piping/misc. Liquid will be hauled to a nearby liquid processing facility or landfill for disposal.
4. Assume six 30-cubic yard dewatering boxes are full with in-process material solids. Current cost for solids disposal is transport for $250 and disposal at the landfill for $400.00 = $650/dewatering unit.
5. Concrete & other built structures, after decon, will be abandoned in place.
6. Two liquid waste samples and two processed waste samples will be collected for waste classification. Each waste characterization sample will be a composite sample. Classification sampling includes: SVOC's, VOC's, FOG, and RCRA 8 metals.
7. The unit transportation and disposal costs are representative of the cost to contract an outside disposal company to remove the tank contents and transport them for disposal/recycling to at facility licensed for disposal of this kind of waste. A current unit cost for loading, transportation and disposal of the waste at the TCEQ authonzed processing facility is $0.20/gallon.
8. Sump water and washdown water will be disposed of by transport to a permitted wastewater facility at $0.11/gallon which is based on $0.1/gal haul plus $0.01/gal disposal at WWTP.

STATE OF TEXAS
J. BRIAN DUDLEY
59831
REGISTERED PROFESSIONAL ENGINEER

10/22/21

Wastewater Residuals Management – Permit No. 2370A
(Formerly TX Remediation)

CLOSURE COST ESTIMATE
WASTEWATER RESIDUALS MANAGEMENT TYPE V FACILITY (MSW 2370A), HOUSTON, TX

Revised 15 October 2021

WRM - Phase II

CLOSURE ELEMENT DESCRIPTION	Unit Measure	Unit Cost	Number of Units	Total Cost
A. State administration of site closure				
1. Observe site and review file to determine closure activities	Hour	$125.00	16	$ 2,000
2. Prepare bid documents and procure bids	Hour	$125.00	20	2,500
3. Contract award and administration of contract	Hour	$125.00	16	2,000
			Subtotal Part A.	**$ 6,500**
B. General cleanup of the site and process unit(s)				
1. Waste Sampling / testing / classification				
a. Classification Sampling (4 samples)	Sample	$675.00	4	$ 2,700
b. Sampler Costs	Hour	$110.00	4	440
c. Sampling supplies /travel / per diem	Lump Sum	$250.00	1	250
2. Transport and/or disposal of waste at a properly authorized facility				
a. Unprocessed waste disposed	Gallon	$0.20	180,000	36,000
b. Used and unused polymer	Gallon	$0.20	2,000	400
c. pH adjustment and caustic supply tank	Gallon	$0.20	7,500	1,500
d. Liquid waste in piping/misc.	Gallon	$0.20	28,425	5,685
e. Processed Waste Material (9 dewatering box)	Unit	$650.00	9	5,850
f. Sump wastewater and Washdown water (2500 gal each to WWTP)	Gallon	$0.1100	5,000	550
g. Preparation of disposal paperwork	Hour	$70.00	2	140
3. General cleanup				
(washdown of concrete and units, disconnecting and storage of equipment)	Hour	$70.00	8	560
4. Vector control procedures	Lump sum	$500.00	1	500
			Subtotal Part B.	**$ 54,575**
C. Completion of cleanup				
1. Sign installation, securing buildings and access	Lump Sum	$1,500.00	1	1,500
2. Perform site inspection and prepare certification of work completion	Hour	$125.00	16	2,000
			Subtotal Part C.	**$ 3,500**
D. Contingency cost		15% of A.-C. Total		$ 9,686
		CLOSURE COST TOTAL (2021 Dollars)		**$ 74,261**

ASSUMPTIONS:

1. All costs reflect the work being performed by an independent third party contractor, administered by TCEQ.
2. No waste material will be accepted after the closure filing date.
3. Assume nine liquid waste storage tanks are full with unprocessed waste (9 x 20,000 gallons = 180,000 gallons). Assume polymer injection system and tank are full with 2,000 gallons of liquid. Assume pH adjustment and caustic supply tank is full with 7,500 gallons of liquid. Assume an additional 15% of total phase I volume of liquids for piping/misc. Liquid will be hauled to a nearby liquid processing facility or landfill for disposal.
4. Assume nine 30-cubic yard dewatering boxes are full with in-process material solids. Current cost for solids disposal is transport for $250 and disposal at the landfill for $400.00 = $650/dewatering unit.
5. Concrete & other built structures, after decon, will be abandoned in place.
6. Two liquid waste samples and two processed waste samples will be collected for waste classification. Each waste characterization sample will be a composite sample. Classification sampling includes: SVOC's, VOC's, FOG, and RCRA 8 metals.
7. The unit transportation and disposal costs are representative of the cost to contract an outside disposal company to remove the tank contents and transport them for disposal/recycling to at facility licensed for disposal of this kind of waste. A current unit cost for loading, transportation and disposal of the waste at the TCEQ authorized processing facility is $0.20/gallon.
8. Sump water and washdown water will be disposed of by transport to a permitted wastewater facility at $0.11/gallon which is based on $0.1/gal haul plus $0.01/gal disposal at WWTP.

WWRM\FINAL\18043\
T211012_ClosureCost

APPENDIX 6
COORDINATION DOCUMENTATION

TEXAS HISTORICAL COMMISSION LETTER

TXDOT COORDINATION LETTER

HOUSTON-GALVESTON AREA COUNCIL LETTER

TEXAS PARKS AND WILDLIFE DEPARTMENT LETTER

UNITED STATES FISH AND WILDLIFE SERVICES LETTER

TCEQ AIR PERMITS EMAIL

Kevin Lonseth

From: noreply@thc.state.tx.us
Sent: Monday, May 17, 2021 1:19 PM
To: Kevin Lonseth; reviews@thc.state.tx.us; jcmcmillon@tceq.texas.gov
Subject: Section 106 Submission

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
THC Tracking #202108515
Date: 05/17/2021
Wastewater Residuals Management (INTERA Inc)
10217A Wallisville Road
Houston,TX 77013

Description: type V municipal solid waste permit for operation of a liquid municipal waste processing facility

Dear Client:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the Executive Director of the Texas Historical Commission (THC), pursuant to review under the Antiquities Code of Texas.

The review staff, led by Bill Martin, has completed its review and has made the following determinations based on the information submitted for review:

Archeology Comments

- No identified historic properties, archeological sites, or other cultural resources are present or affected. However, if cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: bill.martin@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

cc: jcmcmillon@tceq.texas.gov

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

April 21, 2021

Mr. Mark Wolfe
State Historic Prevention Officer
Texas Historical Commission
Department of Antiquities Review
P.O. Box 12276
Austin, Texas 78711-2276

Re: TCEQ Municipal Solid Waste Permit Amendment Application Coordination-
Wastewater Residuals Management Type V-GG Processing Facility
Houston, Texas

Dear Mr. Wolfe:

On behalf of our client, Wastewater Residuals Management, Cook-Joyce, Inc. (now part of INTERA Incorporated) is preparing a Permit Amendment application for the current Texas Commission on Environmental Quality (TCEQ) for a Type V Municipal Solid Waste (MSW) Permit for the operation of a liquid municipal waste processing facility. The facility has been operating under the MSW permit since 2012. This Amendment will increase the maximum daily volume of waste accepted from 100,000 gallons/day to 400,000 gallons per day with minimal changes to the current facility. Your Commission was previously notified in 2012 of this facility, and there was apparently no historical issues identified at that time.

The 1.25 acre site is located approximately 1 mile east on Wallisville Road from East Loop Freeway 610 in Houston, Harris County, Texas. The physical address is 10217A Wallisville Road, Houston, Texas 77013. Please refer to the enclosed location map.

The subject property is located in a long-established industrial area and completely within an existing permitted industrial wastewater treatment facility. The site was originally permitted in 1998 and began operating as part of an industrial wastewater facility. In 2012, an additional Municipal Solid Waste Permit was received to comply with State rule revisions. The site is currently completely developed with processing equipment, offices and driveways. Physically, the Amended Permit will slightly expand the area within the wastewater plant where processing occurs and adds some equipment.

The facility will receive and process grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; water and wastewater sludge (municipal and industrial); commercial and industrial food waste; stormwater and groundwater wastewater, leachate, lint and oil/water separator waste; Class II and III non-hazardous industrial liquid waste containing fats or oils other than petroleum, and other industrial

wastewaters and sludges. Processed solids will be disposed at an authorized compost facility, processor or Houston area MSW landfill. The liquid effluent will be discharged to the adjacent permitted industrial wastewater treatment plant or other authorized processing or disposal facility.

This letter is to request acknowledgement, in writing, from the Texas Historical Commission that continued development of the Wastewater Residuals Management Type V-GG Processing Facility will comply with the Natural Resources Code, Chapter 191, Texas Antiquities Code. This request is being made in accordance with TCEQ regulations at 30 TAC §330.61(o), and your response will be submitted as part of the TCEQ application. Please e-mail your response to klonseth@intera.com.

Thank you for your time and assistance. If you have any questions or need any additional information, please contact me at (512) 474-9097 or via the e-mail address provided above.

Sincerely,

Kevin Lonseth, P.G.
Senior Geoscientist

KL

cc: Darrell Rogers, Wastewater Residuals Management

WATER ENGINEERS, INC.
Water & Wastewater Treatment Consultants
17230 HUFFMEISTER RD., SUITE A
CYPRESS, TEXAS 77429
TEL: 281-373-0500
FAX: 281-373-1113

November 18, 2010

Ed Baker
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711-2276

Subject: **Texas Remediation**
MSW Type V Permit Application
Houston, Texas

Dear Mr. Baker,

Texas Remediation is applying for an MSW Type V permit with a proposed permitted capacity of 100,000 gallons per day (gpd). Wastewater from the MSW type V facility will be treated in the Houston area at an existing permitted wastewater treatment facility that is owned and operated by Texas Remediation. WaterEngineers, Inc. is preparing an application for the Texas Commission on Environmental Quality (TCEQ) permit for this facility. Attached is an aerial photo showing the location of the facility.

As a part of this permitting process, Texas Remediation is seeking comment from the Texas Historical Commission. Please evaluate the location of this facility for the likelihood of impacts to prehistoric or historic cultural resources which would result from an existing Type V Municipal Solid Waste (MSW) processing facility. We request this evaluation in compliance with TCEQ Municipal Solid Waste Regulation 30 TAC §330.61 (o) which states: "the owner or operator shall submit a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code."

The facility is located on a 15 acre site at 10217 Wallisville Road, Houston, Texas 77013. The site is permitted as a MSW Type V. Adjacent land use is industrial.

Please respond to the undersigned at (281) 373-0500 or mark@waterengineers.com with any comments you may have regarding this proposed facility. Thank you for your assistance in this matter.

Sincerely,
WaterEngineers, Inc

Mark L. Urback, P.E.
Senior Project Engineer

CC: TCEQ

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701

February 9, 2021

Ms. Eliza Paul, P.E.
District Engineer
Texas Department of Transportation
Houston District
7600 Washington Ave.
Houston, Texas 77007

Re: Type V Municipal Solid Waste Permit Application Coordination
Wastewater Residuals Management Type V-GG Processing Facility
Houston, Texas

Dear Ms. Paul:

On behalf of our client, Wastewater Residuals Management, Cook-Joyce, Inc. is preparing an application to amend the current Texas Commission on Environmental Quality (TCEQ) for a Type V Municipal Solid Waste (MSW) Permit for the operation of a liquid municipal waste processing facility. The 1.25 acre site is located approximately 1 mile east on Wallisville Road from East Loop Freeway 610 in Houston, Harris County, Texas. The physical address is 10217A Wallisville Road, Houston, Texas 77013. Please refer to the enclosed location map.

The subject property is located in a long-established industrial area and completely within an existing permitted industrial wastewater treatment facility. The site was originally permitted in 1998 and began operating as part of an industrial wastewater facility. In 2012, an additional Municipal Solid Waste Permit was received to comply with State rule revisions. The site is currently completely developed as with processing equipment, offices and driveways. Physically, the Amended Permit will slightly expand the area within the wastewater plant where processing occurs and adds some equipment.

The facility is located on Zaballos Court, a two lane all weather roadway on a 60 foot wide public easement with a 24 foot concrete or aggregate driving surface. The roadway has adequate turning radii. Zaballos Court is located approximately 1 mile east of East Loop Freeway 610 on the north side of Wallisville Road. Trucks enter the facility through the wastewater plant gate on Zaballos Court and will exit through the same gate. Internal drives have all weather driving surfaces. The volume of site traffic on access roads within one mile of the facility may be up to about 75 vacuum trucks a day plus ten (10) employee/service vehicles, for a total of 85 vehicles per day..

This letter is to request a letter of coordination with the TxDOT for traffic and location restrictions in accordance with TCEQ regulations at 30 TAC §330.61(i)(4). The

information will be used to document coordination with your agency, to show adequate road service for the facility and to show that added traffic will not adversely affect the roadway. Information regarding the adequacy of the roads in the area as well as traffic counts for roads that are under the TxDOT jurisdiction is appreciated. Please e-mail your response to me at kevin.lonseth@cook-joyce.com.

Thank you for your time and assistance. If you have any questions or need any additional information, please contact me at (512) 560-3786 or via the e-mail address provided above.

Sincerely,

Kevin Lonseth, P.G.
Project Staff IV

KL

cc: Leo Ounanian, Wastewater Residuals Management

COOK-JOYCE INC.
ENGINEERING AND CONSULTING
812 WEST ELEVENTH 512-474-9097
AUSTIN, TEXAS 78701

February 9, 2021

Erin Livingston
Principal Planner
Houston-Galveston Area Council
P.O. Box 22777
Houston, TX 77227-2777

Re: TCEQ Municipal Solid Waste Permit Amendment Application Coordination-
Wastewater Residuals Management Type V-GG Processing Facility
Houston, Texas

Dear Ms. Livingston:

On behalf of our client, Wastewater Residuals Management, Cook-Joyce, Inc. is preparing a Permit Amendment application for the current Texas Commission on Environmental Quality (TCEQ) for a Type V Municipal Solid Waste (MSW) Permit for the operation of a liquid municipal waste processing facility. The facility has been operating under the MSW permit since 2012. This Amendment will increase the maximum daily volume of waste accepted from 100,000 gallons/day to 400,000 gallons per day.

The 1.25 acre site is located approximately 1 mile east on Wallisville Road from East Loop Freeway 610 in Houston, Harris County, Texas. The physical address is 10217A Wallisville Road, Houston, Texas 77013. Please refer to the enclosed location map.

The subject property is located in a long-established industrial area and completely within an existing permitted industrial wastewater treatment facility. The site was originally permitted in 1998 and began operating as part of an industrial wastewater facility. In 2012, an additional Municipal Solid Waste Permit was received to comply with State rule revisions. The site is currently completely developed as with processing equipment, offices and driveways. Physically, the Amended Permit will slightly expand the area within the wastewater plant where processing occurs and adds some equipment.

The facility will receive and process grease trap, grit trap, septic and holding tank waste; raw sewage, lift station and chemical toilet waste; water and wastewater sludge (municipal and industrial); commercial and industrial food waste; stormwater and groundwater wastewater, leachate, lint and oil/water separator waste; Class II and III non-hazardous industrial liquid waste containing fats or oils other than petroleum, and other industrial wastewaters and sludges. Processed solids will be disposed at an authorized compost facility, processor or Houston area MSW landfill. The liquid effluent will be discharged to the adjacent permitted industrial wastewater treatment plant or other authorized processing or disposal facility.

Parts I and II of the TCEQ Permit Application contain general information about the project and are enclosed for your information and review for compliance with the regional solid waste plan. Other parts of the TCEQ application, which are not enclosed, contain detailed designs, operating plans and supporting documentation.

If Houston-Galveston Area Council has any comments regarding compliance with the regional solid waste plan, please send them to me in writing (via the e-mail address provided below). Correspondence will be included with the application to TCEQ.

Thank you for your time and assistance. If you have any questions or need any additional information, please contact me at (512) 560-3786 or via e-mail at kevin.lonseth@cook-joyce.com.

Sincerely,

Kevin Lonseth, P.G.
Project Staff IV

KL

cc: Darrell Rogers, Wastewater Residuals Management

WATER ENGINEERS, INC.
Water & Wastewater Treatment Consultants
17230 HUFFMEISTER RD., SUITE A
CYPRESS, TEXAS 77429
TEL: 281-373-0500
FAX: 281-373-1113

November 18, 2010

U.S. Fish & Wildlife Service
17629 El Camino Real, Ste 211
Houston, Texas 77058

Subject: **Texas Remediation**
MSW Type V Permit Application
Houston, Texas

To Whom It May Concern:

Texas Remediation is applying for an MSW Type V permit with a proposed permitted capacity of 100,000 gallons per day (gpd). Wastewater from the MSW type V facility will be treated in the Houston area at an existing permitted wastewater treatment facility that is owned and operated by Texas Remediation. WaterEngineers, Inc. is preparing an application for the Texas Commission on Environmental Quality (TCEQ) permit for this facility. Attached is an aerial photo showing the location of the facility.

As a part of this permitting process, Texas Remediation is seeking comment from the Texas Parks & Wildlife Department. Please evaluate the location of the facility for the likelihood of impacts to Threatened or Endangered Species or other Species of Concern which would result from an existing Type V Municipal Solid Waste (MSW) processing facility. We request this opinion in compliance TCEQ Municipal Solid Waste Regulation 30 TAC §330.61 (n) regarding coordination with state and federal natural resources agencies.

The facility is located on a 15 acre site at 10217 Wallisville Road, Houston, Texas 77013. The site is permitted as a MSW Type V. Adjacent land use is industrial.

Please respond to the undersigned at (281) 373-0500 or mark@waterengineers.com with any comments you may have regarding this proposed facility. Thank you for your assistance in this matter.

Sincerely,
WaterEngineers, Inc

Mark L. Urback, P.E.
Senior Project Engineer

WATERENGINEERS, INC.
Water & Wastewater Treatment Consultants
17230 HUFFMEISTER RD., SUITE A
CYPRESS, TEXAS 77429
TEL: 281-373-0500
FAX: 281-373-1113

November 18, 2010

Texas Parks & Wildlife Department
1502 Pine Drive (FM 517)
Dickinson, Texas 77539

Subject: **Texas Remediation**
MSW Type V Permit Application
Houston, Texas

Dear Ms. Phillips,

Texas Remediation is applying for an MSW Type V permit with a proposed permitted capacity of 100,000 gallons per day (gpd). Wastewater from the MSW type V facility will be treated in the Houston area at an existing permitted wastewater treatment facility that is owned and operated by Texas Remediation. WaterEngineers, Inc. is preparing an application for the Texas Commission on Environmental Quality (TCEQ) permit for this facility. Attached is a aerial photo showing the location of the facility.

As a part of this permitting process, Texas Remediation is seeking comment from the Texas Parks & Wildlife Department. Please evaluate the location of the facility for the likelihood of impacts to Threatened or Endangered Species or other Species of Concern which would result from an existing Type V Municipal Solid Waste (MSW) processing facility. We request this opinion in compliance TCEQ Municipal Solid Waste Regulation 30 TAC §330.61 (n) regarding coordination with state and federal natural resources agencies.

The facility is located on a 15 acre site at 10217 Wallisville Road, Houston, Texas 77013. The site is permitted as a MSW Type V. Adjacent land use is industrial.

Please respond to the undersigned at (281) 373-0500 or mark@waterengineers.com with any comments you may have regarding this proposed facility. Thank you for your assistance in this matter.

Sincerely,
WaterEngineers, Inc

Mark L. Urback, P.E.
Senior Project Engineer

CC: TCEQ

Aki, Gulay

From: Sainani, Sonu
Sent: Friday, March 31, 2006 3:26 PM
To: Dudley, Brian; Aki, Gulay
Subject: FW: FW: PBR applicability

-----Original Message-----
From: Jon Edwards [mailto:JEdwards@tceq.state.tx.us]
Sent: Friday, March 31, 2006 2:01 PM
To: Sonu Sainani
Cc: Ana Quinones; Clyde Price; Emmanuel Ukandu; Rich Carpenter; John Gott
Subject: Re: FW: PBR applicability

Treatment of grease trip material is a process that is part of the wastewater treatment process and falls within the scope of PBR 106.532, so it can be authorized under it.

If you have any more questions, please let me know.
Sincerely,

Jon Edwards, P.E.,
Technical Specialist
GSR Section
Air Permits Division
Texas Commission on Environmental Quality
512-239-5863
jedwards@tceq.state.tx.us

>>> "Sainani, Sonu" <Sonu.Sainani@COOK-JOYCE.com> 3/30/2006 1:24 PM >>>
Jon

I had e-mailed Jon Gott - Please see e-mail below. I believe he is unavailable this week - Could you review the message below and try to answer my questions.

Thanks!

Sonu Sainani
Project Engineer
Cook-Joyce Inc. - Austin
812 West 11th, Austin, TX
(512) 370-2494

> -----Original Message-----
> From: Sainani, Sonu
> Sent: Monday, March 27, 2006 2:42 PM
> To: 'jgott@tceq.state.tx.us'
> Subject: PBR applicability
>
> John
>
> I am writing to check if a Grease and Grit Processing facility can use
> 106.532 (Water and Wastewater treatment) to authorize air emissions. The